


Monterey Bay 2035

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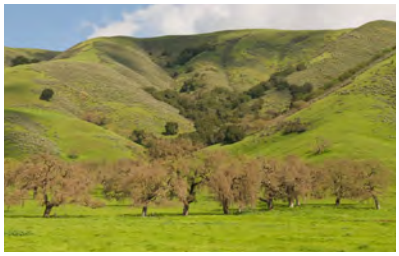



2035 Metropolitan Transportation Plan / Sustainable Communities Strategy

Final
June 2014

PLANNING EXCELLENCE
AMBAG
Association of Monterey Bay Area Governments

Moving Forward
Monterey Bay 2035

June 2014

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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 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 2035.

Our Vision

A Sustainable Future

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. Additionally, the 2035 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 2035.

Senate Bill 375

Under SB 375, the SCS should demonstrate the land use and transportation measures that will be used to meeet the region's greenhouse gas emission reduction targets as established by the California Air Resources Board (CARB) - a zero percent per capita change by 2020 and five 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 point the region toward overall sustainability and will provide benefits beyond reducing emissions.

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 comprises a new chapter 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) adopted targets for each of the 18 MPOs across the state. Based upon the recommendation issued by the AMBAG Board of Directors, CARB adopted the following targets for the Monterey Bay Area in September 2010:

2020: 0% increase from 2005 per capita GHG emissions

2035: 5% 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.

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 2010, there were 732,708 people in the Monterey Bay Area spread over an area of 5,157 square miles. In 2035, the population is expected to reach 885,000. Additionally, there were 261,394 housing units in the region in 2010. The region is expected to add almost 42,000 more housing units by 2035 and more than 64,000 new jobs as shown in Figures ES-2 and ES-3.

Goals & Policies

AMBAG adopted a framework of goals and policy objectives to guide the development of the 2035 MTP/SCS. Chapter 1 presents these goals and policies within the context of the regional vision for 2035. The goal areas are:

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

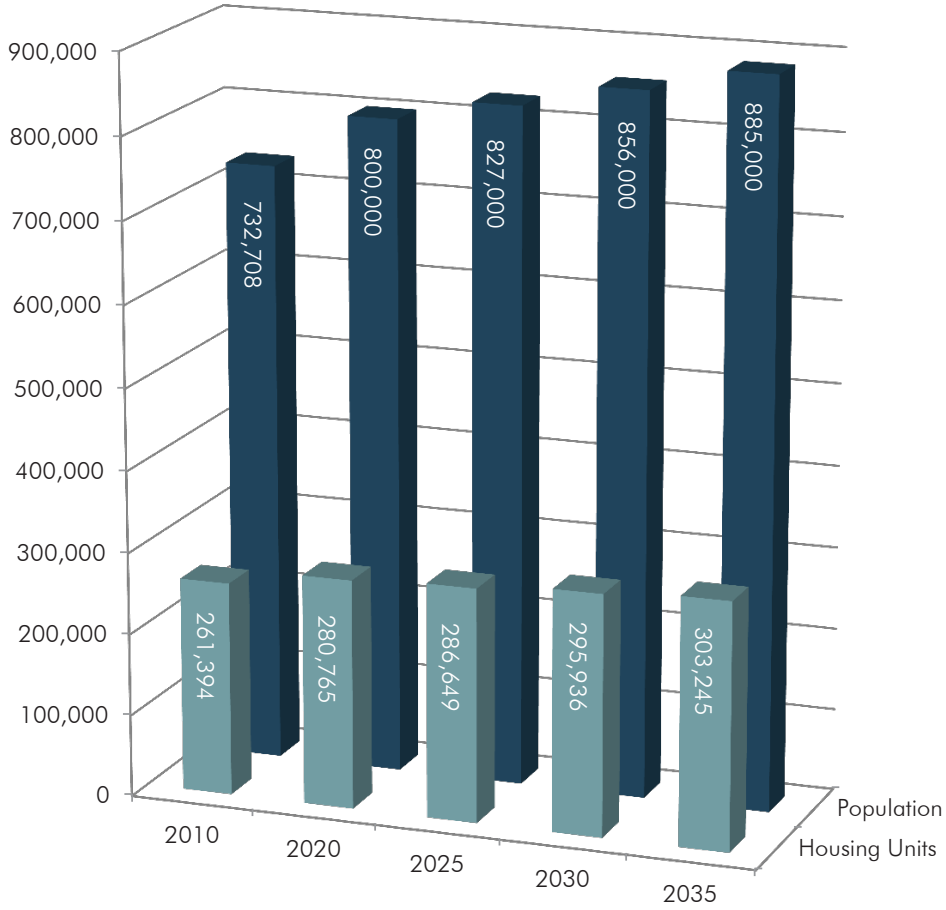
Transportation Investments

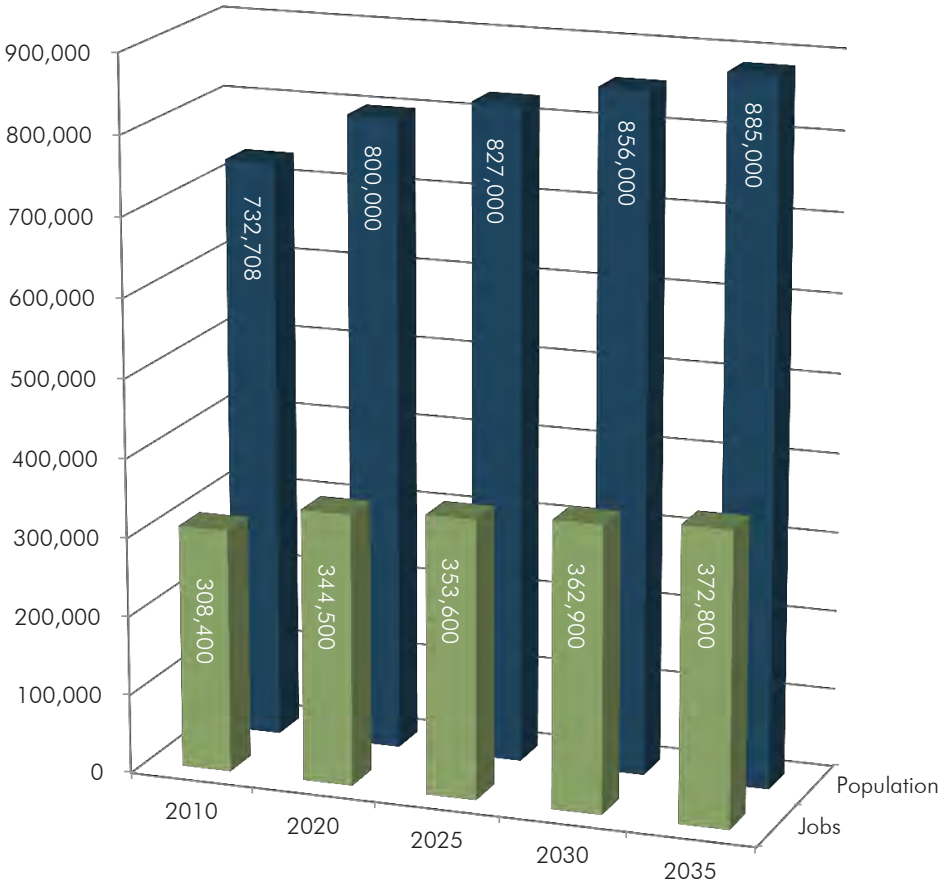
The 2035 MTP/SCS contains a number of improvements to the region's multimodal transportation system. These improvements include closures of critical gaps in the network that hinder access to jobs and daily needs, as well as the strategic expansion of the transportation system to provide the region with increased mobility.

One of the Plan's goals is to reduce per capita greenhouse gas emissions over the next 25 years, however, the total demand to move people and goods will continue to grow due to the region's projected population increase.

Figure ES-1: Regional Map

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





Source: AMBAG 2014 Regional Growth Forecast

A strategic expansion of the transportation system is needed to provide the region with the mobility it needs. The 2035 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. These transportation systems must be improved and expanded to improve the accessibility and connectivity needed to become a truly viable alternative for the region as a whole. 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 twenty 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 $7.6 billion that includes local, state, and federal sources reasonably expected to be available over the timeline of the 2035 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. 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 this 2035 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 2035 MTP/SCS exceeds 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 2035.

Public Participation

The development of the 2035 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. A video, as well as an interactive website that expanded AMBAG's ability to engage and involve stakeholders and the public in shaping the 2035 MTP/SCS. The input received through this process was critical in defining a preferred land use

and transportation strategy and meeting/exceeding the 2035 MTP/SCS goals and policies. Chapter 6 details the public outreach process to involve and engage stakeholders and the public throughout the 2035 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 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 2035.

The region's population is largely concentrated in urban areas consisting of the 18 incorporated cities, which accounts for 66 percent of the total regional population. Unincorporated areas account for the remaining 34 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 2010, there were 732,708 people in the Monterey Bay Area spread over an area of 5,157 square miles. By 2035, the population is expected to reach 885,000. Additionally, there were 261,394 housing units in the region in 2010. The region is expected to add almost 42,000 more housing units by 2035.

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 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 zero percent per capita change by 2020 and five 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 2035 MTP/SCS is anticipated to achieve a three percent per capita reduction by 2020 and a nearly six percent per capita reduction by 2035.

A Sustainable Future

The 2035 MTP/SCS serves as a blueprint for addressing the mobility and sustainability challenges faced in the region. The 2035 MTP/SCS will improve the quality of life for residents by implementing sound land use and transportation choices for the future. By 2035 the region is envisioned to have more travel choices and a safer, more efficient transportation system that provides improved access to jobs and education. Additionally, 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 2035.

This 2035 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 2035.

Regional Growth

The Monterey Bay Area is projected to grow more slowly than the state and nation. By the year 2035, the region's population is forecasted to exceed 885,000 people. That's an increase of more than 150,000 people; along with more than 40,000 new housing units and over 64,000 new jobs. See Tables 1-1 through 1-3 for detailed forecast figures.

The regional growth forecast was developed by the Center for Continuing Study of the California Economy, 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 65,600 jobs between 2010 and 2035. A portion of this job growth (17,200 jobs) represents recovery of jobs lost during the Great Recession.

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 that apply technology to the development of internationally traded goods and services. Information and professional services are where the largest job gains are projected for the state's economic base and the region has a below-average share of jobs in these sectors as well as minimal 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 2035, will be the second largest major industry sector after government. Government job levels are also projected to increase modestly following recent cutbacks as government will be required to serve 150,000 additional residents in 2035 as compared to 2010.

The largest job gains in absolute numbers and percentage increases are in education and health services 17,900 jobs (+76.5%) compared to pre-recession 2007 job levels. This growth will be led by growth in sectors associated with health care and social services for an aging population.

Three sectors are projected to add approximately 10,000 jobs professional and business services, leisure, and hospitality and government.

Construction job levels are projected to rebound from recent lows but remain below pre-recession levels through 2035. Although there is a substantial

gain measured from 2010 job levels, it is primarily driven by a slow return to more normal construction levels in the region.

Manufacturing job levels are projected to remain near current levels and not experience the job losses that occurred during the past 20 years. Slow growth is driven by the disparity between high productivity gains and slow increases in domestic demand as population growth slows and the population continues to age. These projections do not anticipate any major move of high tech manufacturing jobs from Silicon Valley to the Monterey Bay Area.

Consistent with national trends, slow growth in retail trade and finance are also expected in 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 2035. 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. AMBAG projects that the ratio of population to jobs will return to the average regional levels by 2020.

Additionally, 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 recession as job levels fell while the population continued to grow. Between 2010 and 2020, job levels are projected to increase faster than the population as previously unemployed residents find work during the economic recovery. Between 2020 and 2035, 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 2035. 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 734,300 in 2010 to 885,000 in 2035 for an increase of nearly 21 percent, or 150,700 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 contained in Appendix A.

Table 1-1a: Employment by Industry Monterey County North

Monterey County - Coastal	2010	2020	2025	2030	2035
Region Total	**308,400**	**344,500**	**353,600**	**362,900**	**372,800**
Carmel-By-The-Sea					
Agricultural	11	11	11	12	12
Construction	6	8	8	8	8
Industrial	59	57	56	56	55
Retail	431	506	509	514	519
Service	1,651	1,924	1,986	2,051	2,122
Public	124	139	146	152	159
TOTAL	**2,282**	**2,645**	**2,716**	**2,793**	**2,875**
Del Rey Oaks					
Agricultural	0	0	0	0	0
Construction	15	150	100	80	50
Industrial	26	25	25	25	24
Retail	112	181	182	182	183
Service	36	41	43	45	46
Public	225	243	252	260	270
TOTAL	**414**	**640**	**602**	**592**	**573**
Marina					
Agricultural	18	19	19	19	19
Construction	276	379	386	393	400
Industrial	212	526	526	526	530
Retail	926	1,079	1,085	1,496	1,906
Service	2,249	2,326	2,715	3,293	3,871
Public	1,270	1,398	1,460	1,515	1,579
TOTAL	**4,951**	**5,727**	**6,191**	**7,242**	**8,305**
Monterey					
Agricultural	810	856	865	871	878
Construction	818	1,123	1,144	1,164	1,185
Industrial	1,205	948	827	792	692
Retail	2,653	3,099	3,116	3,146	3,176
Service	12,085	14,363	14,787	15,274	15,745
Public	9,362	10,860	11,773	12,350	13,152
TOTAL	**26,933**	**31,249**	**32,512**	**33,597**	**34,828**
Pacific Grove					
Agricultural	0	0	0	0	0
Construction	167	229	233	237	241
Industrial	121	117	115	114	113
Retail	1,022	1,198	1,205	1,216	1,227
Service	4,930	5,900	6,203	6,506	6,858
Public	2,552	2,717	2,743	2,754	2,755
TOTAL	**8,792**	**10,161**	**10,499**	**10,827**	**11,194**
Sand City					
Agricultural	0	0	0	0	0
Construction	156	214	218	222	316
Industrial	113	110	108	107	105
Retail	703	820	825	833	1,095
Service	455	546	565	583	784
Public	135	149	157	163	200
TOTAL	**1,562**	**1,839**	**1,873**	**1,908**	**2,500**
Seaside					
Agricultural	0	0	0	0	0
Construction	204	380	385	390	395
Industrial	196	190	187	186	183
Retail	949	1,111	1,117	1,128	1,139
Service	2,743	3,182	3,258	3,339	3,425
Public	3,698	3,965	4,145	4,301	4,486
TOTAL	**7,790**	**8,828**	**9,092**	**9,344**	**9,628**

Source: AMBAG 2014 Regional Growth Forecast

Table 1-1b: Employment by Industry Monterey County South

Monterey County - Inland	2010	2020	2025	2030	2035
Region Total	**308,400**	**344,500**	**353,600**	**362,900**	**372,800**
Gonzales					
Agricultural	1,968	2,080	2,101	2,093	2,089
Construction	8	36	47	62	67
Industrial	160	395	553	561	574
Retail	238	277	279	303	328
Service	257	802	822	831	858
Public	291	494	614	952	1,318
TOTAL	**2,922**	**4,084**	**4,416**	**4,802**	**5,234**
Greenfield					
Agricultural	5,542	4,556	4,615	4,755	4,905
Construction	21	29	29	30	30
Industrial	59	57	56	56	55
Retail	138	160	161	162	164
Service	685	1,056	1,065	1,075	1,087
Public	489	1,546	1,571	1,595	1,621
TOTAL	**6,934**	**7,404**	**7,497**	**7,673**	**7,862**
King City					
Agricultural	1,441	1,453	1,538	1,549	1,562
Construction	50	124	150	172	183
Industrial	306	287	292	290	285
Retail	416	553	585	590	594
Service	1,060	1,518	1,520	1,542	1,563
Public	1,000	1,072	1,251	1,426	1,482
TOTAL	**4,273**	**5,007**	**5,336**	**5,569**	**5,669**
Salinas					
Agricultural	9,830	10,386	10,493	10,563	10,651
Construction	922	1,266	1,289	1,312	1,335
Industrial	2,114	2,050	2,021	2,080	2,173
Retail	7,270	8,441	8,481	9,063	9,643
Service	17,149	20,861	21,280	22,052	23,231
Public	17,217	19,523	20,178	20,092	19,850
TOTAL	**54,502**	**62,527**	**63,742**	**65,162**	**66,883**
Soledad					
Agricultural	300	300	300	300	300
Construction	41	56	57	58	59
Industrial	62	60	59	58	58
Retail	196	243	280	328	334
Service	890	1,002	1,028	1,054	1,160
Public	1,083	1,207	1,223	1,224	1,232
TOTAL	**2,572**	**2,868**	**2,947**	**3,022**	**3,143**
Balance Of County					
Agricultural	25,179	27,771	27,985	28,094	28,250
Construction	1,616	1,908	1,964	1,990	1,957
Industrial	968	829	734	662	578
Retail	5,045	5,638	5,593	4,683	3,561
Service	16,710	17,909	18,142	17,941	17,055
Public	8,553	8,943	9,377	10,585	12,042
TOTAL	**58,071**	**62,998**	**63,795**	**63,955**	**63,443**

Source: AMBAG 2014 Regional Growth Forecast

Table 1-1c: Employment by Industry San Benito County

San Benito County	2010	2020	2025	2030	2035
TOTAL	16,201	17,858	18,836	19,187	19,546
Hollister					
Agricultural	339	228	231	232	234
Construction	575	0	667	680	692
Industrial	1,109	1,471	1,448	1,437	1,415
Retail	1,403	1,564	1,572	1,586	1,602
Service	3,641	4,498	4,600	4,714	4,830
Public	3,430	3,759	3,931	4,083	4,258
TOTAL	10,497	11,520	12,449	12,732	13,031
San Juan Bautista					
Agricultural	1	16	16	17	18
Construction	6	8	8	9	10
Industrial	25	32	32	32	31
Retail	56	67	67	68	68
Service	222	263	269	276	283
Public	102	104	105	106	106
TOTAL	412	490	497	508	516
Balance Of County					
Agricultural	1,260	1,254	1,252	1,252	1,253
Construction	219	249	254	257	261
Industrial	1,367	1,393	1,375	1,366	1,344
Retail	941	1,088	1,095	1,105	1,116
Service	1,238	1,536	1,561	1,588	1,617
Public	267	328	353	379	408
TOTAL	5,292	5,848	5,890	5,947	5,999

Source: AMBAG 2014 Regional Growth Forecast

Table 1-1d: Employment by Industry Santa Cruz County

Santa Cruz County	2010	2020	2025	2030	2035
TOTAL	**110,201**	**120,021**	**123,550**	**127,295**	**131,117**
Capitola					
Agricultural	0	11	0	0	0
Construction	0	0	0	0	0
Industrial	38	32	31	31	31
Retail	1,694	1,742	1,752	1,768	1,785
Service	3,306	3,576	3,671	3,774	3,881
Public	1,132	1,200	1,237	1,277	1,321
TOTAL	**6,170**	**6,561**	**6,691**	**6,850**	**7,018**
Santa Cruz					
Agricultural	488	517	522	526	530
Construction	496	676	688	701	713
Industrial	2,140	1,799	1,771	1,758	1,730
Retail	3,813	3,912	3,772	3,820	3,908
Service	13,435	14,503	14,924	15,286	15,493
Public	16,704	18,984	19,602	20,455	21,489
TOTAL	**37,076**	**40,391**	**41,279**	**42,546**	**43,863**
Scotts Valley					
Agricultural	32	34	34	34	35
Construction	106	125	128	130	133
Industrial	804	675	665	660	650
Retail	759	774	776	785	792
Service	2,532	2,576	2,612	2,634	2,667
Public	932	967	1,004	1,010	1,012
TOTAL	**5,165**	**5,151**	**5,219**	**5,253**	**5,289**
Watsonville					
Agricultural	2,869	3,039	3,071	3,091	3,116
Construction	1,100	1,497	1,525	1,553	1,580
Industrial	1,439	1,209	1,192	1,181	1,164
Retail	3,397	3,552	3,749	3,818	3,842
Service	7,315	8,632	9,211	10,036	10,931
Public	5,385	6,430	6,932	7,297	7,910
TOTAL	**21,505**	**24,359**	**25,680**	**26,976**	**28,543**
Balance Of County					
Agricultural	6,211	6,380	6,447	6,492	6,548
Construction	1,298	1,788	1,820	1,852	1,885
Industrial	879	938	927	922	910
Retail	5,238	5,295	5,299	5,306	5,318
Service	17,112	17,286	17,342	17,374	17,393
Public	9,547	11,872	12,846	13,724	14,350
TOTAL	**40,285**	**43,559**	**44,681**	**45,670**	**46,404**

Source: AMBAG 2014 Regional Growth Forecast

Table 1-2: Population

Geography	2010	2020	2025	2030	2035	Compound Annual Growth Rate	Change Over Forecast Period
AMBAG Region	**732,708**	**800,000**	**827,000**	**856,000**	**885,000**	**0.76%**	**20.78%**
Monterey County	**415,057**	**447,516**	**463,884**	**479,487**	**495,086**	**0.71%**	**19.28%**
Carmel-By-The-Sea	3,722	3,541	3,661	3,789	3,917	0.20%	5.24%
Del Rey Oaks	1,624	1,889	2,345	2,806	3,468	3.08%	113.55%
Gonzales	8,187	13,340	13,955	16,194	19,333	3.50%	136.14%
Greenfield	16,330	21,341	22,061	22,835	23,609	1.49%	44.57%
King City	12,874	14,568	16,398	17,759	18,620	1.49%	44.63%
Marina	19,718	21,315	22,651	23,388	24,225	0.83%	22.86%
Monterey	27,810	28,004	28,839	29,743	30,647	0.39%	10.20%
Pacific Grove	15,041	15,394	15,914	16,472	17,030	0.50%	13.22%
Salinas	150,441	156,793	161,405	166,912	172,499	0.55%	14.66%
Sand City	334	1,048	1,198	1,414	1,550	6.33%	364.07%
Seaside	33,025	36,120	40,260	41,308	42,256	0.99%	27.95%
Soledad	25,738	31,316	32,050	32,839	33,628	1.08%	30.66%
Balance Of County	100,213	102,847	103,147	104,028	104,304	0.16%	4.08%
San Benito County	**55,269**	**73,103**	**75,604**	**78,418**	**81,332**	**1.56%**	**47.16%**
Hollister	34,928	39,975	41,704	43,551	45,397	1.05%	29.97%
San Juan Bautista	1,862	1,993	2,015	2,053	2,092	0.47%	12.35%
Balance Of County	18,479	31,135	31,885	32,814	33,843	2.45%	83.14%
Santa Cruz County	**262,382**	**279,381**	**287,512**	**298,095**	**308,582**	**0.65%**	**17.61%**
Capitola	9,918	9,119	9,427	9,758	10,088	0.07%	1.71%
Santa Cruz	59,946	66,860	70,058	73,375	76,692	0.99%	27.94%
Scotts Valley	11,580	11,638	11,696	11,754	11,813	0.08%	2.01%
Watsonville	51,199	59,446	61,452	63,607	65,762	1.01%	28.44%
Balance Of County	129,739	132,318	134,879	139,601	144,227	0.42%	11.17%

Source: AMBAG 2014 Regional Growth Forecast

Table 1-3: Housing Units

Geography	2010	2020	2025	2030	2035	Compound Annual Growth Rate	Change Over Forecast Period
AMBAG Region	**261,394**	**280,765**	**286,649**	**295,936**	**303,245**	**0.60%**	**16.01%**
Monterey County	**139,048**	**147,106**	**150,260**	**154,585**	**157,992**	**0.51%**	**13.62%**
Carmel-By-The-Sea	3,417	3,417	3,417	3,417	3,418	0.00%	0.03%
Del Rey Oaks	741	898	1,035	1,246	1,521	2.92%	105.26%
Gonzales	1,989	3,400	3,591	3,958	4,607	3.42%	131.62%
Greenfield	3,752	4,734	4,795	4,982	5,105	1.24%	36.06%
King City	3,218	3,838	3,944	4,395	4,484	1.34%	39.34%
Marina	7,200	8,248	9,264	9,608	9,797	1.24%	36.07%
Monterey	13,584	13,665	13,695	13,750	14,001	0.12%	3.07%
Pacific Grove	8,169	8,169	8,169	8,274	8,478	0.15%	3.78%
Salinas	42,651	43,174	43,989	45,795	46,883	0.38%	9.92%
Sand City	145	439	496	586	629	6.05%	333.79%
Seaside	11,335	12,556	12,907	13,311	13,664	0.75%	20.55%
Soledad	3,876	5,231	5,325	5,533	5,670	1.53%	46.28%
Balance Of County	38,971	39,337	39,633	39,730	39,735	0.08%	1.96%
San Benito County	**17,870**	**22,620**	**23,221**	**24,200**	**25,057**	**1.36%**	**40.22%**
Hollister	10,401	11,176	11,534	12,114	12,620	0.78%	21.33%
San Juan Bautista	745	834	843	852	861	0.58%	15.57%
Balance Of County	6,724	10,610	10,844	11,234	11,576	2.20%	72.16%
Santa Cruz County	**104,476**	**111,039**	**113,168**	**117,151**	**120,196**	**0.56%**	**15.05%**
Capitola	5,534	5,534	5,534	5,537	5,553	0.01%	0.34%
Santa Cruz	23,316	26,890	27,547	28,297	29,355	0.93%	25.90%
Scotts Valley	4,610	4,655	4,692	4,771	4,785	0.15%	3.80%
Watsonville	14,089	16,382	16,933	17,733	18,188	1.03%	29.09%
Balance Of County	56,927	57,578	58,462	60,813	62,315	0.36%	9.46%

Source: AMBAG 2014 Regional Growth Forecast

Goals & Policies

AMBAG began developing the 2035 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 2035 MTP/SCS. Performance measures were established to evaluate how well the 2035 MTP/SCS performs in each of these areas.

Plan Overview

The 2035 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 2035 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 2035 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 2035 MTP/SCS.

The development of the 2035 MTP/SCS has required a greater level of collaboration than past plans. AMBAG worked closely with stakeholders to develop a growth forecast, a multimodal transportation network, a land use pattern, and strategies based on reasonably available revenues.

AMBAG developed the 2035 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. AMBAG also worked in close coordination with the region's transit operators, local jurisdictions, Caltrans, the Monterey Bay Area Unified Air Pollution Control District, state and federal resource agencies, local agency formation commissions, and other special purpose public agencies.

Scenario Development and Evaluation

To evaluate various combinations of transportation and land use strategies that could lead to achieving the GHG targets established by CARB for the tri-county region, AMBAG developed and evaluated scenarios that included various land use assumptions and transportation system

improvements and investments. Each scenario was analyzed using AMBAG's recently upgraded transportation model and land use modeling software. Outreach with partner agencies, local jurisdictions, key stakeholders, and the public was ongoing throughout the planning process through workshops and meetings, surveys, and interactive tools.

Beginning in December 2012, AMBAG began the scenario planning effort by gathering critical data as a starting point for the 2035 MTP/SCS. Prior developing scenarios, AMBAG worked with local jurisdictions on growth forecasts for 2020 and 2035. The forecast was then used as the growth parameter for the scenario planning process.

Utilizing feedback from a series of community workshops, interactive web-based surveys, a telephone survey, and meetings with stakeholders, AMBAG developed five initial 2035 MTP/SCS scenarios representing distinct conceptual approaches to land use and transportation through 2035. AMBAG evaluated these initial scenarios using a set of transportation, environmental, and equity performance measures. An additional round of community workshops was conducted in the summer of 2013 throughout the region, along with a second survey, to present the initial scenarios and receive feedback from a wide range of stakeholders and the general public.

The input gathered from these workshops, along with continued extensive input from partner agencies and key stakeholders, allowed for a further refinement and development of two hybrid scenarios for more detailed evaluation and assessment. Ultimately, the AMBAG Board selected a single preferred scenario in September 2013. The preferred scenario builds on the region's success over the last four years in implementing the previous MTP and moves the region forward in meeting mobility, integrated land use and transportation strategies, and other regional goals. The components of the 2035 MTP/SCS are described briefly in the next section and in more detail in the succeeding chapters of this document.

Scenario Planning

Scenario planning is an analytical tool that can help transportation professionals prepare for what lies ahead. Scenario planning provides a framework for developing a shared vision for the future by analyzing various forces (e.g., health, transportation, economic, environmental, land use, etc.) that affect growth. Scenario planning, which can be done at the statewide level or for metropolitan regions, tests various future alternatives that meet state and community needs. A defining characteristic of successful public sector scenario planning is that it actively involves the public, the business community, and elected officials on a broad scale, educating them about growth trends and trade-offs, and incorporating their values and feedback into future plans.

Source: Federal Highway Administration, http://www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/

Strategies and Investments

The MTP 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 2035. 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 2035 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 2035 MTP/SCS is described in Chapter 6 and a glossary is included in Chapter 7.

2 Transportation Investments

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Introduction

This chapter sets forth the investments and strategies that constitute the 2035 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 2035 MTP/SCS will develop an improved multimodal network while maintaining the existing system.

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 2035 MTP/SCS places a high priority on protecting the region's existing system and ensuring that the transportation system is being operated as safely, efficiently, and effectively as possible.

Safety

In 2005, Congress passed the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which requires states to develop Strategic Highway Safety Plans. The California Department of Transportation (Caltrans) developed a Strategic Highway Safety Plan 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. While the California Strategic Highway Safety Plans sets various strategies that state agencies can implement to reduce fatalities, there are complementary actions that can be performed by regional and local governments.

The projects and programs included in the 2035 MTP/SCS aim to reduce collisions and fatalities by improving the overall safety of the system. 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.

Strategic System Expansion

One of the 2035 MTP/SCS's primary goal 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 it's residents need. The 2035 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 needed 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.

Highways and Local Arterials

The three counties and 18 incorporated cities in the region are responsible for an extensive network of county and city roads and streets. 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 2035 MTP/SCS and are included in the Project List (Appendix C). The 2035 MTP/SCS provides over $2.1 billion for highway investments and almost $1.7 billion for local streets and roads.

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 2035 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 2035 MTP/SCS.

- US 101 corridor
- SR 1, SR 68, and SR 156 West improvements
- SR 25 improvements
- SR 156 widening
- SR 1 auxiliary lane improvements (Santa Cruz)

Local Arterials

Local streets and roads – including the 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.

Figure 2-1: 2035 Regional Highway Network

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.

Some examples of regionally significant projects on local arterials include:

- Marina – Salinas Multimodal (bus/roadway) Corridor improvements
- US 101/5th Street operations improvements
- 41st Avenue mutimodal 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), San Benito Transit (County Express). Additional public transit providers include Amtrak and six paratransit operators.

A key focus of this 2035 MTP/SCS was to invest in an ambitious transit network that significantly expands the role that transit plays in meeting the region's mobility needs.

The 2035 MTP/SCS provides $2.6 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 2035 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.

Figure 2-2: 2035 Regional Transit Network

Bus Rapid Transit

Bus Rapid Transit (BRT) is a high-capacity, transit solution that can achieve some of the same performance benefits of rail modes without the same high cost capital and operating investments as rail. This integrated system uses buses or specialized vehicles on roadways or dedicated lanes to quickly and efficiently transport passengers to their destinations, while offering the flexibility to meet a variety of local conditions. BRT system elements can easily be customized to community needs and incorporate state-of-the-art, low-cost technologies that attract more passengers and ultimately help reduce overall traffic congestion.

There are many elements to a BRT system, some or all of which can be incorporated to make a BRT more attractive than congested roadways. These include, but are not limited to: dedicated or semi-dedicated lanes, enhanced stations with real time arrival information, innovative vehicles that improve passenger comfort, improved and quicker fare collection, intelligent transportation system technologies such as transit signal priority, quicker, more efficient service and distinctive branding and identity.

The benefits to BRT service include decreased travel time, increased reliability, improved accessibility, increased safety and security as well as increased capacity. The integration of these BRT system elements have shown to increase ridership. (TCRP Project A-23, 2003)

Source: National Bus Rapid Transit Institute, http://www.nbrti.org/

Bus Rapid Transit and Express Service

The 2035 MTP/SCS allocates additional funding to bus transit in the region. Fixed route bus lines in the region are continuously evaluated and adjusted. Additionally, new bus rapid transit (BRT) and express routes are planned in many key regional corridors, including:

- Watsonville – Santa Cruz BRT
- Marina – Salinas Multimodal Corridor
- Monterey BRT (MST study)
- Salinas BRT
- Monterey South County express bus transit enhancements
- Hollister to Salinas and Watsonville

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 commuting 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, bus rapid transit lite or express service can still serve the same route with high speeds by utilizing transit priority infrastructure such as queue jumps. Bus rapid transit 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.

Assembly Bill (AB) 946 (Stone, 2013) authorizes 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.

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

Expanded Local Service

A system of high frequency local bus services in 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
- UCSC & other bus frequency improvements
- System wide operations funding

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 can also provide mobility for both transit dependent and choice riders, and residents and employees in higher density, 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.

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, described below.

Coordinated Plan

A Public Transit-Human Services Transportation Plan (Coordinated Plan) has been 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 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 was adopted by AMBAG in October 2013.

Passenger Rail

Rail projects are an important component of the regional transportation network that will 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 from Highways 1, 101, and 156.

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 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 the Coast Starlight services which will stop at new additional 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 travel to jobs, education, and entertainment.

Two rail services for Monterey County are planned:

- *Capitol Corridor Extension to Salinas* – An extension of commuter rail service from Santa Clara County to Salinas
- *Monterey Branch Light Rail* – Passenger light rail service on the Monterey Peninsula

The Monterey Branch Line will connect to the planned commuter rail service in Castroville and provide local transit service to planned stations in Monterey, Seaside, Sand City, Marina/CSUMB, and Castroville. As a precursor to the light rail bus rapid transit is being considered along the same alignment. A less expensive alternative, bus rapid transit will allow transportation agencies to phase in a full light rail system.

In 2012, the Santa Cruz County Regional Transportation Commission (SCCRTC) purchased a rail line extending almost 32 miles from Davenport to Pajaro. One rail service is planned for Santa Cruz County:

- *Santa Cruz Branch Rail Line* – Planned passenger rail and expanded freight service between Santa Cruz and Watsonville

This service will use the existing right of way which requires significant improvements before passenger rail service can operate on the existing tracks. The Monterey Bay Sanctuary Scenic Trail will also share the right of way with the rail line in Santa Cruz County.

Active Transportation

For the purposes of the 2035 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. Additionally 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 need to be made. 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 2035 MTP/SCS's active transportation improvements total over $898 million.

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 kiosks, lockers, and wayfinding signs
- Sidewalk enhancements
- Bicycle and pedestrian plans

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. 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.

Bike lanes in the region are classified in three 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.

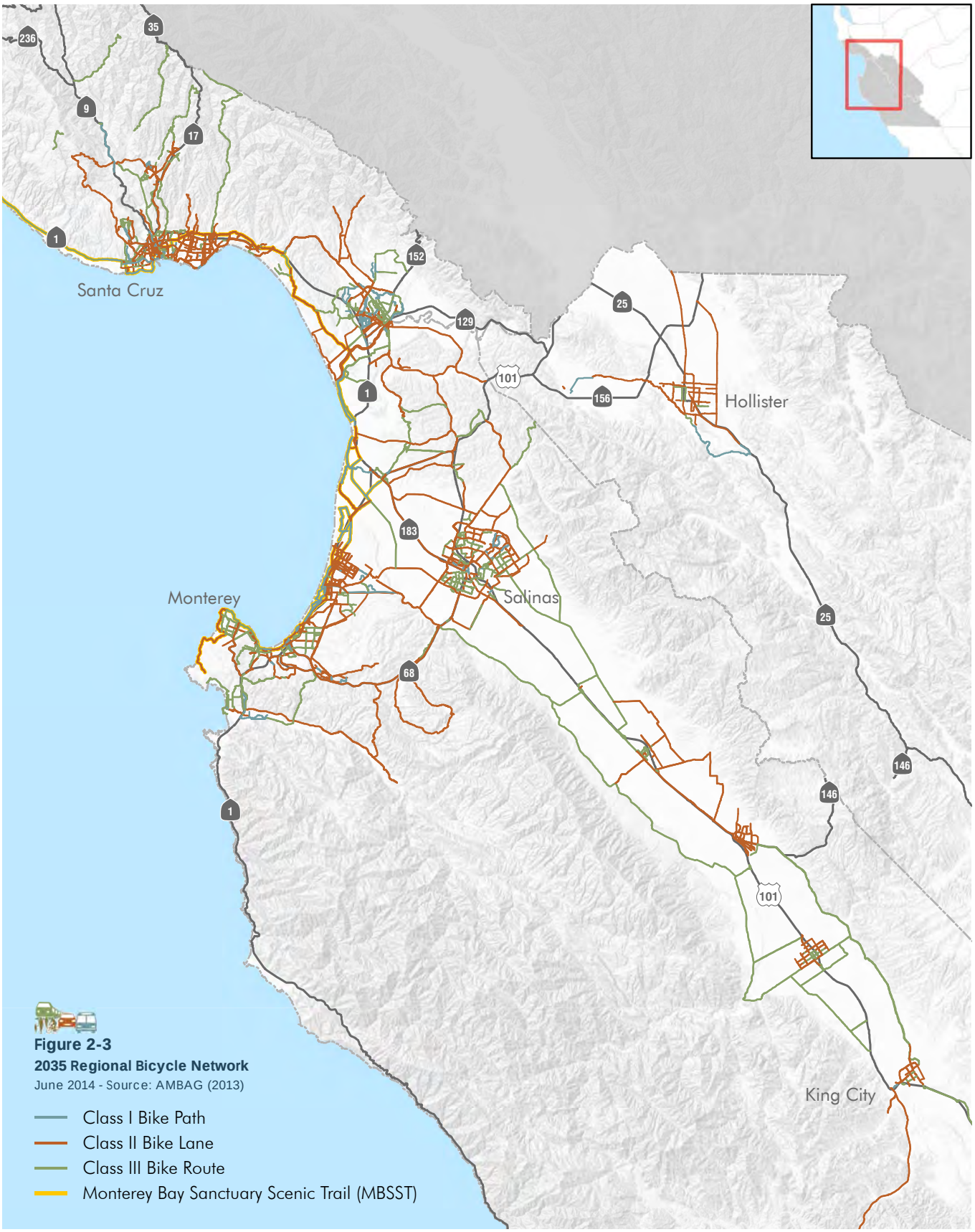
Pedestrian Facilities

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.

More emphasis is being placed on walking as a viable, inexpensive, nonpolluting, and healthy way to travel. Most pedestrian infrastructure is in the form of sidewalks; however, there are many significant trails in the region. Multipurpose trails are separated from roadways and are usually

Figure 2-3: 2035 Regional Bicycle Network



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. Additionally, 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

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 2035 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.

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 Route 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 the new transportation authorization bill, MAP-21, 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.

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 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.

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/

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 development of the trail has been and will continue to be coordinated with appropriate agencies such as the State Coastal Conservancy, the California Coastal Commission, resource agencies and local jurisdictions. Refer to the MBSST Master Plans for more information.

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 2012, five commercial airlines served the airport for a total of 196,268 enplanements.

Primary air-carrier airports with annual enplanements over 10,000 are required to have an Airport Ground Access Improvement Program. TAMC will develop this program in coordination with AMBAG. 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. Additional information on airport access can be found in the TAMC Regional Transportation Plan.

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.

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, 77,745 general aviation operations took place in 2011, with 197 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 2008, it handled 7,860 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 31 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 40,150 operations in 2012 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 2013, there were an estimated 103,000 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.

Hollister Municipal

Hollister Municipal Airport is located northwest of the City of Hollister on 343 acres. It services 168 aircraft and there were an estimated 52,560 operations in 2012. In addition to the 6,350 foot runway, Hollister Municipal also has a 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 2011, there were 7,665 general aviation operations, and 91 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, and other business interests throughout the region. AMBAG will work with airport stakeholders to update the Airports Economic Impact Study.

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. Additionally, projections recently prepared by Monterey Peninsula Airport District (MPAD) for the draft Monterey Regional Airport Master Plan forecast 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 elsewhere.

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 $238 million in 2008. 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 railways and local roads that connect crop production with buyer markets via major state routes and US 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 US 101, SR 46, SR 129, SR 152, and SR 156) 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 is to increase the awareness of the US 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 group has been meeting since 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. Additionally, the group 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.

Figure 2-4: Goods Movement System

Figure 2-4
2035 Goods Movement System
June 2014 - Source: AMBAG (2013)

California Freight Mobility Plan

Caltrans is currently developing the California Freight Mobility Plan, an update to the Goods Movement Action Plan, issued in two phases in 2005 and 2007. Similar to the Goods Movement Action Plan, the California Freight Mobility Plan will address current freight conditions, identify important trends, and respond to major issues in goods movement across all modes and regions of California. In addition, the updated plan will respond 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 California Freight Mobility Plan is scheduled to be finalized by December 2014.

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 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.

US 101 Corridor Freight Study

The primary freight corridor in the Monterey Bay Area is US 101. It is the main north-south route between Los Angeles and San Francisco. The US 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 US 101 from San Benito County through Santa Barbara County. The US Route 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 will provide better connectivity between adjacent communities. The study is scheduled to be completed by 2016.

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 2035 MTP/SCS allocates over $46 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.

AMBAG subsidizes and manages the Regional Vanpool Program. The funding provides a monthly subsidy of $350 per vanpool for the first 12 months of operation. The subsidy encourages more workers to join a vanpool because of the reduced cost, thereby reducing emission and providing employment opportunities to individuals who cannot afford to own and operate a vehicle or do not have a driver's license.

As of April 30, 2014, the program had started ninety-five new vanpools, reducing an estimated of 22,935,080 vehicle miles traveled and removing 915 vehicles from the roads in the region. Sixty-three vanpools serve the agricultural industry. Under this Plan, AMBAG will continue to expand vanpool service - specifically to agricultural workers - to provide a safe, flexible, and affordable means of transportation.

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 the regional vanpool program operated by AMBAG. 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 regional vanpool 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 over 18 percent of all employment. Agricultural workers represent a unique sector that is particularly well suited to vanpools. They often work 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.

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. Telecommuting has increased dramatically over the past decade and nearly six percent of all workers in the Monterey Bay Area telecommute most of the time, and an even greater number telecommute at least one day per month.

Systems Management

TSM increases the productivity of the existing multimodal transportation system, thereby reducing the need for expensive system expansion. TSM relies in part on intelligent transportation system (ITS) technologies to increase traffic flow and reduce congestion. This 2035 MTP/SCS dedicates nearly $23 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

There are a variety of projects in the Plan that utilize new technologies such as real time transit information and new detection software for lights. However, while these technologies are new, they are widely used and not necessarily emerging. Transportation plans must also 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. Technology will lead to improvements in how transit and transportation infrastructure operates in the future, and innovative designs and passenger amenities will help make transit attractive to new market segments. While this Plan does not include technologies such as autonomous cars or personal rapid transit, it recognizes that these technologies are emerging. As projects that incorporate new emerging technologies are proposed by local jurisdictions to the transportation planning agencies and start to become more widely adopted, AMBAG will consider and potentially incorporate them into future Metropolitan Transportation Plans.

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
Improved Data Collection	Monitor system performance
Transit Automatic Vehicle Location (AVL)	Enables monitoring of transit vehicles and ensures on time performance

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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, system preservation, and demand management goals. It also addresses the need for investment in goods movement infrastructure. Improving ground access in and around major goods movement facilities and enhancing major highways and public transit are critical to maintaining the health of the Monterey Bay Area's economy. The 2035 MTP/SCS calls for various revenue sources for implementing a program of infrastructure improvements to keep freight and people moving.

The 2035 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 2035 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 2035 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 2035. Additionally, the region assumes new sales tax measures in Monterey and Santa Cruz counties as reasonably available funds.

Financial Assumptions

The financial forecasts in the 2035 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 2035 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 Metro Transit District, the three Counties, and 18 cities.

Year of Expenditure (YOE)

The Safe Accountable Flexible Transportation Equity Act – a Legacy for Users (SAFETEA-LU) 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 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 2035. Revenue forecasts are thus a key part of the 2035 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

With the passage of the Intermodal Surface Transportation Efficiency Act in 1991 and its successors, the 1998 Transportation Equity Act for the 21st Century (TEA 21), and SAFETEA-LU, nationwide transportation funding appeared to stabilize. However, 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.

For some years after SAFETEA-LU expired Congress kept extending the Bill without updating priorities for spending or grant allocation formulas. 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 creates a streamlined, performance based and multimodal program to address the challenges facing the U.S. transportation system.

Federal revenue sources for the region total just under $1.1 billion, 14 percent of the region's total forecast revenue through 2035. The region qualifies for federal revenue from almost twenty different programs. However, just two of these programs constitute 43 percent of all federal revenue: the Regional Surface Transportation Program and the Urbanized Area Formula Program (Section 5307). The major revenue sources are detailed below.

Regional Surface Transportation Program

The Regional Surface Transportation Program (RSTP) 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 RSTP funds have 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 $223 million from this federal program over the course of the next 25 years.

Urbanized Area Formula Program (Section 5307).

Section 5307 is the original federal transit assistance program for transit operators in urbanized area 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

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. During the recent recession, gas tax receipts fell well below funding levels authorized in the legislation. Since fiscal year 2008, Congress has transferred $34.5 billion from the Treasury to the Highway Trust Fund to address shortfalls. In its most recent estimates, the Congressional Budget Office (CBO) projected the fund will reach a shortfall before the end of 2014. The Mass Transit Account remains solvent today, though its long term health is also believed to be in jeopardy. The current funding approach is unsustainable and most industry observers agree new sources of funds for transportation projects are essential.

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

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 nearly $234 million from this federal program through 2035.

State Revenues

State revenue sources total over $1.8 billion, or 24 percent of the region's total forecast revenue for the life of the Plan. Of the state funding sources 85 percent comes from two programs – State Highways Operation and Protection Program (SHOPP) and the Regional Share State Transportation Improvement Program (STIP). The major revenue sources are detailed below.

State Highways Operation and Protection Program

The State Highways 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 $1.2 billion for the life of the 2035 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 Improvement Program and Interregional Transportation Improvement Program.

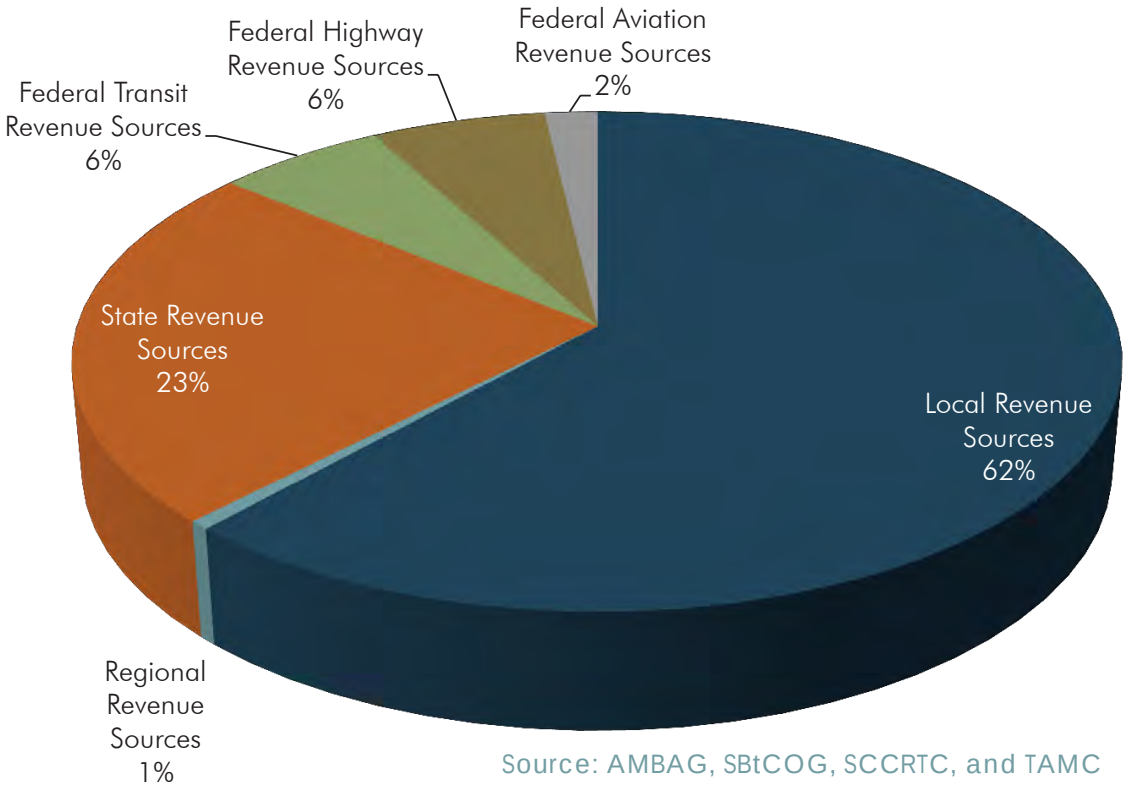
Of funds available for programming in the STIP, 75 percent is allocated to regional transportation planning agencies for the selection of projects of regional significance in the Regional Transportation Improvement Program. The 25 percent remaining is used as the interregional share and is limited to state highway, intercity passenger rail, mass transit guideway, or grade separation projects that facilitate the interregional movement of people and goods.

At least 60 percent of the interregional share (15 percent of the STIP) must be programmed for projects on the interregional system. At least 15 percent of that 60 percent (9 percent of the interregional program; 2.25 percent of the STIP) must be for intercity rail. The remaining 40 percent of the interregional share is designated for interregional movement of people and goods. The Monterey Bay Area forecasts over $237 million in revenue from the Regional Share STIP category and $65 million in revenue from the Interregional Share STIP. The 2035 MTP/SCS projects are consistent with the STIP fund estimate, Interregional Transportation Improvement Program, and Federal Transportation Improvement Program.

Active Transportation Program

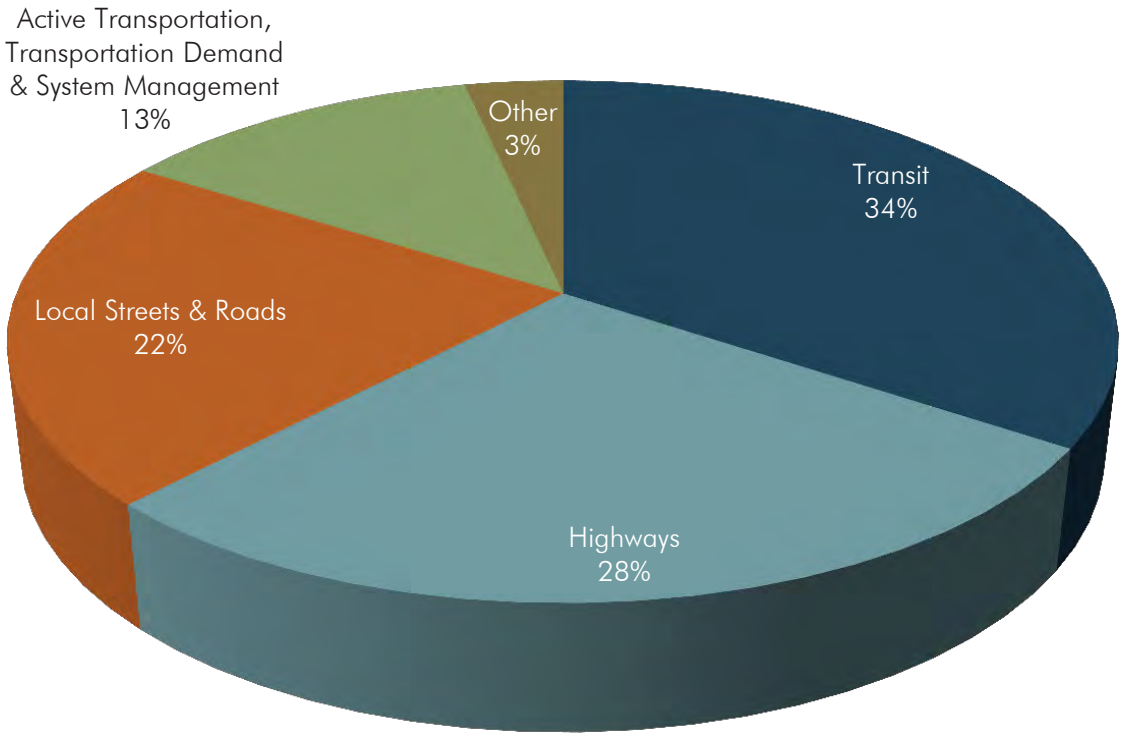
MAP-21 has consolidated many of the dedicated funding streams for active transportation projects (Transportation Enhancements, Safe Routes to School, and Recreational Trails) under a single new program: the Transportation Alternatives Program (TAP). This equated to roughly a 30 percent cut

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)	22 Year Not Escalated	Percent of Funding (Not Escalated)	22 Year Escalated at 1.0175%	Percent of Funding (Escalated)
Local Revenue Sources	**$4,738,819**	**61.8%**	**$5,701,072**	**60.9%**
Gas Tax, Prop 42 and TDA	$1,241,848	16.2%	$1,450,130	15.5%
Transit Related Revenues	$1,296,664	16.9%	$1,650,304	17.6%
Local Misc. Revenues	$2,200,307	28.7%	$2,600,638	27.8%
Regional Revenue Sources	**$42,825**	**0.6%**	**$51,366**	**0.5%**
AB 2766	$42,825	0.6%	$51,366	0.5%
State Revenue Sources	**$1,819,132**	**23.7%**	**$2,238,113**	**23.9%**
Prop 1B and SHOPP	$1,280,578	16.7%	$1,618,346	17.3%
STIP	$302,378	3.9%	$340,454	3.6%
State Misc. Revenues	$236,176	3.1%	$279,313	3.0%
Federal Transit Revenue Sources	**$457,799**	**5.9%**	**$659,401**	**7.1%**
Bus and Bus Related Grants (5309c), Enhanced Mobility of Seniors and Individuals with Disabilities (5310), FTA Section 5304, Intercity Bus (5311f), Fixed Guideway Capital Investment Grants (5309), Safety Authority (5329), Bus and Bus Facilities Formula Grants (5339), and Federal Very Small Starts	$205,917	2.7%	$363,184	3.9%
Metropolitan Planning (5303)	$230	0.0%	$270	0.0%
Nonurbanized Rural Area Formula Program (5311)	$17,751	0.2%	$25,364	0.3%
Urbanized Area Formula Program (5307)	$233,901	3.0%	$270,583	2.9%
Federal Highway Revenue Sources	**$473,746**	**6.2%**	**$547,158**	**5.9%**
Earmarks, High Risk Rural Road (HR3), Highway Bridge Program (HBP), Highway Safety Improvement Program (HSIP), National Scenic Byways Program, and FEMA/CALEMA/ER - Emergency Road Repair Funding	$243,479	3.2%	$287,022	3.1%
Regional Surface Transportation Program (RSTP)	$223,487	2.9%	$260,136	2.8%
Transportation Enhancements (TE) Transportation Alternatives Program (TAP)	$6,780	0.1%	$0	0.0%
Federal Aviation Revenue Sources	**$142,755**	**1.9%**	**$167,933**	**1.8%**
FAA Airport Improvement Program (AIP)	$142,755	1.9%	$167,933	1.8%
Grand Total	**$ 7,675,076**	**100.0%**	**$ 9,365,043**	**100.0%**

Source: AMBAG, SBtCOG, SCCRTC, and TAMC

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. Additionally, MAP-21 gives 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 will be administered on a competitive grant basis with a 25 percent set aside for disadvantaged populations. The region forecasts over $70 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. Statue 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 almost $140 million in TDA/STA funds.

Local Revenues

At $4.7 billion, local revenues constitute 62 percent of all transportation funding for the Monterey Bay Area in the 2035 MTP/SCS. The Transportation Development Act/Local Transportation Fund (10%), the Highway User Tax/Gas Tax (16%), developer fees (8%), transit revenue (27%), and new transportation sales taxes (16%) constitute over two thirds of all local revenues. The major revenue sources are detailed below.

Transportation Development Act - Local Transportation Fund

The TDA extended sales tax to gasoline purchases and earmarked 1/4 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 $491 million from the TDA/LTF category.

Gas Tax

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. The region is forecast to receive $750 million in gas tax 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 nearly $438 million of revenue for the Monterey Bay Region through 2035. Other sources of transit revenue include a sales tax and revenue on ad space. The combined total revenue from transit is forecasted to be over $1.2 billion or 27 percent of all local revenue sources for the life of this Plan.

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. The Fort Ord Reuse Authority also collects fees to fund transportation improvements needed to accommodate redevelopment of the former Fort Ord.

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. In total the region forecasts to collect over $619 million in developer fees including regional developer fees.

Local Transportation Sales Tax

A new transportation sales tax is identified as a reasonably available revenue source for Monterey and Santa Cruz Counties. Based on numerous surveys and the successes in other regions of the state representing over 80 percent of the state's population, the 2035 MTP/SCS assumes that voters in Monterey and Santa Cruz counties will approve a new local revenue source - an 1/8 cent sales tax for public transit and a 1/2 cent sales tax for regional transportation in Monterey County, and a 1/2 cent sales tax in Santa Cruz County - thereby including an anticipated revenue of approximately $770 million or 16 percent of local revenue in the Plan. It is reasonable to include this potential revenue for several reasons:

- Numerous surveys, public workshops, and outreach to community and business leaders and stakeholder groups have demonstrated broad based support for new taxes to fund transportation projects. Over the past decade, the Regional Transportation Planning Agencies for Monterey and Santa Cruz Counties and local agencies have worked with the community to evaluate options to increase funding for transportation, including a Vehicle Registration Fee discussion conducted in 2012 and the extensive Transportation Funding Task Force (TFTF) process in 2006-2007 in Santa Cruz County.
- Thirty-three percent of counties in California representing 84 percent of the population are self help counties benefiting from increased locally sourced transportation revenues and those that are not continue efforts to become self help counties through a statewide Aspiring Counties group; therefore, it is reasonable to assume that this trend will continue in the future.
- While current state law requires that two-thirds of voters approve any new local sales tax which includes a specific list of projects, legislative efforts are underway to reduce the two-thirds (66.67%) vote requirement for special taxes to 55 percent which will increase the likelihood for local transportation measures to be approved.
- Local transportation sales taxes and vehicle registration fees are among the more feasible funding sources to adopt logistically, as state law

already authorizes voters to raise such taxes.

- In order to further reduce greenhouse gas (GHG) emissions, additional revenues are needed to build the infrastructure and expand services to achieve state and local goals.
- As fewer state and federal dollars are designated for transportation, local communities are increasingly recognizing the need to generate reliable local funding that cannot be taken by the state.

Strategies to implement local revenue measures include:

- Develop a draft expenditure plan of projects to receive sales tax and vehicle registration fee revenues based on funding projections included in the Regional Transportation Plans, including gaps in available revenue for some projects.
- Conduct polling at various points to test support for expenditure plans, test key messages and ballot language.
- Develop a public education plan and build support coalitions.
- Conduct outreach, including roundtables, focus groups, community meetings, workshops, work with advisory bodies, and seek input from local jurisdiction councils and board of supervisors.
- Conduct a public information program which may include: establishing speaker's bureau to community and business groups, developing project Fact Sheets, writing articles for newsletters, using newspaper inserts, printing brochures, developing a special website or webpage, conducting media outreach, and posting Frequently Asked Questions.
- Complete legal and required environmental review of the expenditure plan.
- Draft and finalize ballot language. File the ballot measure at the elections office.

Highway 156 Toll Revenues

Tolling revenues for State Route 156 West are included as a reasonably available revenue source for Monterey County. 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

Table 3-2: Total Expenditures by Project Type

Expenditures (all figures in 1000's)	22 Year Current Dollars (Not Escalated)	Percent of Funding (Not Escalated)	22 Year of Expenditure Dollars (Escalated)	Percent of Funding (Escalated)
Transit				
Rail and BRT New Facilities	$671,459	8.7%	$878,750	9.7%
Transit Capital, Rehabilitation, and Replacement	$250,605	3.3%	$316,573	3.5%
Transit Operations	$1,480,757	19.3%	$1,788,120	19.8%
ADA/HHSA Transportation Services	$231,112	3.0%	$288,617	3.2%
Highways				
Highway Projects	$940,292	12.3%	$1,195,237	13.2%
Highway Operations, Maintenance, and Rehabiliation	$1,191,057	15.5%	$1,411,531	15.6%
Local Streets & Roads				
Local Streets and Roads Capital Expansion	$566,747	7.4%	$728,178	8.1%
Local Streets and Roads Operations, Maintenance, and Rehabilitation	$1,112,230	14.5%	$1,014,485	11.2%
Active Transportation, Transportation Demand & System Management				
Active Transportation	$898,919	11.7%	$999,491	11.1%
Transportation Demand Management	$46,211	0.6%	$57,172	0.6%
Transportation Systems Management	$22,763	0.3%	$27,711	0.3%
Other				
Airport	$262,924	3.4%	$319,093	3.5%

Source: AMBAG, SBtCOG, SCCRTC, and TAMC

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. The region is forecasting almost $149 million in revenue from tolling on State Route 156.

Strategies to implement this revenue include:

- Execution of a Pre-Development Agreement between Caltrans, TAMC and a private developer team in which the developer participates in project planning, value engineering, determining financial feasibility and other activities that take place before the construction procurement phase.
- Completion of an investment-grade Traffic and Revenue Study, as other products needed to inform TAMC's decision to proceed with tolling for the project.
- Preparation of a Supplemental Environmental Impact Report.
- Evaluation of various design and financing options that would allow building both phases of the project.

Revenue Constrained Scenario

As the 2035 MTP/SCS is 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 2035 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 2035, 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 2035 MTP/SCS. The total known unconstrained need for the Monterey Bay Area is more than $15 billion.

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 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. Additionally, the 2035 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 2035.

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 2035 MTP/SCS achieves GHG emission reductions of three percent per capita in 2020 and a nearly six percent per capita in 2035, surpassing CARB's reduction targets of zero and five 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 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

Assembly Bill (AB) 32 and Senate Bill (SB) 375

California has a number of regulations regarding greenhouse gases (GHGs) and they are often confused with each other, in particular SB 375 is confused with AB 32. The major difference is AB 32 reduces GHGs from all sectors, whereas SB 375 is only concerned with transportation, specifically passenger vehicles.

California's major initiative for reducing GHG emissions is outlined in AB 32, the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels, and requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions.

Senate Bill (SB) 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by aligning transportation planning and funding, land use planning and state housing mandates at the regional level in order to reduce VMT and transportation-related GHG emissions. As mandated by CARB, AMBAG must reduce per capita GHG emissions from passenger vehicles in order to meet the SB 375 target. For the AMBAG region, the targets set by CARB are not to exceed 2005 per capita levels of GHGs by 2020 and to reduce GHG emissions by 5 percent per capita from 2005 levels by 2035.

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 2035 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.

California Transportation Plan

Senate Bill 391 of 2009 requires the California Department of Transportation to prepare the California Transportation Plan, a long range transportation plan, by December 2015. 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. The upcoming California Transportation Plan 2040 will demonstrate 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.

Creating the 2035 MTP/SCS

The 2035 MTP/SCS contains ambitious goals to meet the region's challenges and are informed by the policies identified in Chapter 1. In recent years, AMBAG and its local jurisdictions have laid the groundwork for the 2035 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 2035 MTP/SCS. AMBAG also engaged the public and regional stakeholders to determine their priorities of the region. This "bottom-up" approach has included local jurisdictions, the three regional transportation planning agencies (RTPAs), transit operators, Caltrans, Monterey Bay Unified Air Pollution Control District, and a wide array of community stakeholders.

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 2035 MTP/SCS. Early in the development process, the RTPAs worked closely with AMBAG to identify key priorities for consideration in the 2035 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 2035 MTP/SCS.

Land Use & Transportation Connection

Scenario Planning

Scenario planning is a planning method that analyzes a series of potential futures. In developing the Sustainable Communities Strategy, it is used to evaluate potential combinations of land use patterns and transportation investment. The resulting scenarios were analyzed and evaluated in context of the 2035 MTP/SCS goals and performance measures.

Prior to creating the initial set of scenarios, a series of workshops were held to understand and gauge the public's preference with respect to land use and transportation issues and priorities. A web-based survey tool and a phone survey were also used to allow broader participation and input. Based on this input five scenarios were designed to explore and clearly convey the impacts of where and how the tri-county region grows over the next 25 years. On the land use side the alternatives explored whether growth should be focused within existing developed areas or dispersed. Scenarios also varied the style/design of neighborhoods. On the transportation side the scenarios varied the types of transportation investments in a manner that was consistent with the land use theme for that given scenario.

The initial five scenarios were built to be very discrete from one another in order to get a clear picture of the effects any given scenario would have on the performance measures. None of the initial scenarios were intended to be the final preferred scenario. Rather they were constructed to be starkly different in order to highlight how a particular style of growth could or could not meet the region's needs and preferences.

These five initial scenarios were presented to the public at a series of workshops as well as to staff and elected officials at each respective jurisdiction. Based on feedback, they were then consolidated down to two hybrid scenarios. After vetting the hybrids through partner agencies and local jurisdictions a final preferred scenario was prepared and incorporated into the 2035 MTP/SCS.

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 each of these scenarios, 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. Additionally, the hybrid and final preferred scenario restricted the majority of growth to the Spheres of Influence of any given city. Some growth is accounted for in unincorporated Community Plan Areas (Monterey County), Urban Service Areas (Santa Cruz County) or New Community Study Areas (San Benito County). All growth is consistent with General Plans and was based on direction from jurisdiction planning staff. Detailed documentation of the development of the scenarios can be found in Appendices E and F.

Regional Growth Forecast

The 2035 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 spring 2012, AMBAG conducted a series of one-on-one meetings with 18 cities and three counties to receive local input on the regional population, housing, and employment growth forecast for the 2035 MTP/SCS.

Over the last two years, the Regional Growth Forecast has been updated to reflect the 2010 Census, data from the California Employment Development Department and InfoUSA, as well as population and household data from the California Department of Finance. Ongoing discussions with local jurisdictions led to refinement of the forecast figures, which resulted in AMBAG's ability to obtain a consensus on the Regional Growth Forecast to serve as the foundation for the 2035 MTP/SCS. Figures 4-1 through 4-9 highlight the region's population, employment, and household growth through 2035. Detailed information on the Regional Growth Forecast can be found in Appendix A.

Scenario Planning

Scenario planning is an analysis tool that allows the comparison of potential future outcomes of policy decisions. Scenarios are stories in which a narrative helps illustrate how present day decisions might yield future outcomes. The narrative is grounded in empirical work that supports the assessment of scenarios for credibility and likelihood. Simply put, AMBAG and its partners used "what if" planning.

AMBAG in coordination with a range of stakeholders, including the planning directors from around the region, evaluated a series of scenarios in terms of the impact on greenhouse gas emissions and several other performance measures. Using quantitative inputs and producing statistical and visual outputs allows comparison of the outcomes of each scenario.

Through this effort, scenarios build on the existing urban footprint and are guided by identified emerging trends and local General Plans. What is at stake in scenario planning is not the past, but the future population and employment growth that will increase and shape the existing footprint over the next 25 years.

For each scenario there is a set of necessary conditions or requirements, including limited financial resources. Each scenario varies in character and changes the emphasis on types of transportation investments and land use patterns to measure the effect across a series of performance measures. The best performing and most publicly acceptable scenario is selected for the Sustainable Communities Strategy. See Chapter 4 for a more in depth discussion.

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Figure 4-1a: 2010 Employment Density by Census Tract
North Monterey County

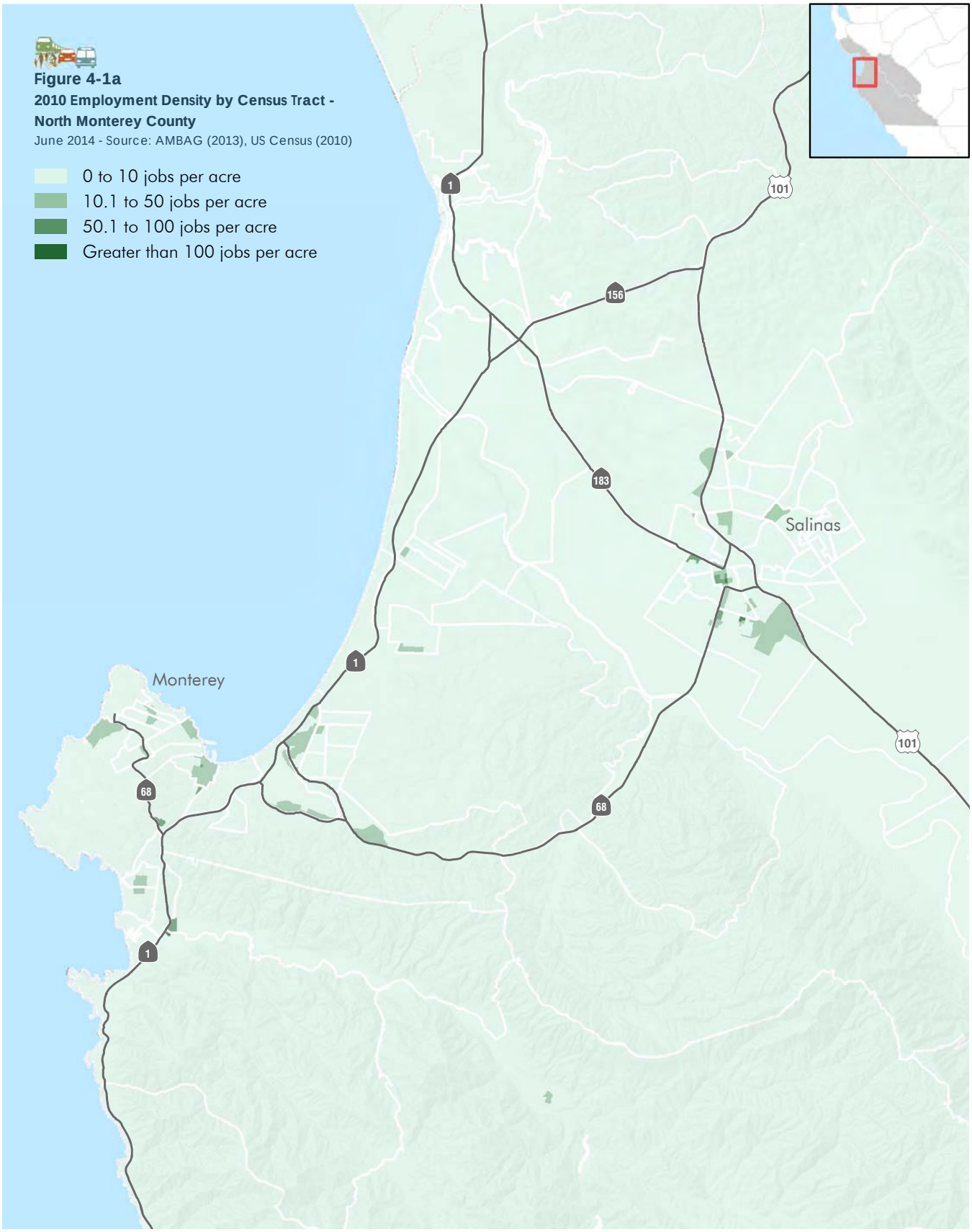

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Figure 4-1b: 2035 Employment Density by Census Tract
North Monterey County

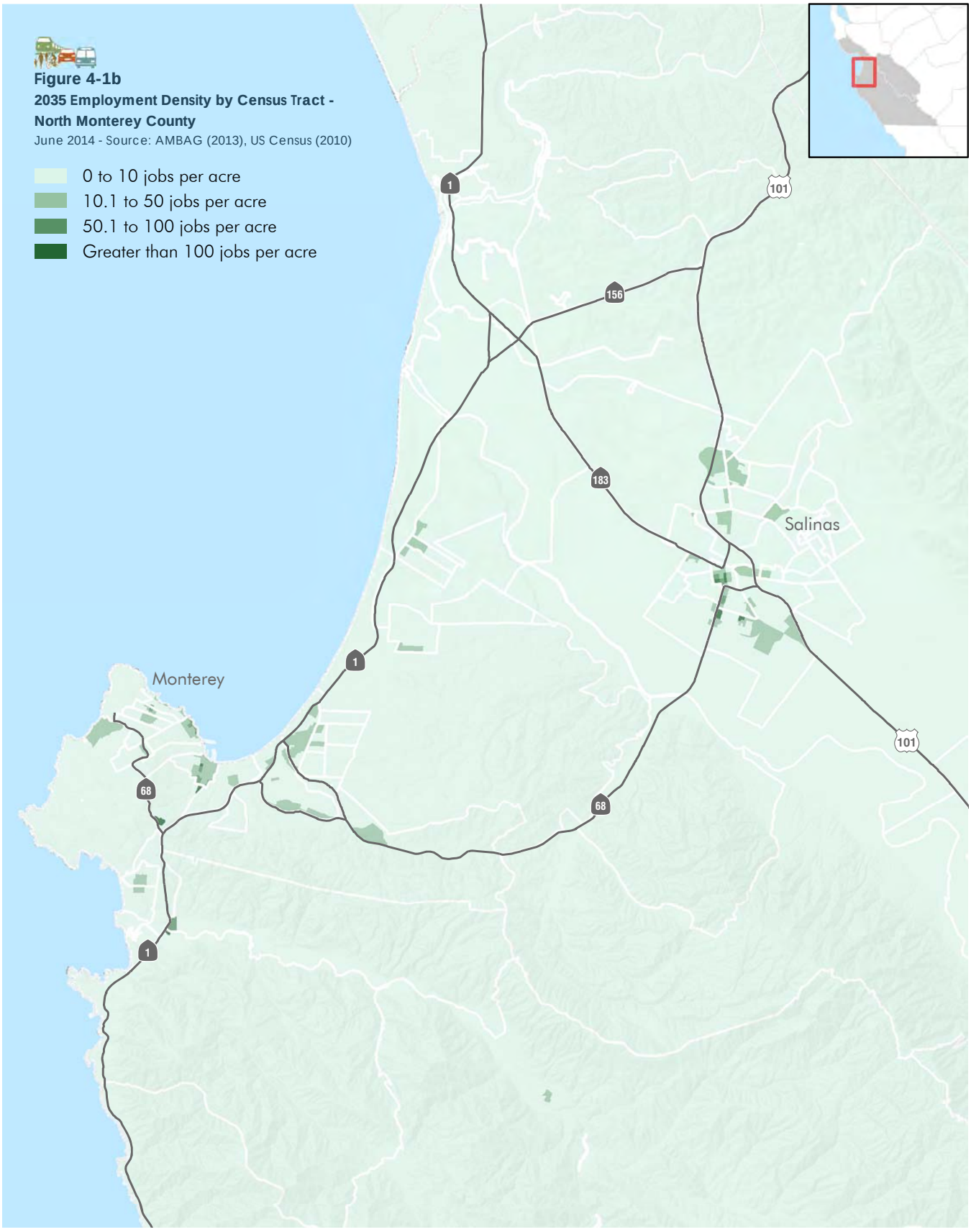

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Figure 4-1c: 2010 Employment Density by Census Tract South Monterey County

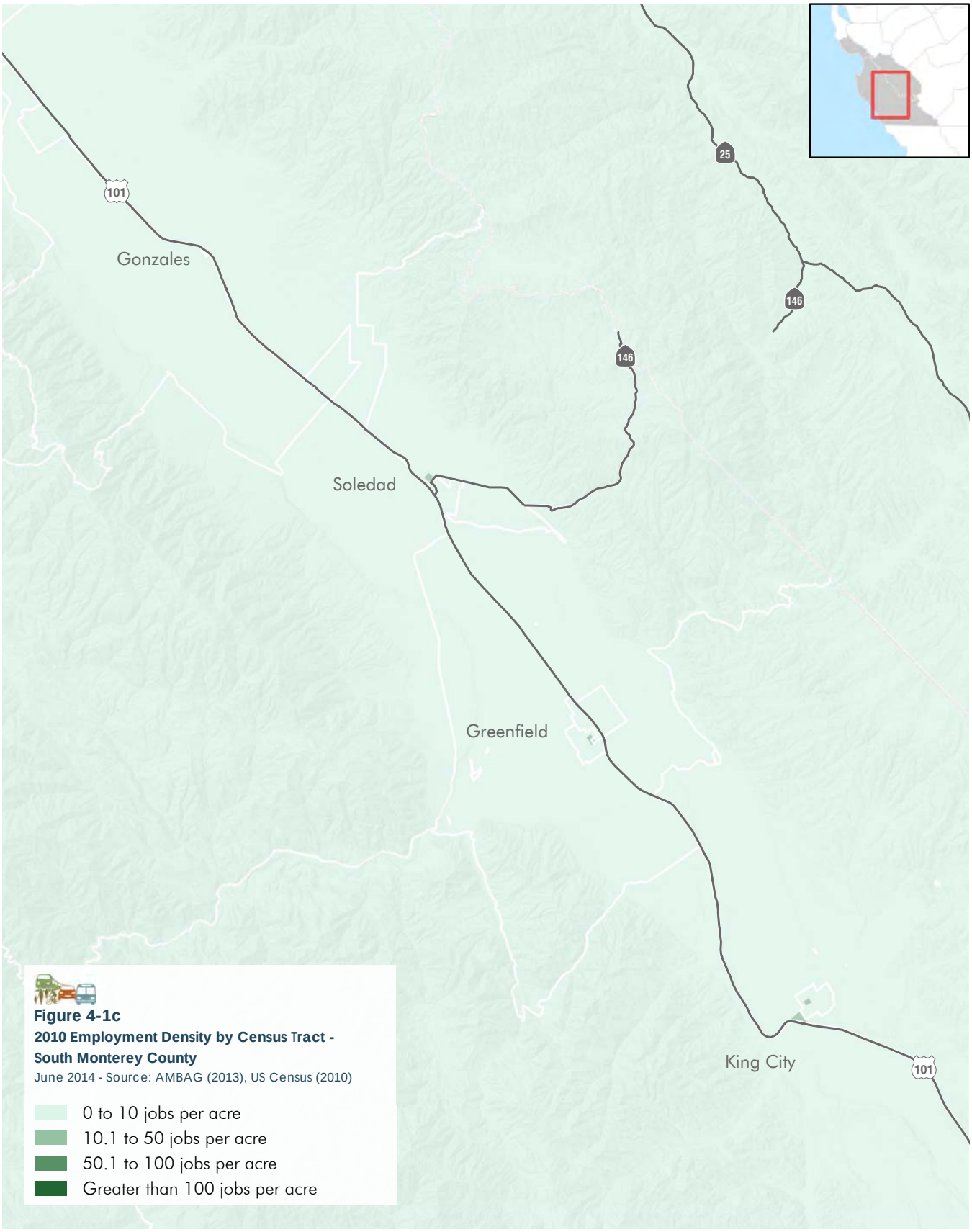

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Figure 4-1d: 2035 Employment Density by Census Tract South Monterey County

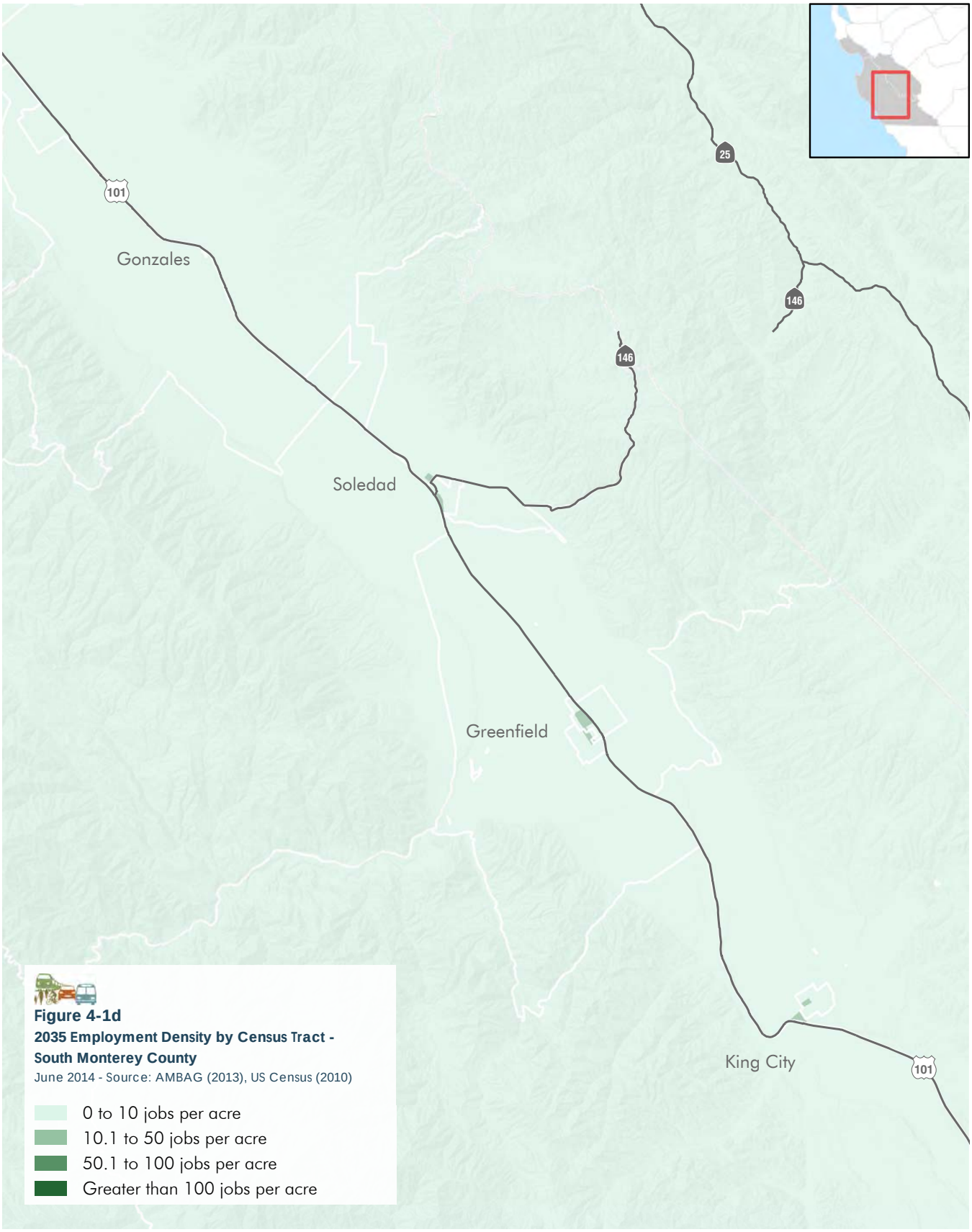

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Figure 4-2a: 2010 Population Density by Census Tract
North Monterey County

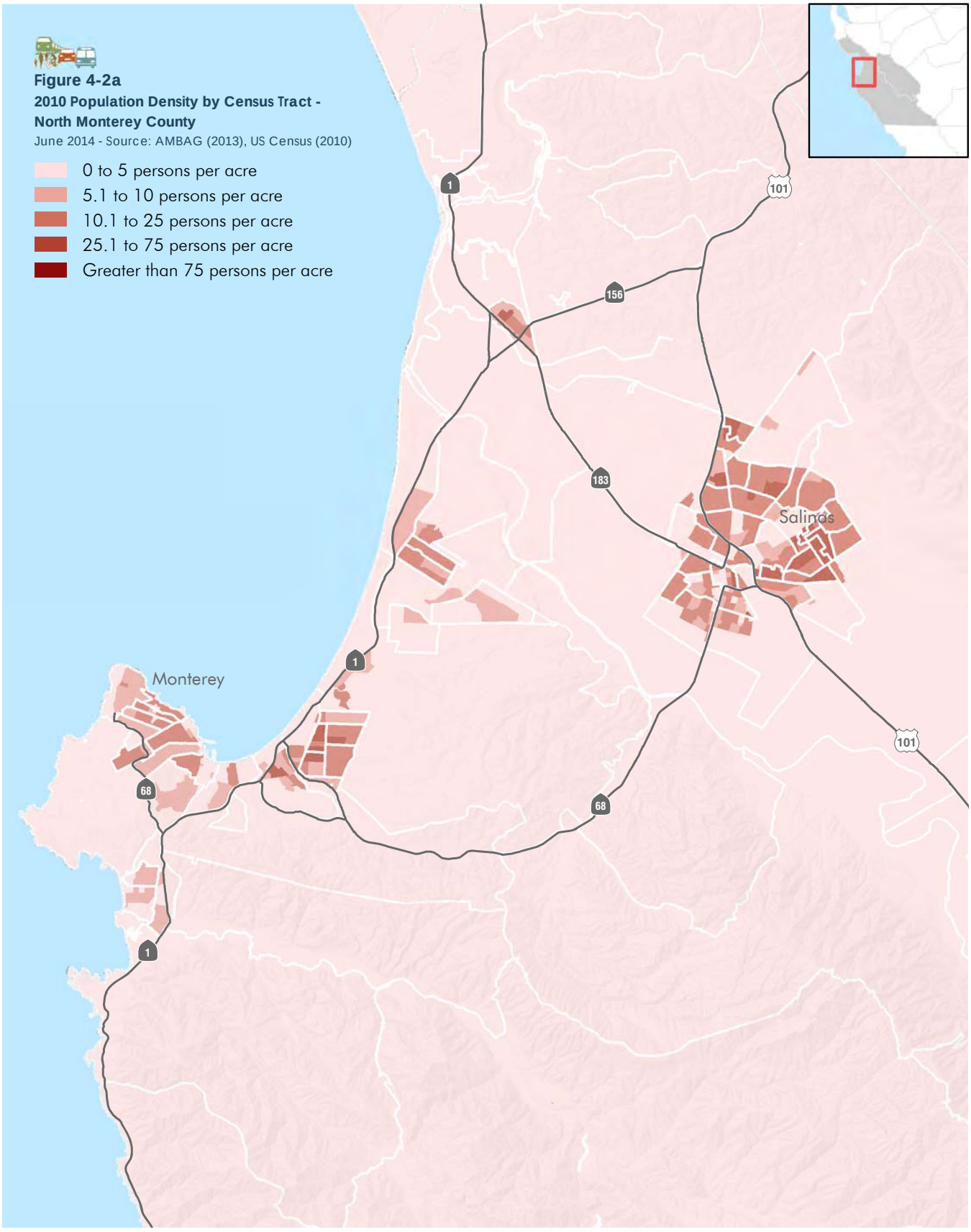

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Figure 4-2b: 2035 Population Density by Census Tract
North Monterey County

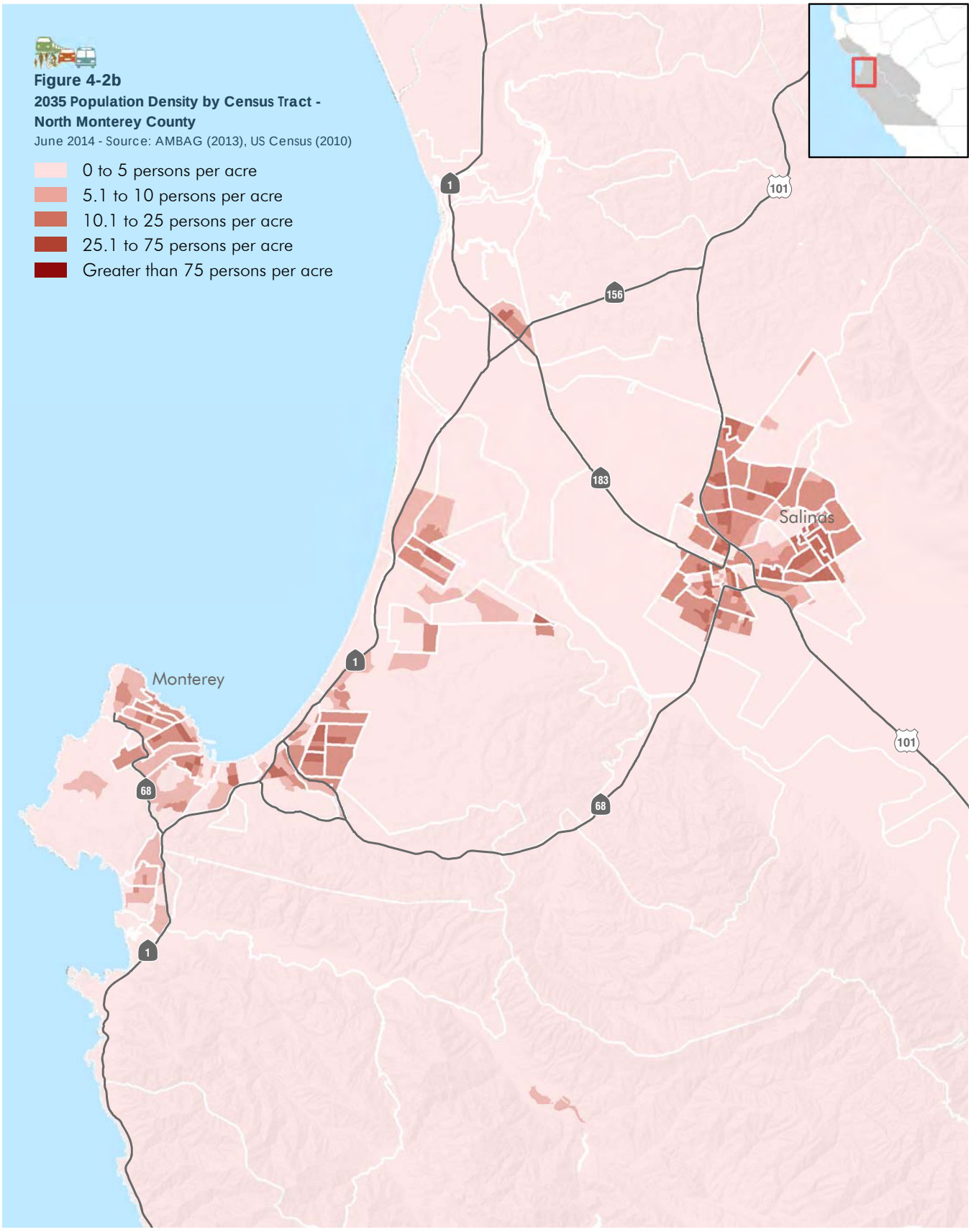

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Figure 4-2c: 2010 Population Density by Census Tract South Monterey County

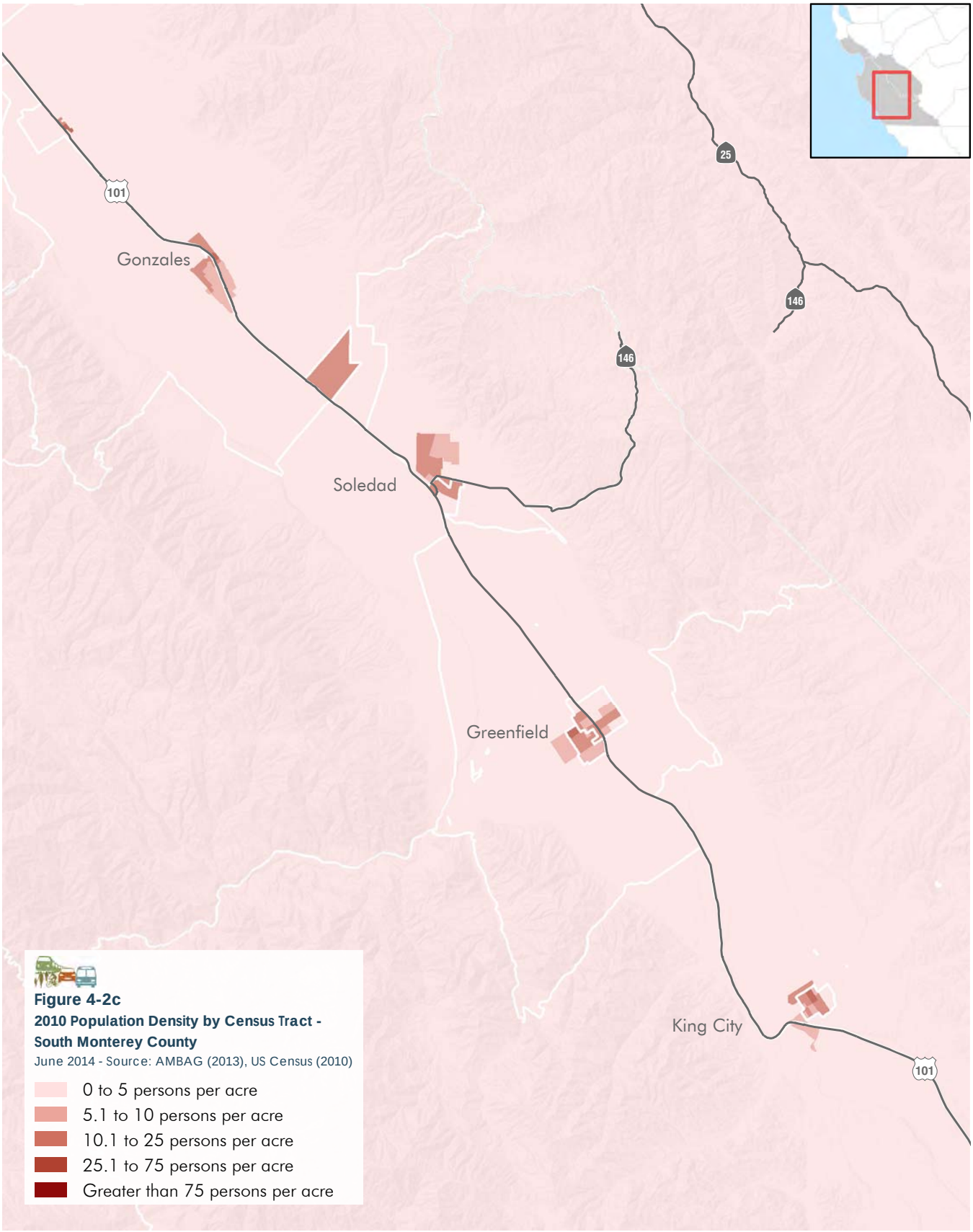

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Figure 4-2d: 2035 Population Density by Census Tract
South Monterey County

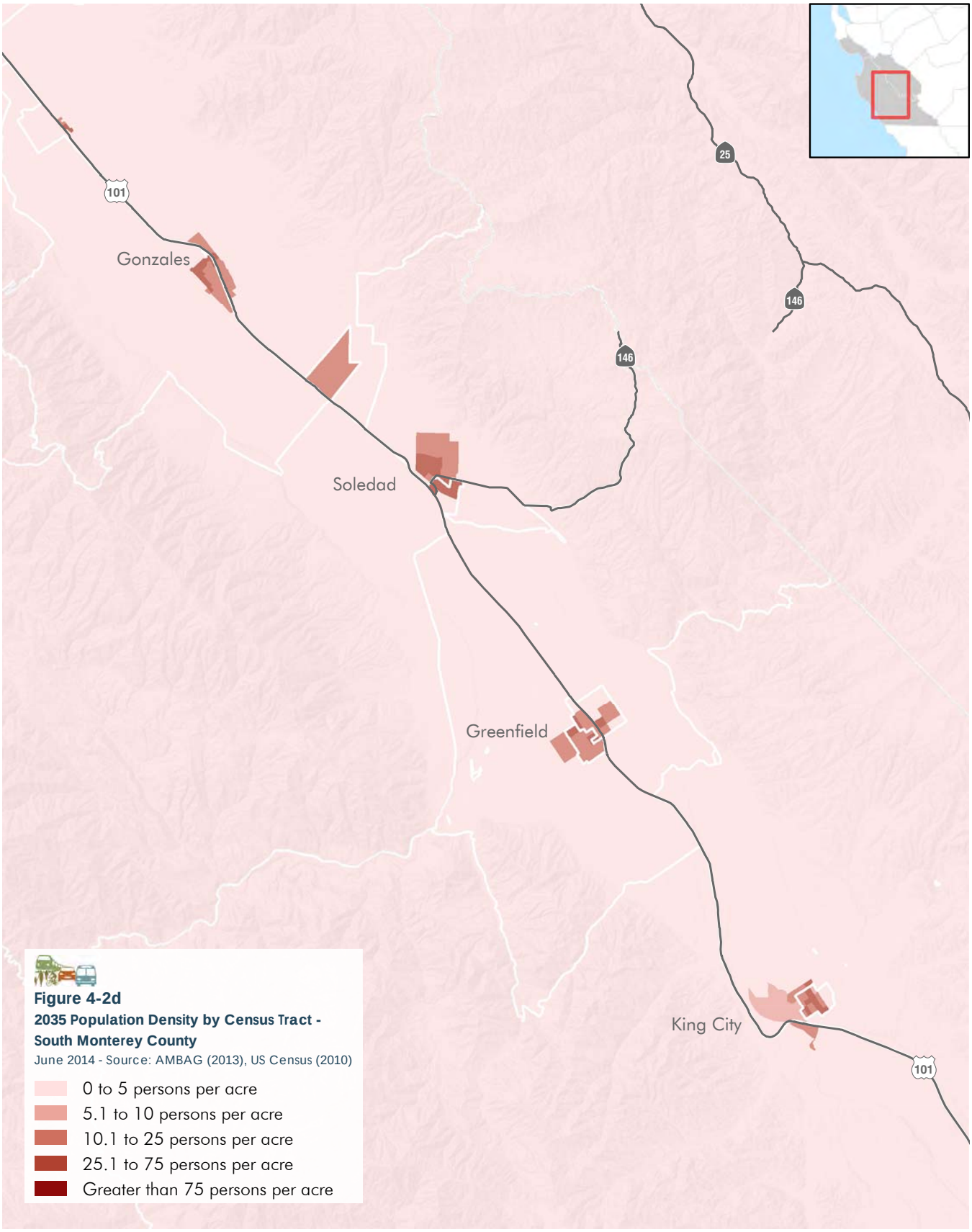

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Figure 4-3a: 2010 Housing Unit Density by Census Tract
North Monterey County

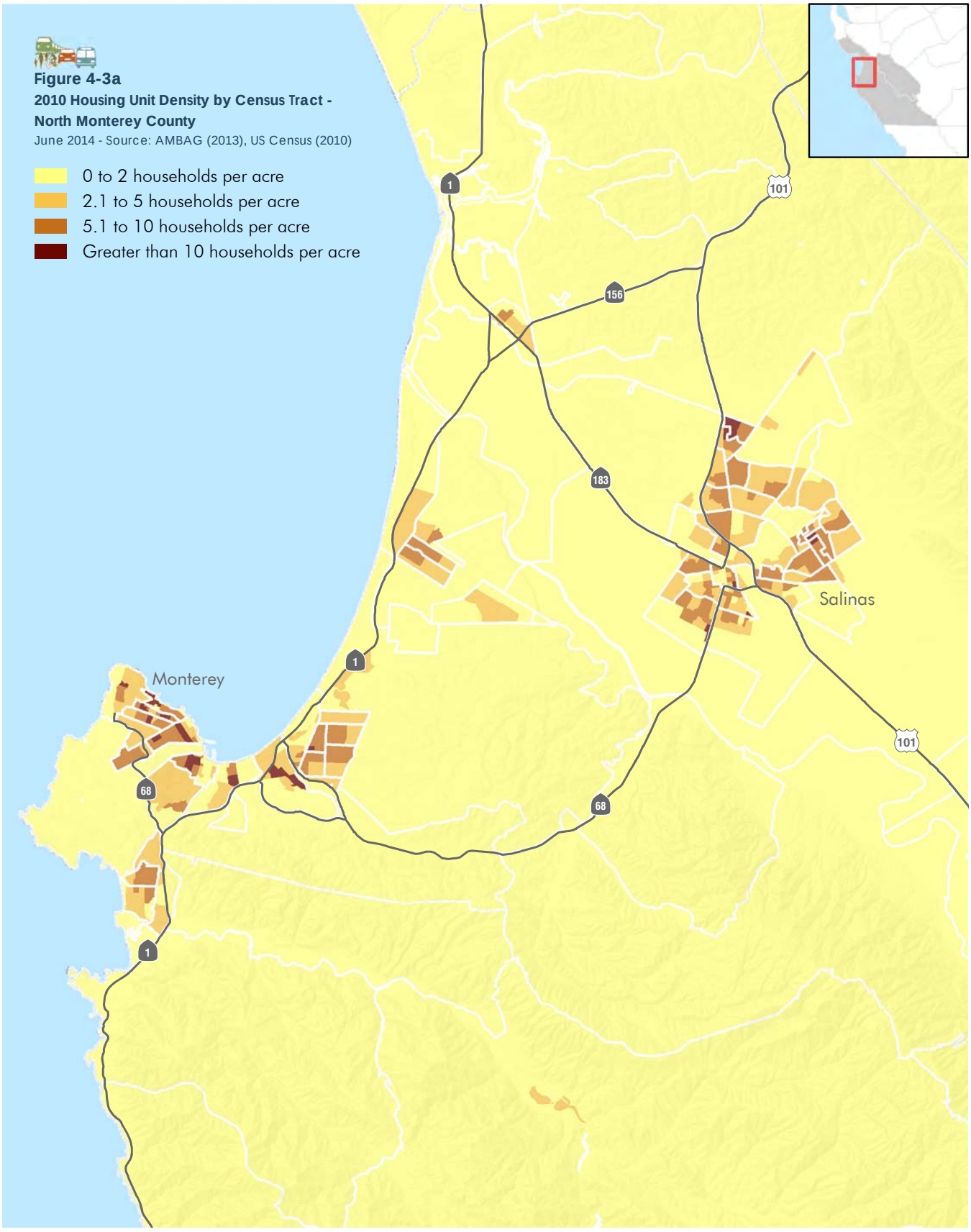

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Figure 4-3b: 2035 Housing Unit Density by Census Tract
North Monterey County

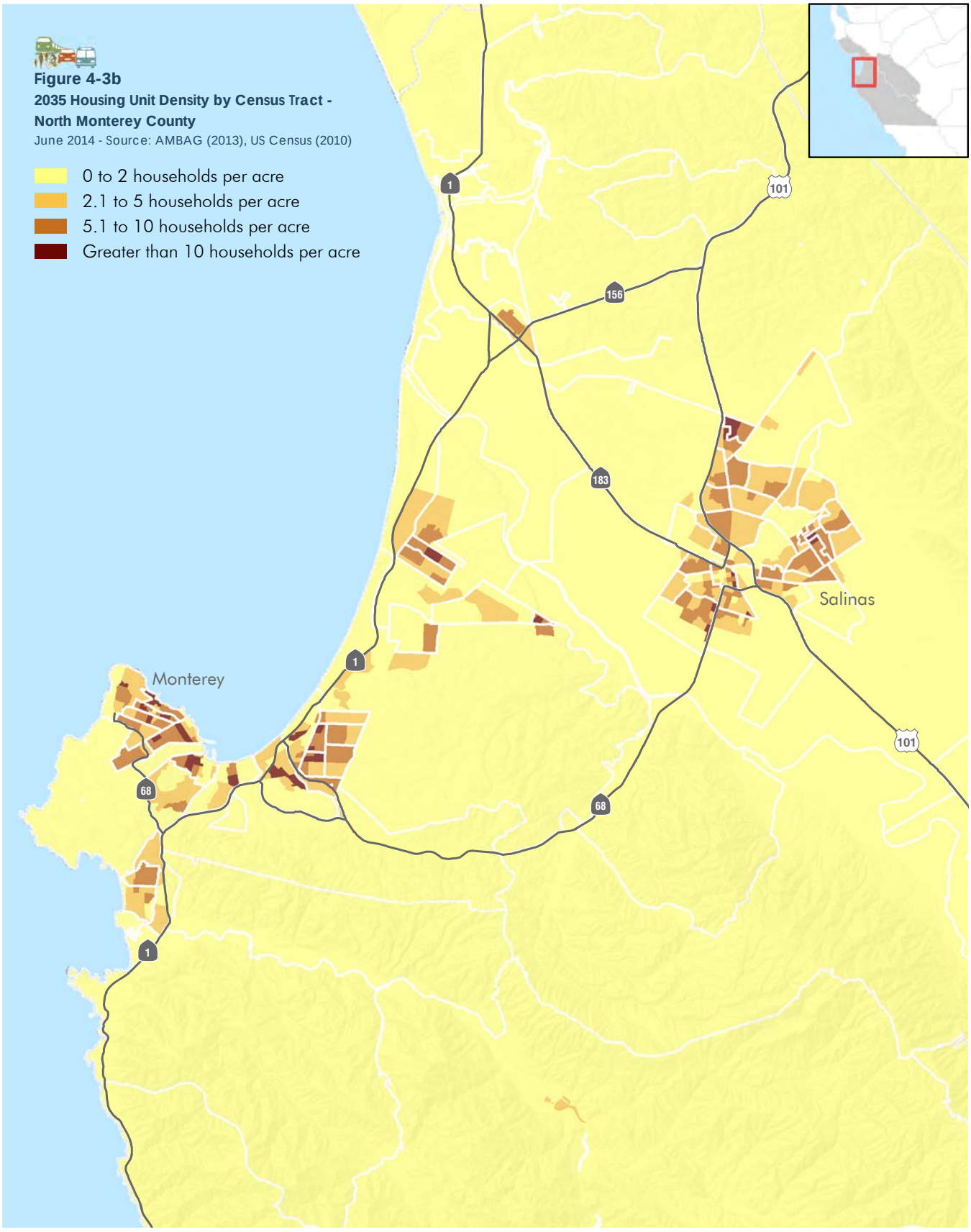

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Figure 4-3c: 2010 Housing Unit Density by Census Tract South Monterey County

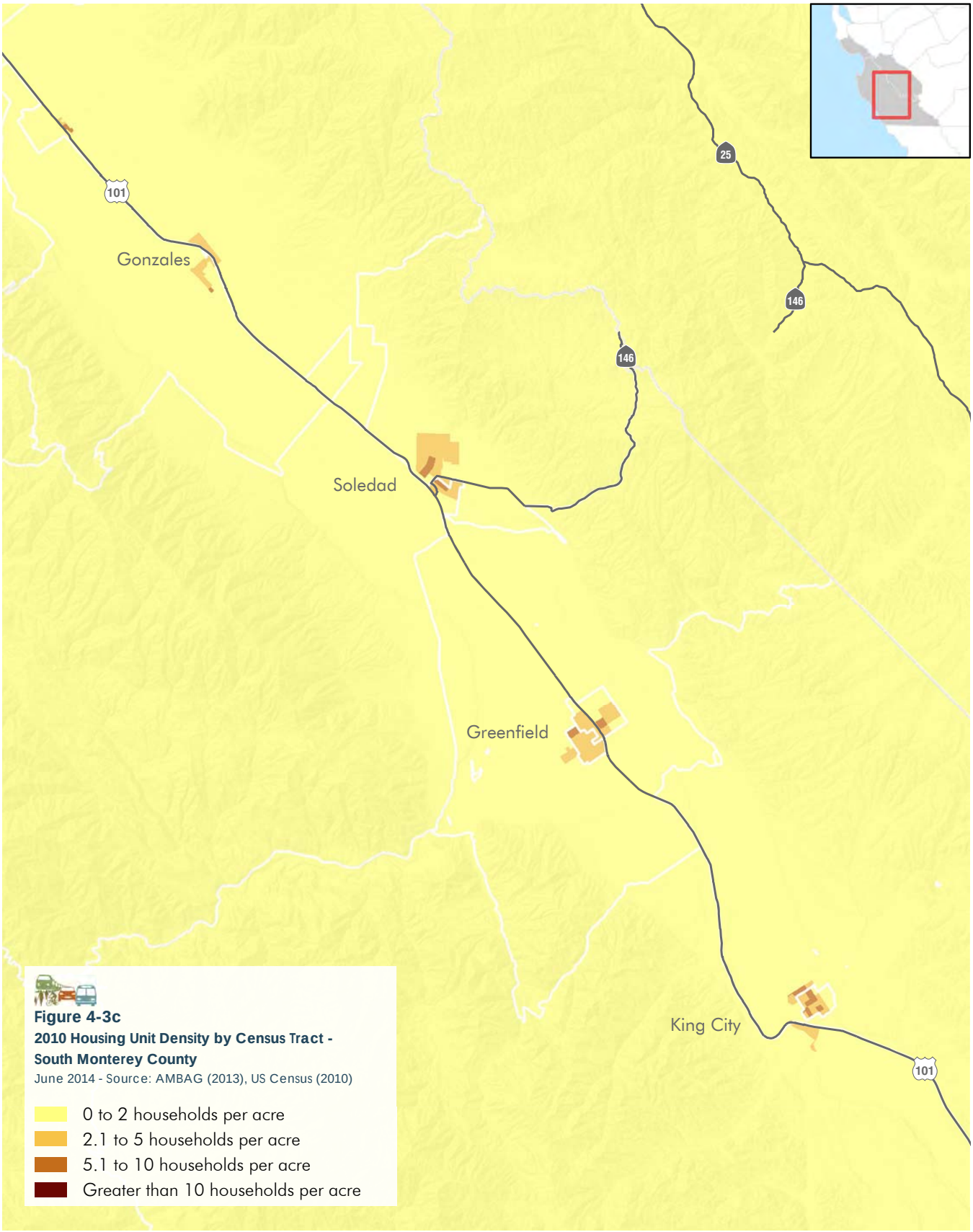

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Figure 4-3d: 2035 Housing Unit Density by Census Tract South Monterey County

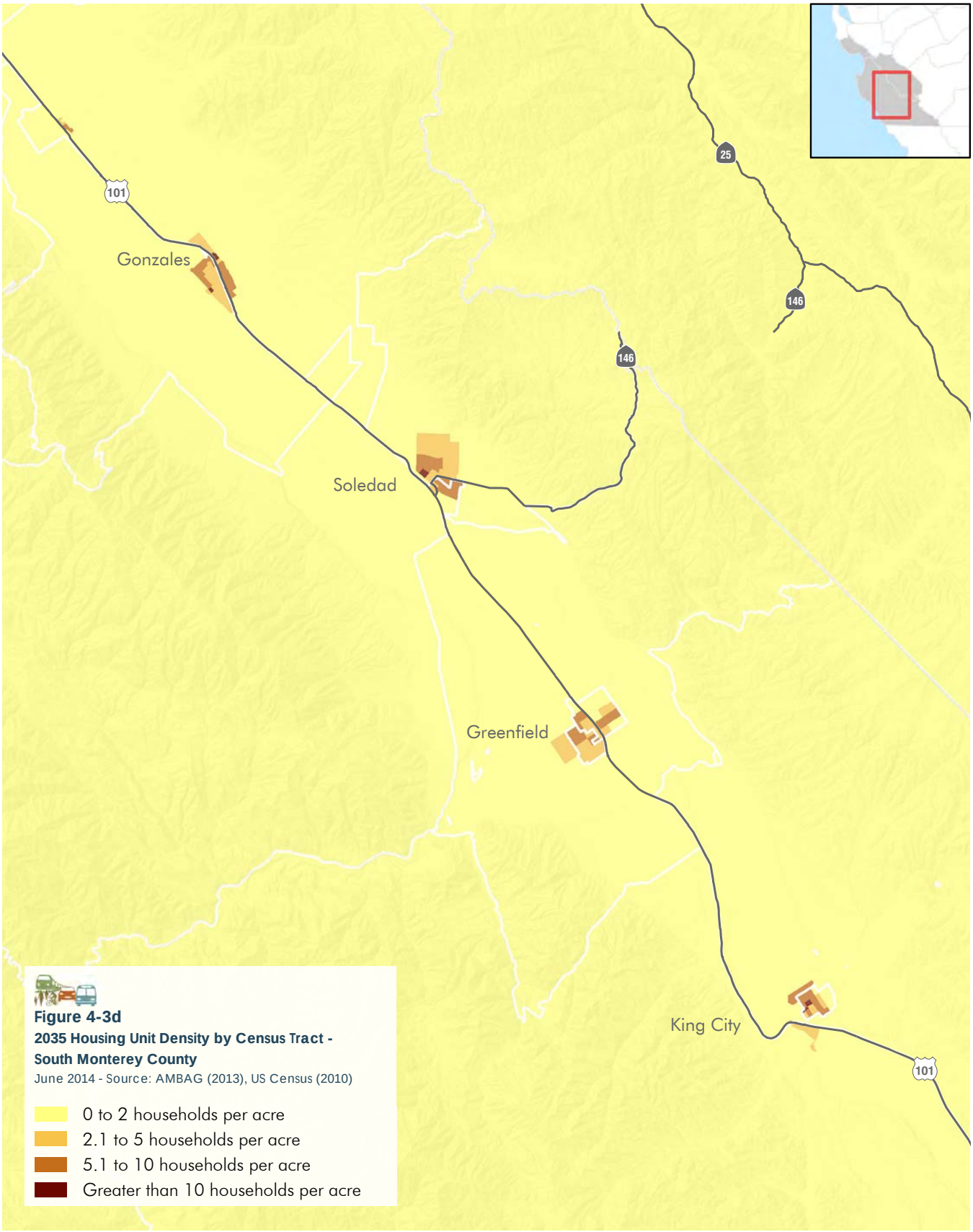

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Figure 4-4a: 2010 Employment Density by Census Tract
San Benito County

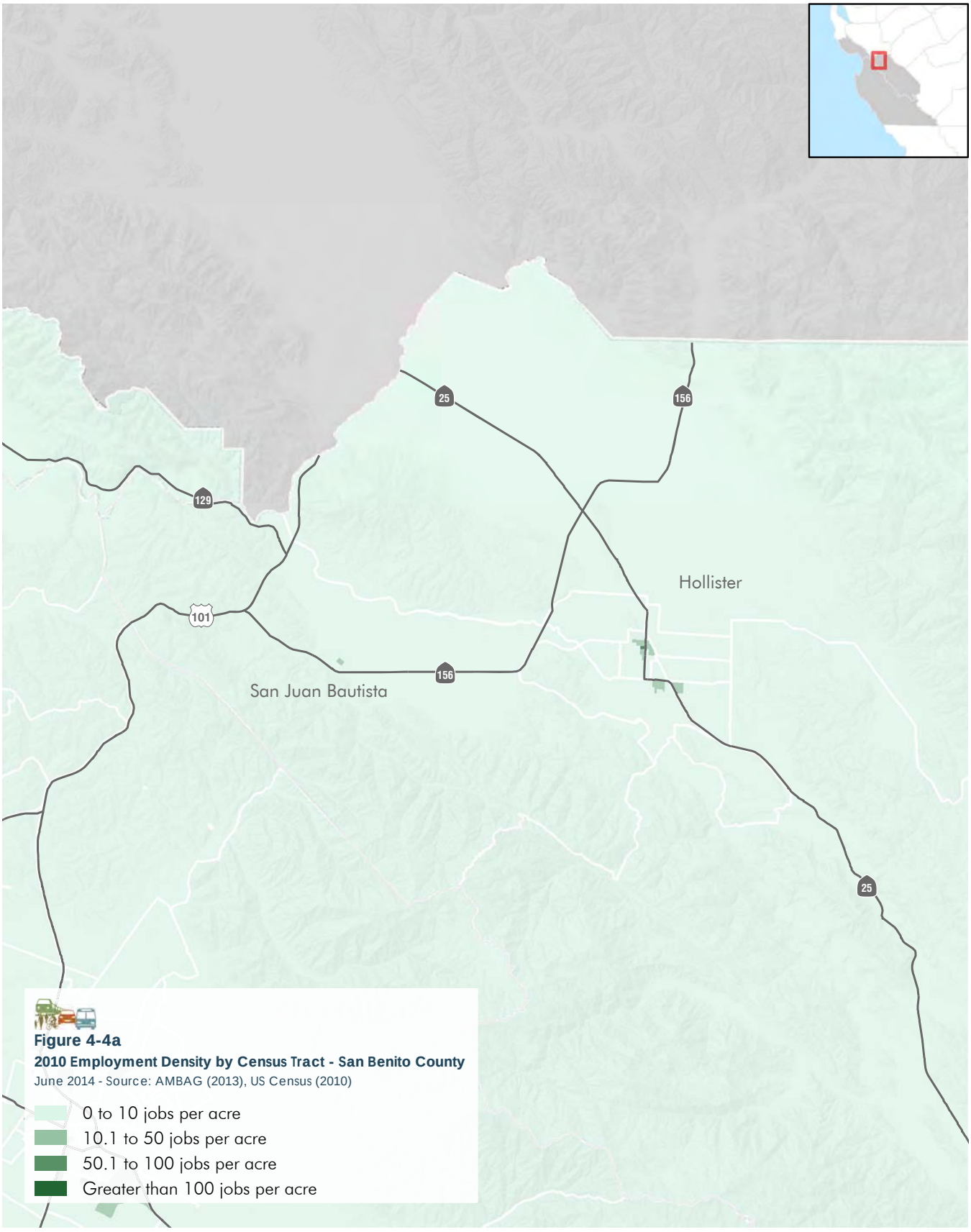

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Figure 4-4b: 2035 Employment Density by Census Tract
San Benito County

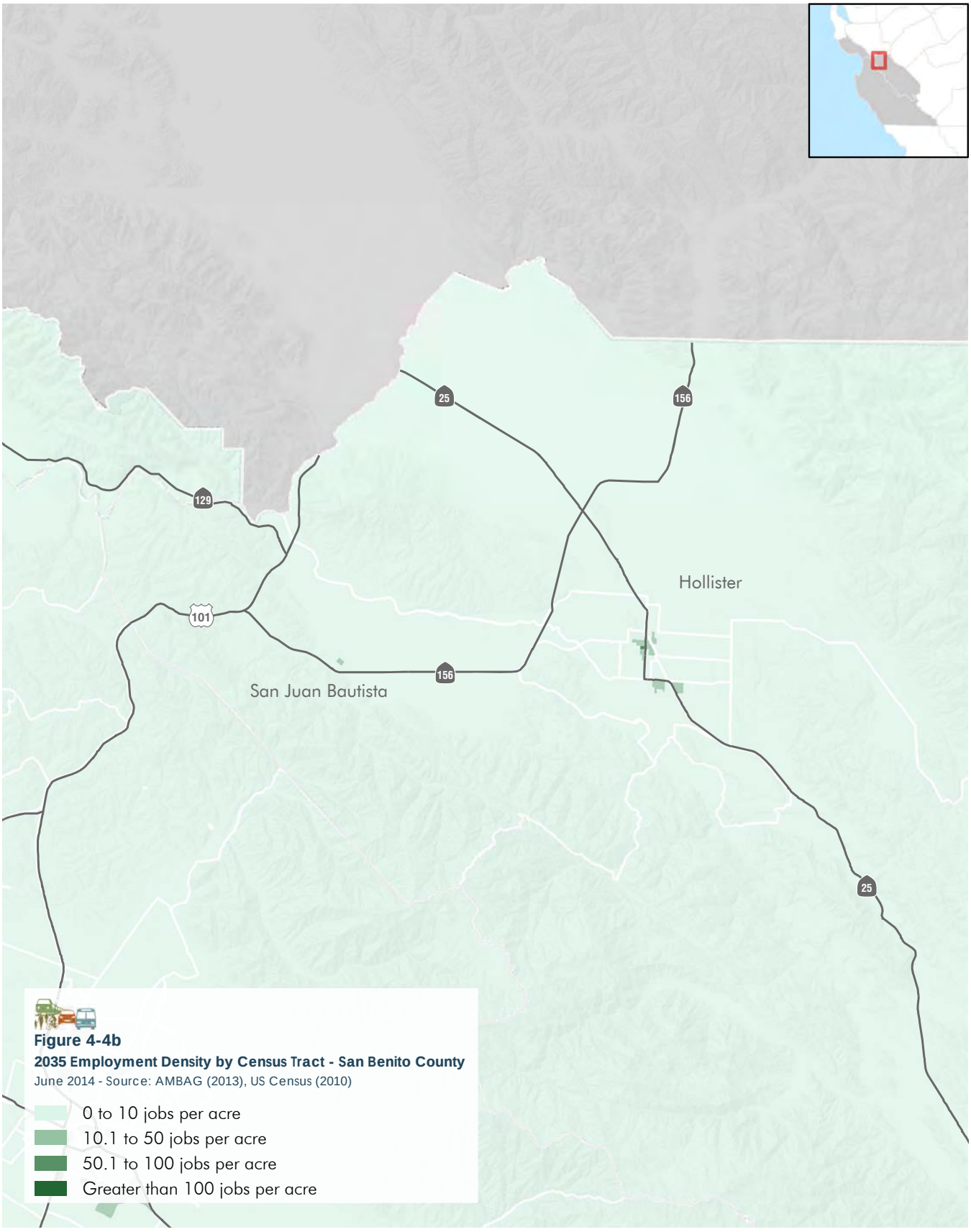

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Figure 4-5a: 2010 Population Density by Census Tract
San Benito County

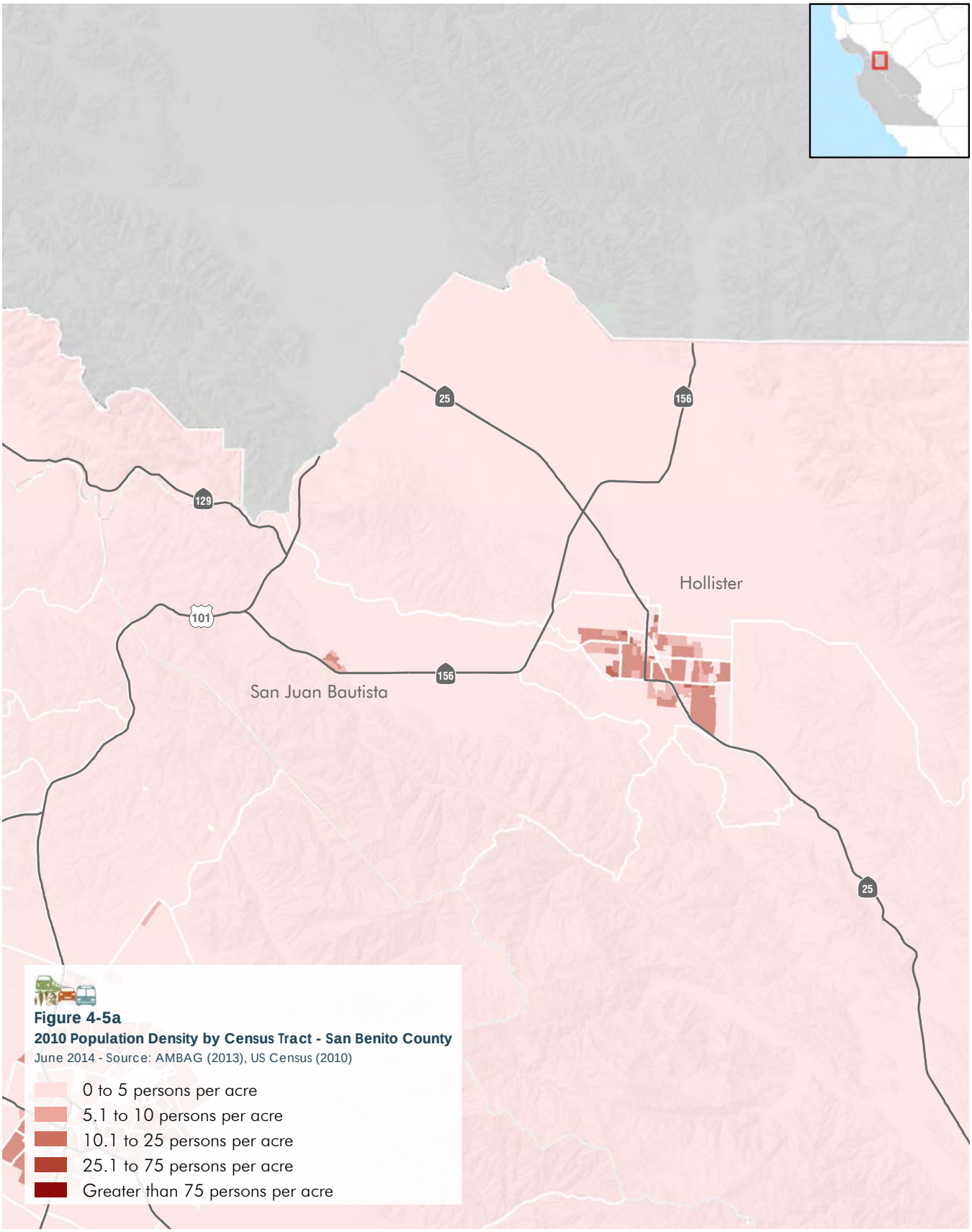

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Figure 4-5b: 2035 Population Density by Census Tract
San Benito County

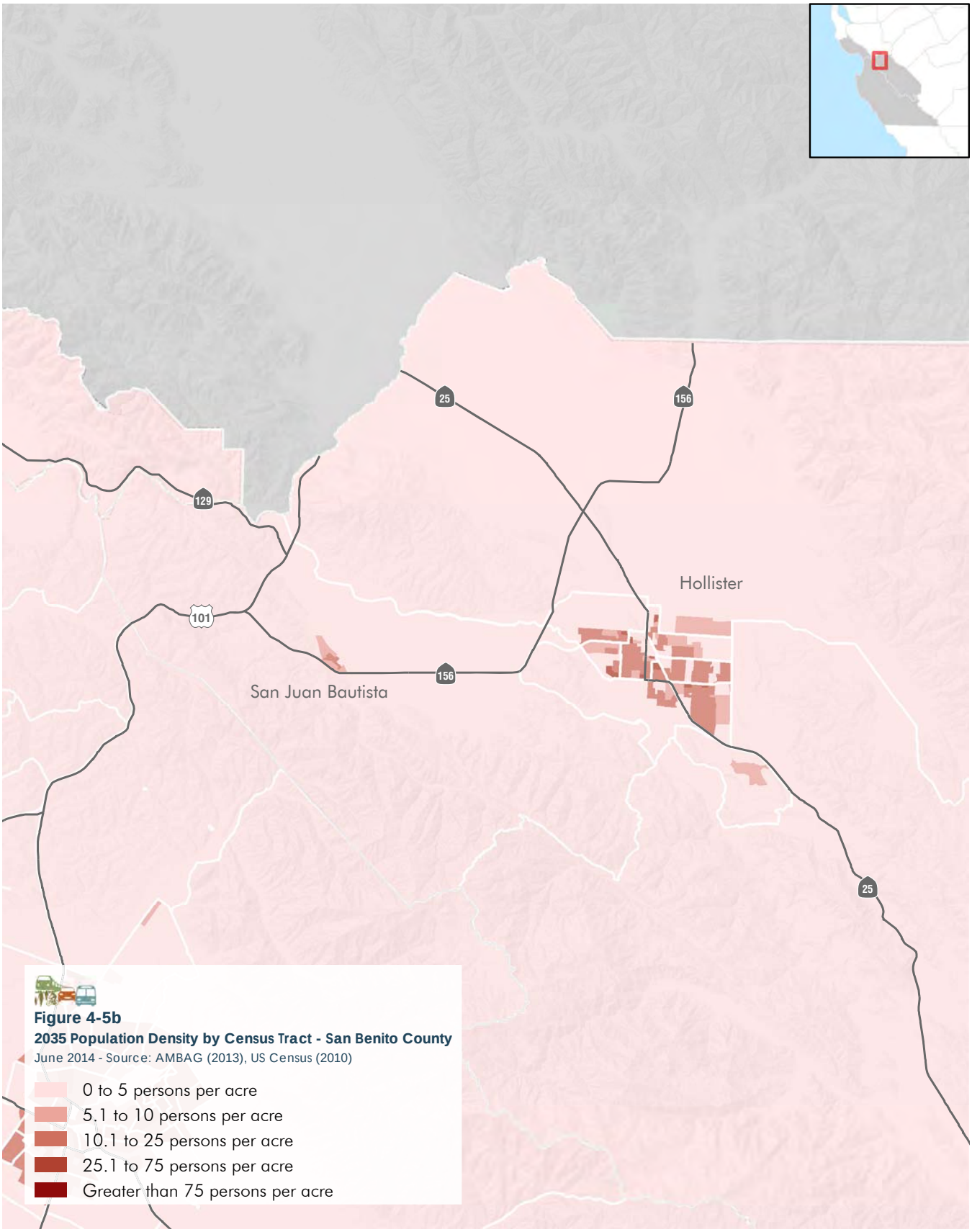

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Figure 4-6a: 2010 Housing Unit Density by Census Tract
San Benito County

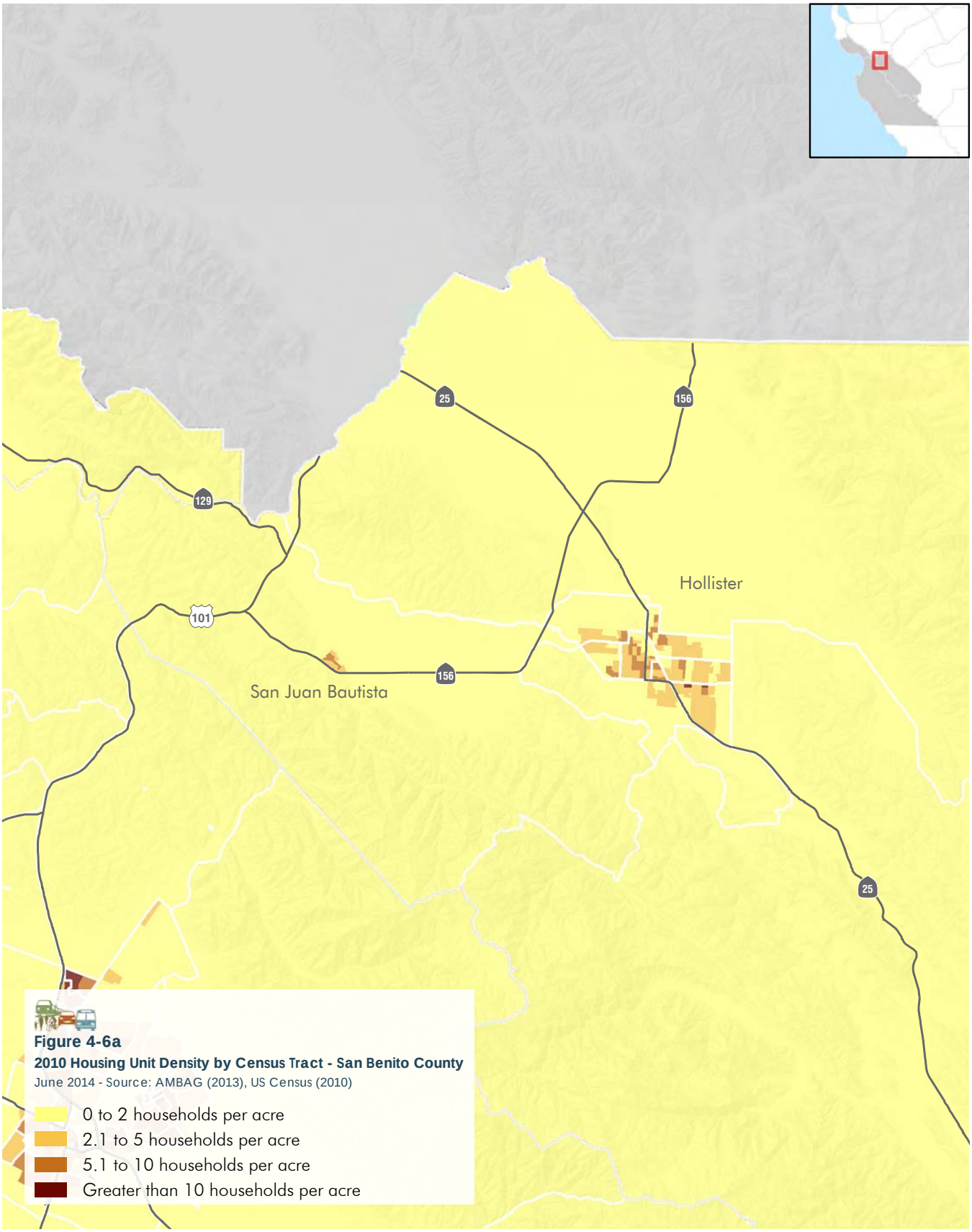

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Figure 4-6b: 2035 Housing Unit Density by Census Tract
San Benito County

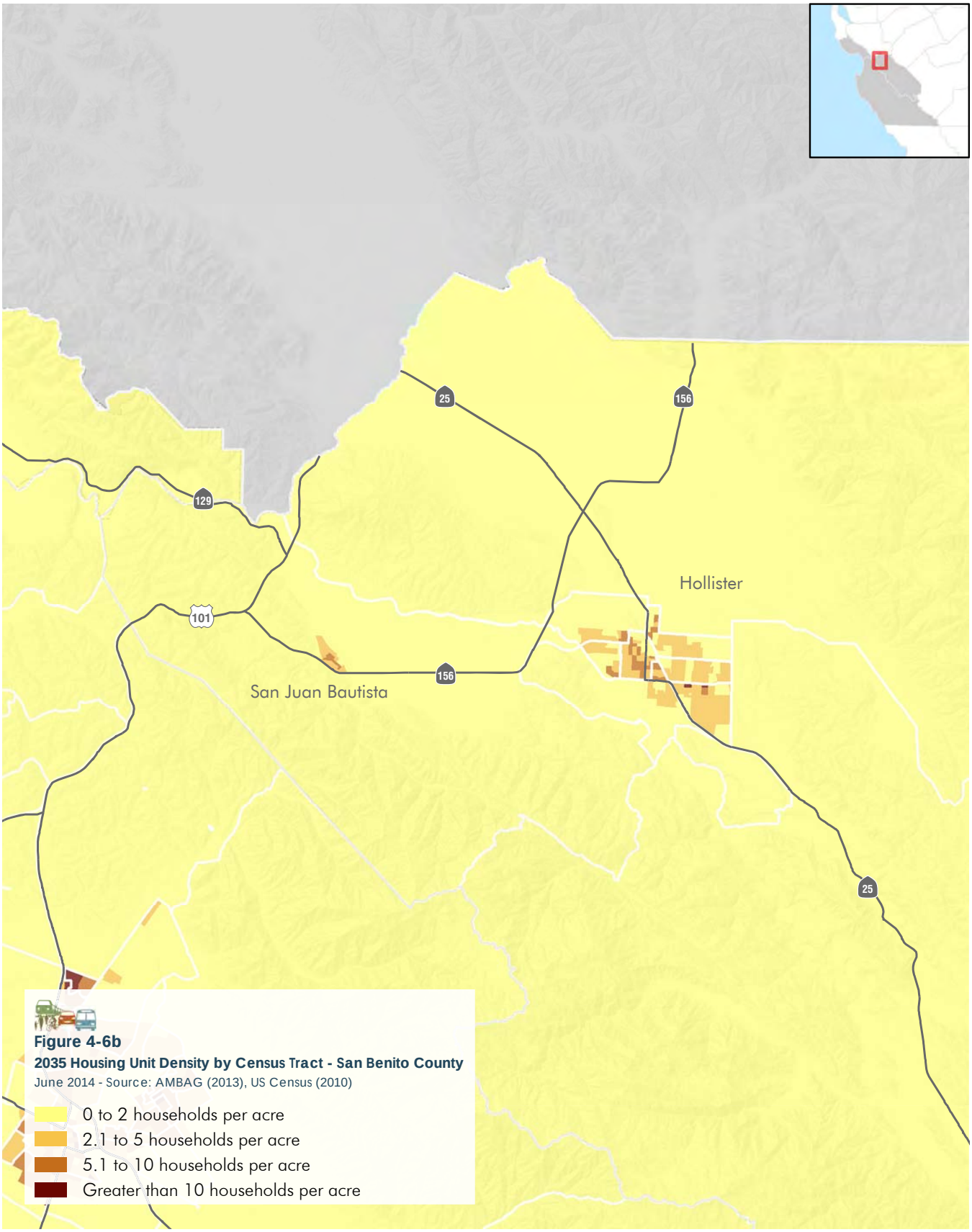

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Figure 4-7a: 2010 Employment Density by Census Tract
Santa Cruz County

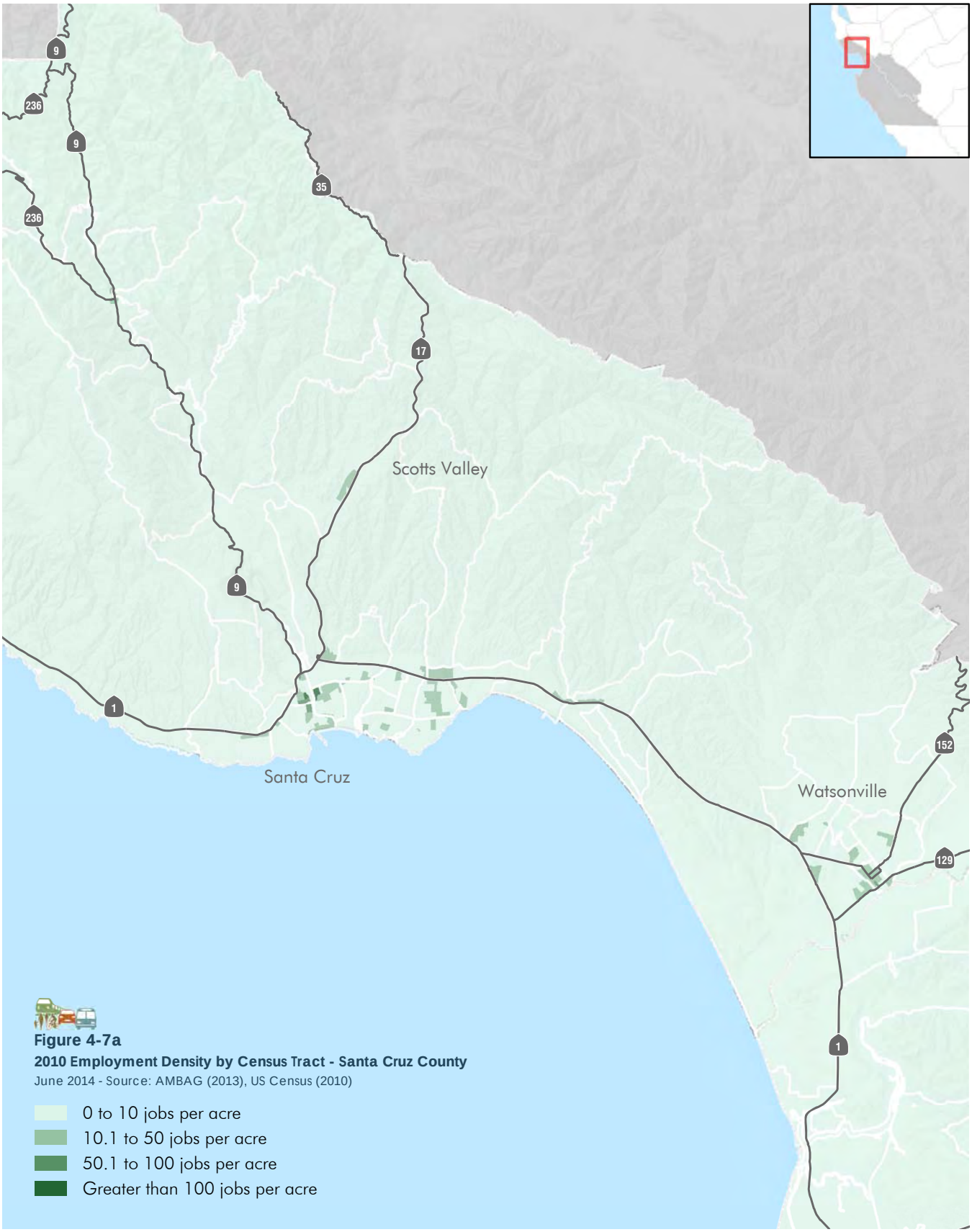

Figure 4-7a
2010 Employment Density by Census Tract - Santa Cruz County
June 2014 - Source: AMBAG (2013), US Census (2010)

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Figure 4-7b: 2035 Employment Density by Census Tract
Santa Cruz County

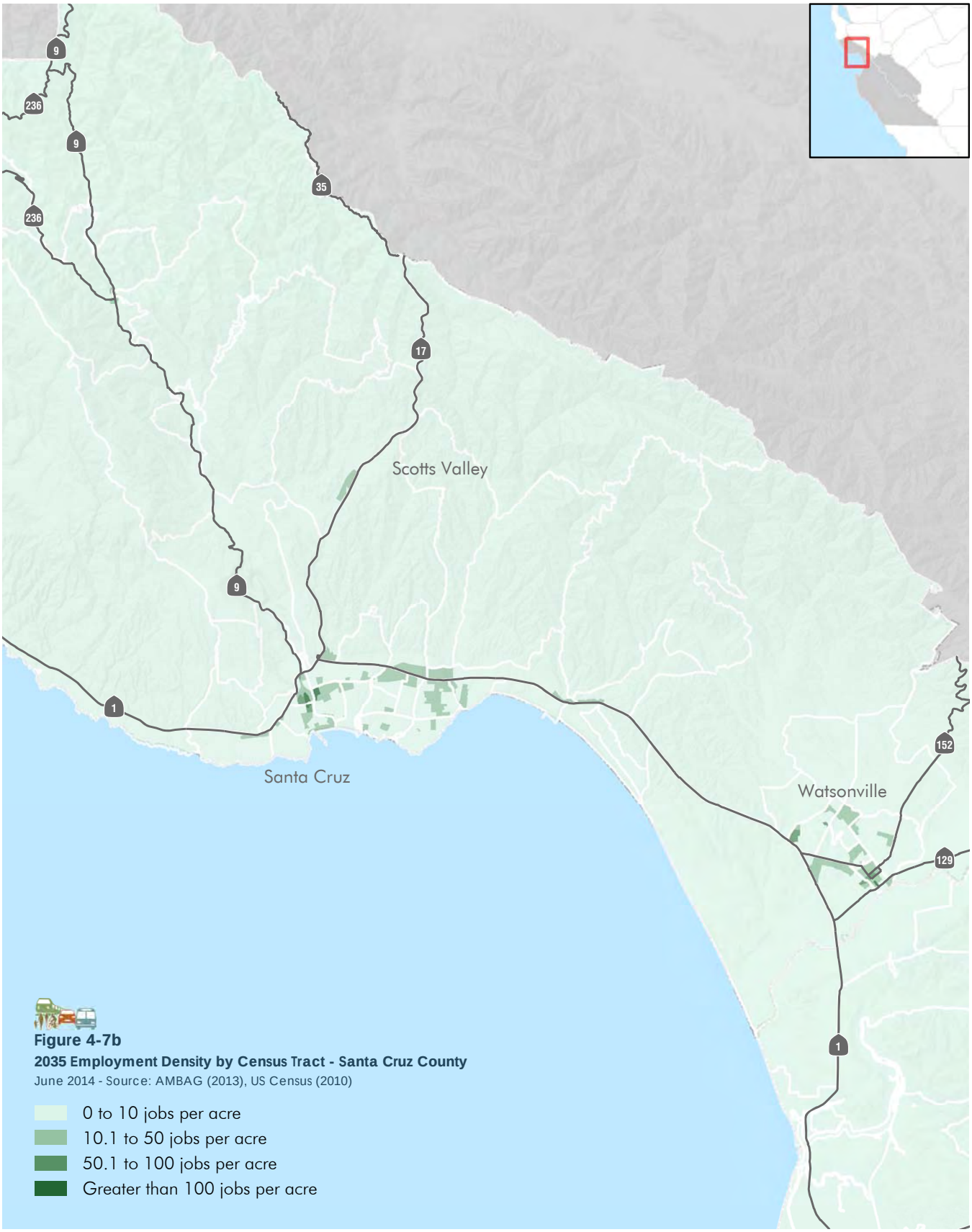

Figure 4-7b
2035 Employment Density by Census Tract - Santa Cruz County
June 2014 - Source: AMBAG (2013), US Census (2010)

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Figure 4-8a: 2010 Population Density by Census Tract
Santa Cruz County

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Figure 4-8b: 2035 Population Density by Census Tract
Santa Cruz County

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Figure 4-9a: 2010 Housing Unit Density by Census Tract
Santa Cruz County

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Figure 4-9b: 2035 Housing Unit Density by Census Tract
Santa Cruz County

Figure 4-9b
2035 Housing Unit Density by Census Tract - Santa Cruz County
June 2014 - Source: AMBAG (2013), US Census (2010)

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 get their basic needs met.

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 4-10 through 4-12, assumes increased density via infill development and mixed use in existing commercial corridors in combination with high quality transit service, bus service that has headways of 15 minutes or less during the peak period or rail service. Figure 4-19 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 rather than drive. Additionally, 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 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.

Placetypes

To better analyze land use patterns and consider scenario alternatives, AMBAG created a set of placetypes which established a set of land use designations common to general plans for the three counties and 18 cities in the region. These placetype 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 placetypes began with a review of the predominant land uses and development patterns in the Monterey Bay region, leading to the creation of initial placetype categories and a preliminary placetype matrix. The following metrics and characteristics were established as the primary determinants of placetype 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 placetype matrix was created and placetype designation assignments were made. The assignment of placetypes was based primarily on existing land use designations, transit service maps, and aerial imagery, but also relied upon information from local jurisdiction. This application of placetypes was considered the baseline for the region.

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. Additionally, the service provided at major transit stops is referred to as high quality transit service.

As different scenarios were considered for the SCS these placetype designations were modified in coordination with different transportation investments. The final preferred scenario includes placetypes that transition commercial corridors into mixed use areas served by high quality transit. Outside of those mixed use areas the placetypes largely remain the same as the baseline.

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.

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.

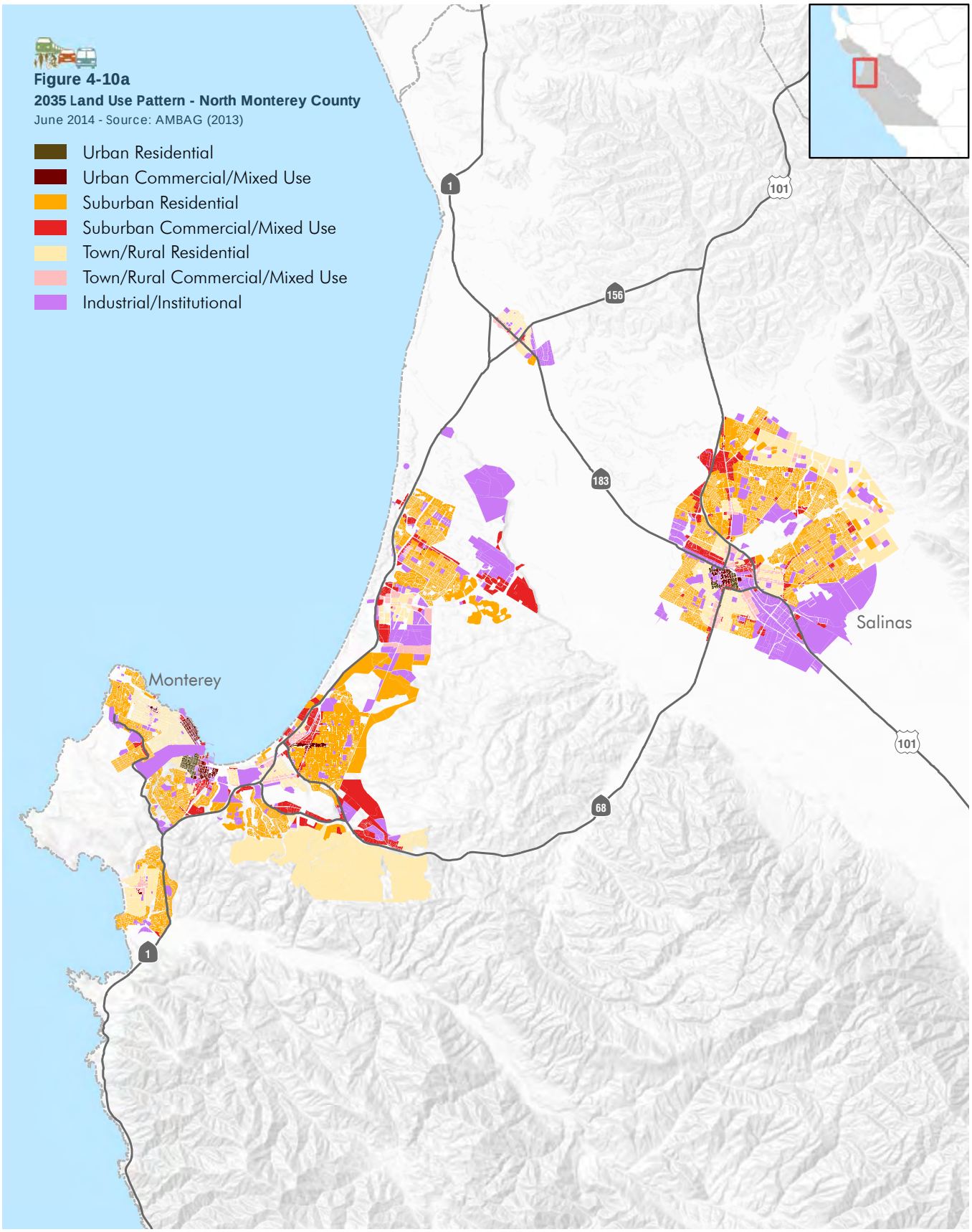
While low wage workers support and make possible the engine of the regional economy they tend to live in cities that struggle to collect enough revenue to support their residents with basic services. The land value in these cities is low compared to the coastal areas, people have access to fewer services, 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. Additionally, the jobs that provide the livelihood for many of these workers are far outside of the jurisdictions they live in. 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.

Figure 4-10a: 2035 Land Use Pattern North Monterey County



Much of the AMBAG region is rural with dispersed land use patterns and very few job opportunities. The region's rural areas include large low income and minority populations that typically have long commutes to agricultural fields or to service and hospitality jobs in high cost coastal areas far away from home. This is the most difficult commute pattern in the region to address with transportation investments. Compounding the issue, rural populations are underrepresented in the regional planning process because of difficulties in engaging them which makes it challenging to design effective strategies to reduce VMT and greenhouse gases in rural areas. In order to implement the 2035 MTP/SCS, AMBAG will form a Rural Task Force to better inform the regional planning process of the needs in rural areas. AMBAG will work with rural cities and public agencies, non-profits and community organizations to ensure a broad cross section of rural stakeholders are represented on the Rural Task Force.

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 2035 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

Figure 4-10b: 2035 Land Use Pattern South Monterey County

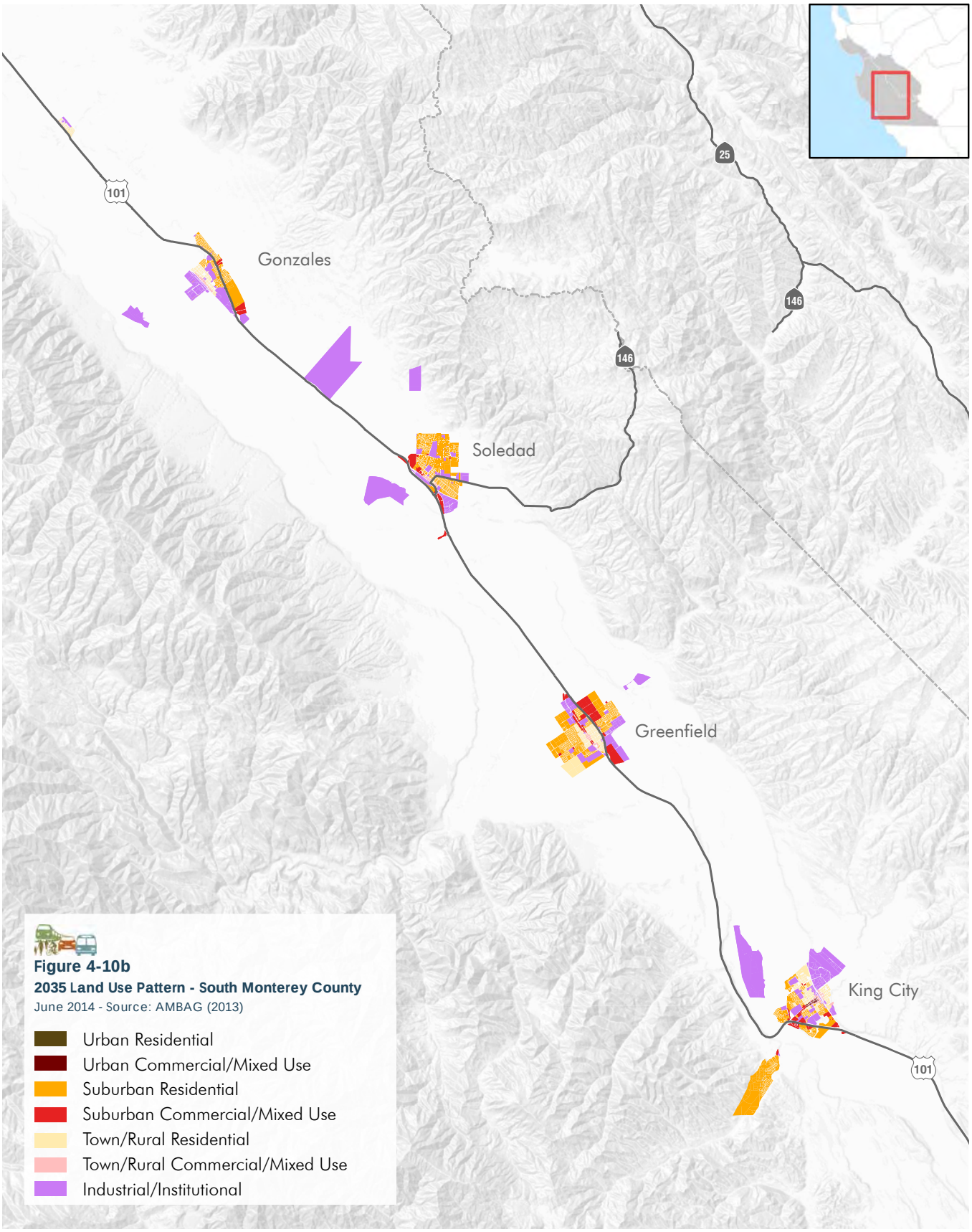


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Figure 4-11: 2035 Land Use Pattern San Benito County

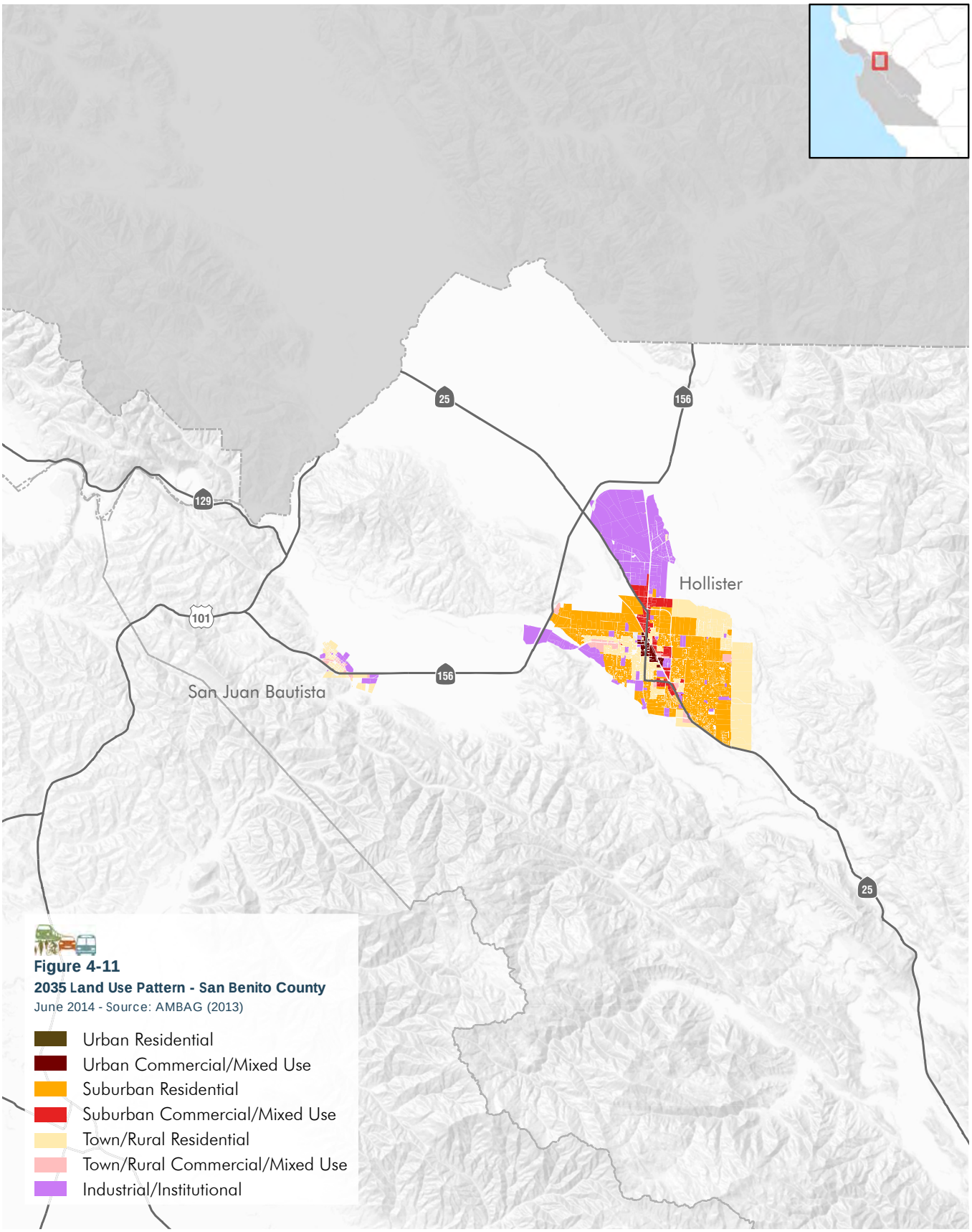

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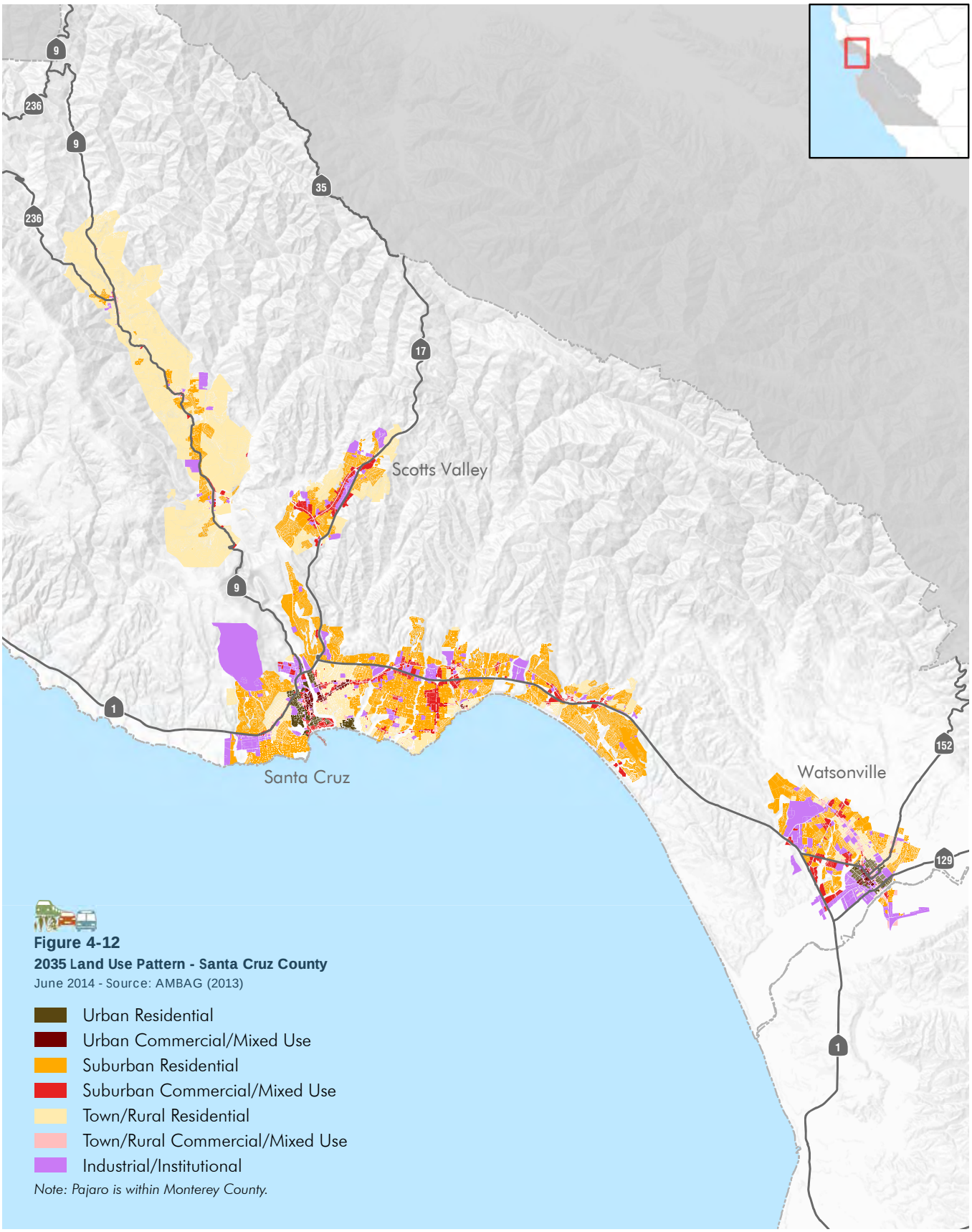
Figure 4-12: 2035 Land Use Pattern Santa Cruz County



so that regional land use and transportation strategies take into account and respond appropriately to the needs of all jurisdictions.

The implementation strategies included in this 2035 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.

Transportation System and Programs

Integrated Multimodal Network

The 2035 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 4-13, the 2035 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 2035 MTP/SCS introduces bus rapid transit and rail passenger service in the region in key corridors. These include extension of the Capital Corridor to Salinas, light rail transit services on the Monterey Peninsula, and future passenger rail service in Santa Cruz County.

Roadways

The 2035 MTP/SCS includes strategic capacity and technology enhancements to existing highways (as shown in Figure 4-14) 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 2035 MTP/SCS also includes a notable increase in the regional active transportation network. Figure 4-15 shows the bicycle network in 2035. 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 over $898 million or nearly 12 percent in available revenues under the 2035 MTP/SCS. This is a significant increase as compared to less than one percent of the available revenue in the 2010 MTP. 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. Additionally, the Regional Transportation Planning Agencies developed the Regional Complete Streets Guidelines to assist local jurisdictions in project design and implementation.

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

Transportation System Management (TSM) measures also support the goals of the 2035 MTP/SCS by making improvements to improve operational efficiency. These techniques contribute

Figure 4-13: 2035 Regional Transit Network

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Figure 4-14: 2035 Regional Highway Network

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 2035 MTP/SCS:

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

Transportation Demand Management

In addition to the transportation network, the 2035 MTP/SCS also relies on strategic and extensive Travel Demand Management (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 $46 million in available revenues.

The 2035 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

Public Health

The 2035 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. The Plan supports the integration of transportation and land use policies to promote improved public health. The 2035 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 2035 MTP/SCS also sets forth a vision for a less carbon intensive vehicle fleet. Through partial zero and zero-emission vehicle technologies, the 2035 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

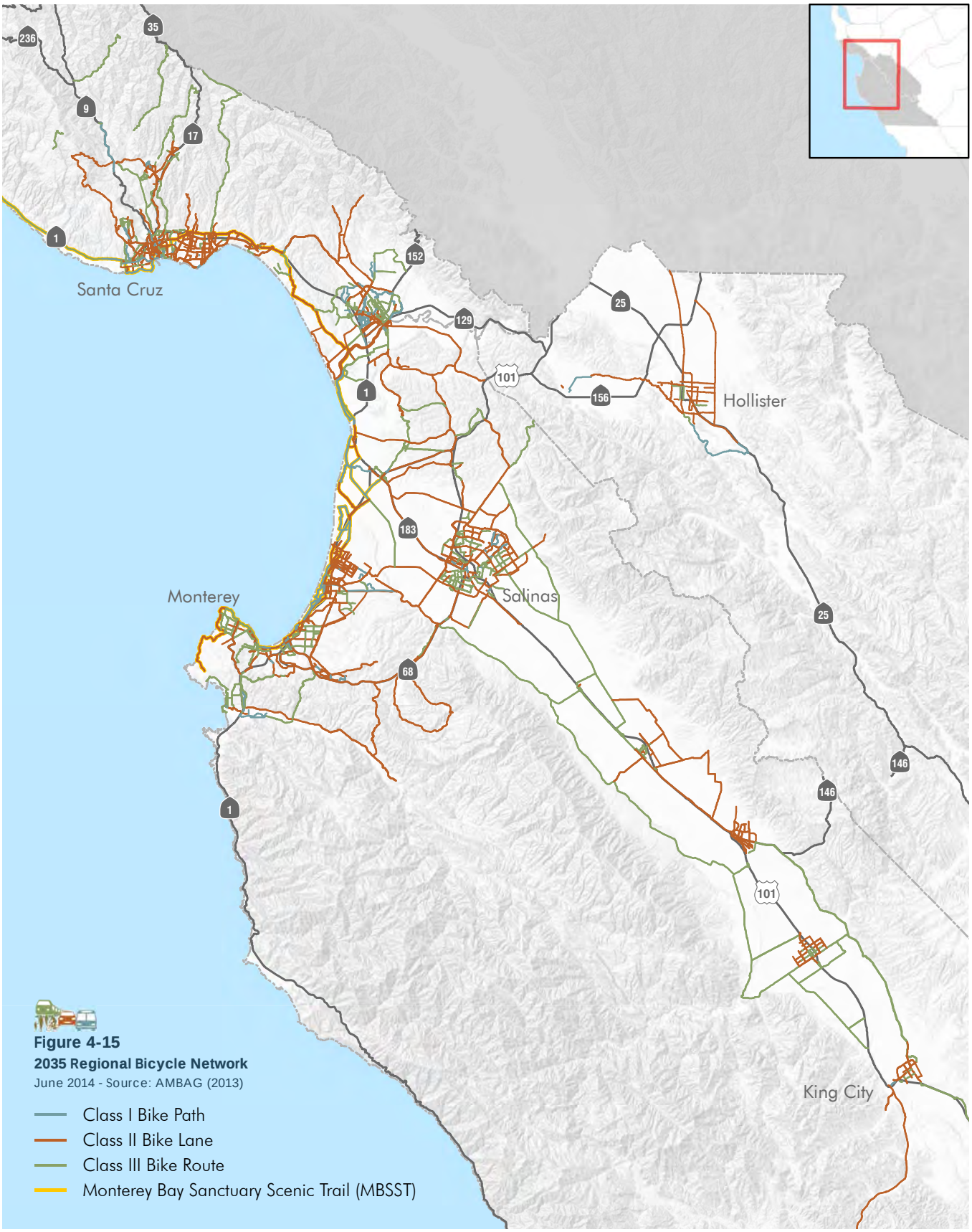
The transportation of people and goods in cars, trucks, buses, and on motorcycles is the single largest source of GHG emissions in the region. The levels of fuel consumption and GHG partly result from the region's reliance on petroleum-based gasoline and diesel fuels, as well as the average fuel efficiency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

The region's need for gasoline and diesel is projected to decline from about 129 million gallons per day in 2010 to about 112 million gallons per day by 2035. (California Energy Commission, "Transportation Energy Forecasts and Analyses for the 2009 Integrate Energy Policy Report.") 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. Electric vehicles in particular are an important alternative to conventional vehicles as they have the potential to reduce greenhouse gas emissions resulting from the consumption of fossil fuels, particularly in a state with a cleaner energy mix.

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

Figure 4-15: 2035 Regional Bicycle Network



SB 375 and Electric Vehicles

After AB 32 was signed into law the California Air Resources Board (CARB) developed a Scoping Plan which provides a regulatory approach to reduce emissions from all sources and sectors within the state including energy, transportation, water, construction, manufacturing, agriculture, etc. SB 375 enacts the first programmatic effort to meet California's climate change objectives under AB 32 through regional planning initiatives. However, SB 375 is strictly concerned with the reduction of greenhouse gas emissions from the transportation sector, specifically passenger vehicles, whereas AB 32 considers all sectors.

In discussions of how the region should meet its GHG targets, people often wonder why the region can not reach the targets by planning for more electric vehicles. AMBAG is involved in regional planning efforts to support electric vehicle infrastructure and has included it as part of the 2035 MTP/SCS. However, SB 375 is focused very specifically on the reduction of CO2 emissions from cars and light trucks through the coordination of land use patterns and transportation improvements that result in reduced emissions. AB 32 and new Pavely fuel standards already propose separate regulatory changes for vehicle and light truck fuel emission and efficiency standards.

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.

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 ten 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.

AMBAG has taken steps to assess what regional infrastructure is needed to accommodate more alternative fuel choices across the region. In 2010, AMBAG and other regional entities began developing 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 Monterey Bay Area. 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 ample 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 (2012), 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 Readiness Plan identifies specific regional targets for significantly expanding plug-in electric vehicle adoption in the Monterey Bay Area by 2015, 2020, and 2025.

AMBAG Energy Watch Program

Within the Monterey Bay Area, the 21 local governments are committed to energy efficiency and climate planning and are working in collaboration with other local governments and their communities. It was through this shared vision of maximizing energy as a resource that the AMBAG Energy Watch program was developed in 2006. This program is funded by the California Public Utilities Commission and is a partnership of the AMBAG with Pacific Gas and Electric Company (PG&E).

The stated vision of the California Public Utilities Commission Long Term Energy Efficiency Strategic Plan for local governments is as follows: "By 2020, California's local governments will be leaders in using energy efficiency to reduce energy use and global warming emissions both in their own facilities and throughout their communities."

The diverse range of programs and services provided by AMBAG Energy Watch has been developed to serve this vision. As noted in the California Public Utilities Commission's Long Term Energy Efficiency Strategic Plan, California is the second largest GHG emitting state in the United States. And within California, electricity production is the second largest source of GHG emissions. Maximizing energy efficiency is a critical strategy in the reduction of GHG emissions.

The AMBAG Energy Watch programs are designed in two major categories. The first category is implementation programs. These programs achieve direct and measurable energy efficient targets through the installation of energy efficiency equipment. These programs have been developed to serve the diverse stakeholders in the region including residents, municipalities, special districts, non-profit organizations, agriculture, school districts and hospitality businesses. The second category of programs is in the area of climate planning support for jurisdictions. The AMBAG Energy Watch program worked collaboratively with staff from each of the 21 AMBAG jurisdictions to complete each jurisdiction's 2005 municipal and community-wide greenhouse gas inventory, as well as their 2009 and 2010 community-wide greenhouse gas inventory updates. This data was used in the creation of a draft community-wide Energy Action Strategy (EAS) developed for each of the jurisdictions, which in some cases were incorporated into their Climate Action Plans.

Climate Change and Adaptation

The transportation sector has been identified as a key contributor of GHGs, but also is threatened by the impacts of continued climate change. The Monterey Bay region is expected to change, even under the most optimistic scenarios, due to climate change. 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.

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.

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 would 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.

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.

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

Figures 4-17 and 4-18 show the location of these parks, open space, and farmlands.

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 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 would also 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, would 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 4-16 shows the location of the region's natural resources.

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 Monterey County.

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 4-16: 2035 Natural Resource Areas

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Figure 4-17: 2035 Open Space

Figure 4-18 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 2035 MTP/SCS has been 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 US Army Corps of Engineers, the US 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.

Accommodating the Region's Housing Needs

The SCS land use pattern accommodates an estimated 42,000 new households that will be needed over the next 25 years to serve a projected growth in of 152,000 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 Assessment

California Housing Element law requires AMBAG to 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 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).

Figure 4-18: 2035 Farmland

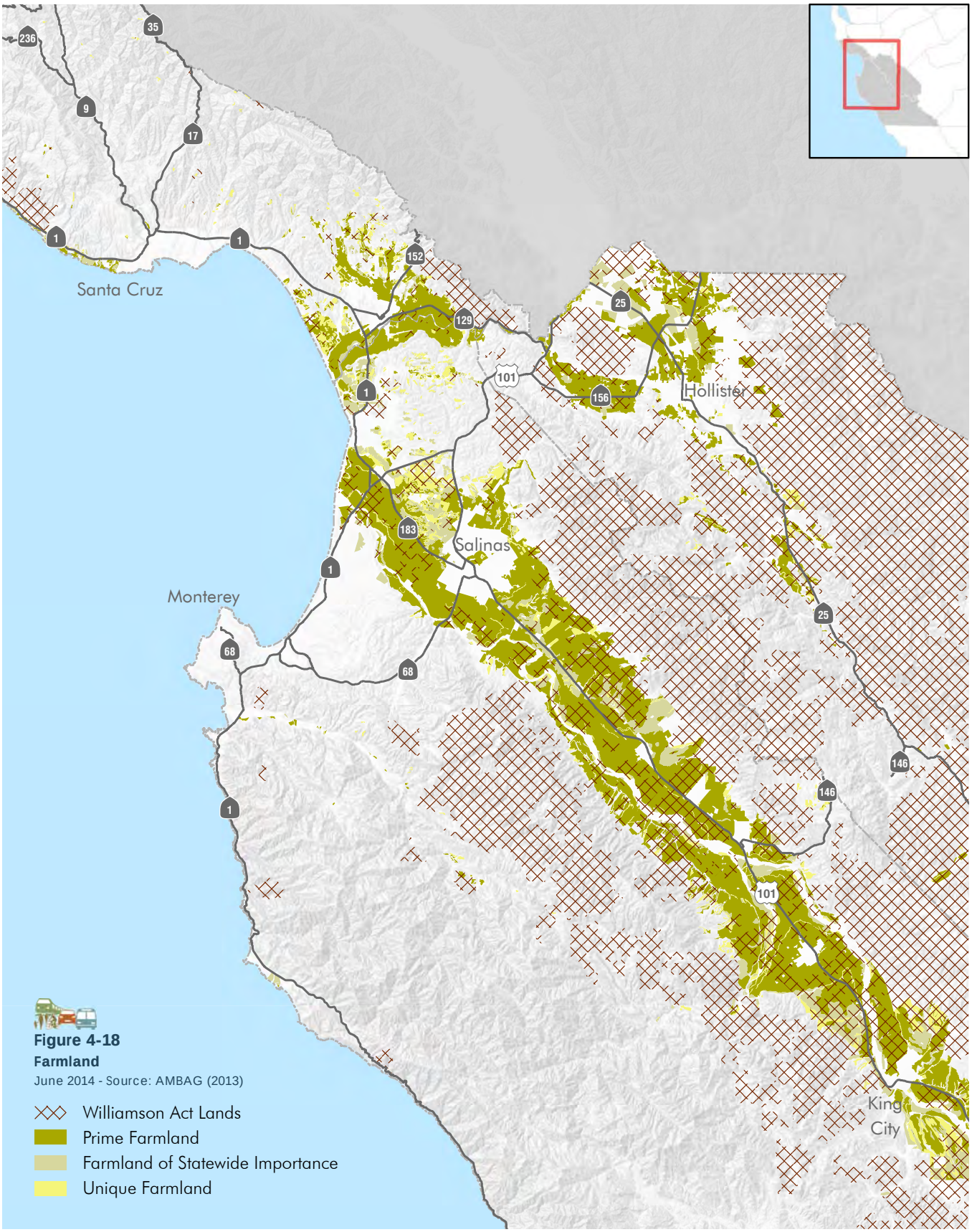

Table 4-1: Housing Capacity from Adopted Housing Elements

Jurisdiction (Date of Last Housing Element Adoption)	Estimated Total
Monterey County Total	**20,059**
Carmel (2007-2014)	180
Del Rey Oaks (1992)	undetermined
Gonzales (2007-2014)	468
Greenfield (2000-2007)	908
King City (2007-2014)	1,387
Marina (2008-2014)	3,119
Monterey (2009-2014)	864
Pacific Grove (2007-2014)	237
Salinas (2007-2014)	6,578
Sand City (2009-2014)	308
Seaside (2009-2014)	1,134
Soledad (2009-2014)	1,143
Monterey County (2009-2014)	3,733
Santa Cruz County Total	**12,971**
Capitola (2007-2014)	233
Santa Cruz City (2007-2014)	1,368
Scotts Valley (2009-2014)	1,112
Watsonville (2008-2013)	950
Santa Cruz County (2009-2014)	9,308

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 (2014-2023), as shown in Table 4-2. The AMBAG RHNA Plan allocates the RHNA Determination by jurisdiction. (For the San Benito RHNA, refer to the San Benito Council of Governments 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. Housing elements are due no later than 18 months after the AMBAG Board adopts the 2035 MTP/SCS, or December 2015.

Table 4-1 shows that 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 consistent with the 2035 MTP/SCS.

Meeting GHG Targets

On September 23, 2010, CARB set targets for lowering GHG in the Monterey Bay region. They call for a zero percent increase, in per capita GHG emissions from passenger vehicles by 2020 (compared with 2005); and a five percent per capita reduction by 2035 through land use and transportation planning.

The 2035 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

Table 4-2: RHNA Housing Allocation

Geography	Total Allocation	Very Low (24.103%)	Low (15.75%)	Moderate (18.249%)	Above Moderate (41.897%)
AMBAG Region	10,430	2,514	1,642	1,905	4,369
Monterey County	**7,386**	**1,780**	**1,162**	**1,349**	**3,095**
Carmel-By-The-Sea	31	7	5	6	13
Del Rey Oaks	27	7	4	5	11
Gonzales	293	71	46	53	123
Greenfield	363	87	57	66	153
King City	180	43	28	33	76
Marina	1,308	315	206	239	548
Monterey	650	157	102	119	272
Pacific Grove	115	28	18	21	48
Salinas	2,229	537	351	407	934
Sand City	55	13	9	10	23
Seaside	393	95	62	72	164
Soledad	191	46	30	35	80
Balance Of County	1,551	374	244	283	650
Santa Cruz County	**3,044**	**734**	**480**	**556**	**1,274**
Capitola	143	34	23	26	60
Santa Cruz	747	180	118	136	313
Scotts Valley	140	34	22	26	58
Watsonville	700	169	110	128	293
Balance Of County	1,314	317	207	240	550

Source: AMBAG, Regional Housing Needs Allocation Plan: 2014-2023. Scheduled for adoption June, 2014.

space; and investing in a transportation system that provides residents, workers and visitors with transportation options that are more effective and diverse.

Additionally, the 2035 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 Plan 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 4-19 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.

Figure 4-19: 2035 High Quality Transit Corridors

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 2035 MTP/SCS is first and foremost a transportation plan. However, the transportation network in the 2035 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, SB 375 provides CEQA incentives for development projects that are consistent with the regional SCS and help meet greenhouse gas emission reduction 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.

Additionally, to achieve the goals of the 2035 MTP/SCS, public agencies at all levels of government may implement a wide range of strategies. Table 4-3 list specific strategies that AMBAG, RTPAs, local jurisdictions, and other stakeholders may consider in order to successfully implement the SCS.

Table 4-3: 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
A taskforce should be created 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 jurisdictions
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 jurisdictions
Compile and coordinate research and development that supports the green economy which can then be used to attract small, private businesses 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
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 jobs-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

Table 4-3: Implementation Strategies (continued)

Strategy	Responsible Party
Land Use & Environment	
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 deployment, bicycle and pedestrian improvements, and safer intersections.	AMBAG; RTPAs; 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 jurisdictions
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 of active transportation options for short trips and improve quality of life.	RTPAs; local jurisdictions
Invest 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
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

Table 4-3: Implementation Strategies (continued)

Strategy	Responsible Party
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
Develop educational and demonstration materials for General Plan updates that helps jurisdictions to easily and readily incorporate concepts and goals from the Sustainable Communities Strategy into their General Plan. Coordinate these materials with Climate Action Plan concepts and goals to ensure consistent and mutually supportive strategies are developed to reduce greenhouse gases.	AMBAG; local jurisdictions
Keep apprised 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 strategies.	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

Table 4-3: Implementation Strategies (continued)

Strategy	Responsible Party
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
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
Take steps to 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; transit agencies
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-share 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
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 agenices

Table 4-3: Implementation Strategies (continued)

Strategy	Responsible Party
Transportation	
Support projects that improve mobility and accessibility for seniors and people with disabilities.	AMBAG; RTPAs; transit agenices
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 Management 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 airports
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

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5 Performance Measures

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Introduction

The investments identified in the 2035 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 2035 MTP/SCS with respect to the adopted regional performance measures. This chapter also describes how the 2035 MTP/SCS addresses the statutory requirements regarding SB 375 and social equity.

Performance Outcomes

This section summarizes how well the 2035 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 2035 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 2010 Existing represents existing conditions and includes only existing transit service and the existing transportation network in 2010. The 2035 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 2012 Metropolitan Transportation Improvement Program (MTIP) that have received environmental clearance. The Plan refers to future conditions in which the 2035 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 2035 MTP/SCS, accessibility performance measures consider the distribution of trips by mode and travel time.

Work Trips Within 30 Minutes

Compared to existing, the percentage of transit work trips that can be made in 30 minutes improves in the 2035 MTP/SCS. Drive alone and carpool work trips maintain a high level of performance with more than 80 percent of the trips capable of being made within 30 minutes.

Table 5-1: Performance Measures

Regional Performance Measures	2010 Existing	2035 No Build	2035 MTP/SCS
Access and Mobility			
Work Trips Within 30 Minutes (percent)			
Drive Alone	84.3%	84.0%	84.2%
Carpool	84.3%	84.0%	84.2%
Transit	15.4%	16.9%	17.1%
Commute Travel Time (minutes)	15.7	15.7	15.7
Economic Vitality			
Jobs Near High Quality Transit (percent)	17.5%	27.2%	57.3%
Daily Truck Delay (hours)	2,802	11,471	10,667
Environment			
GHG Reductions (Percent reduction from 2005 baseline)*	N/A	0.6%	-5.9%
Open Space Consumed (acres)	N/A	2,944	2,556
Farmland Converted (acres)	N/A	14,611	14,316
Healthy Communities			
Alternative Transportation Trips (percent)	17.3%	18.1%	17.7%
Air Pollution - all vehicles (tons/day)	31.3	9.5	9.4
Peak Period Congested Vehicle Miles of Travel (miles)	128,463	749,430	618,975
Social Equity			
Distribution of MTP/SCS Investments (percent)			
Low income population	N/A	N/A	90.3%
Non low income population	N/A	N/A	9.7%
Minority population	N/A	N/A	79.1%
Non minority population	N/A	N/A	20.9%
Poverty population	N/A	N/A	62.2%
Non poverty population	N/A	N/A	37.8%
Access to Transit within 1/2 mile (percent)			
Low income population	14.5%	16.4%	48.2%
Non low income population	10.3%	12.8%	38.4%
Minority population	12.8%	14.9%	47.1%
Non minority population	14.5%	17.0%	44.3%
Poverty population	16.0%	13.6%	50.5%
Non poverty population	11.9%	14.3%	42.6%
System Preservation and Safety			
Maintain the Transportation System (percent)	N/A	N/A	50%
Fatalities and Injuries per Capita	0.4%	0.4%	0.4%

*Greenhouse gas reductions in 2020 are -3.5 percent from 2005 levels.

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

Commute Travel Time

Compared to Existing and No Build, average commute travel time will remain the same with the improvements included in the 2035 MTP/SCS despite an additional 150,000 people living in the region.

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 2035, 57 percent of the region's jobs are within one-half mile of a transit stop, compared to only 17.5 percent in the base year.

Daily Truck Delay

This measure estimates the daily truck hours of delay. The 2035 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 approximately seven percent over No Build. However, the truck delay under the Plan will still be above existing levels.

Environment

There are many aspects of the 2035 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 zero percent per capita increase from 2005 levels by 2020 and a five percent per capita reduction from 2005 levels by 2035. The Plan exceeds the target in both years achieving over 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 reduces the amount of open space that would be consumed over a No Build scenario by 13 percent.

Farmland Preservation

This performance measure shows the total acreage of farmland consumed by development. The Plan shows a decrease of two percent of farmland consumed over the No Build scenario. 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.

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 decrease in the total percent of trips taken using an alternative mode. 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.

Air Pollution

The air quality performance measure evaluates smog forming pollutants in daily short tons. The Plan improves the air quality throughout the region over the 2010 existing measures of smog forming pollutants.

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 2010 existing levels. As population increases so will congested VMT increase. The Plan does improve the projected congested VMT over a scenario in which the region does nothing to address transportation needs.

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, poverty, 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, poverty, and minority areas are shown in Figure 5-1. For more information on identification

of these populations refer to Appendix G.

- *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.
- *Poverty Populations:* any Census tract in which 20 percent or more of families are living at or below the federal poverty income threshold.
- *Minority Populations:* any Census tract in which 65 percent or more of the population is non-White.

Distribution of Transportation Investments

The 2035 MTP/SCS includes regional investments in the transportation system across the three counties. The distribution of transportation investments are greater in low income and minority populations compared to other populations.

The analysis for low income populations shows that the 2035 MTP/SCS will result in higher increases in transportation investments for low income and poverty populations: 90 percent in low income areas compared to 10 percent in non-low income areas and 62 percent in poverty areas compared to 38 percent in non-poverty areas.

The analysis also shows that the 2035 MTP/SCS will result in higher investments for minority populations as compared to non-minority populations: 79 percent in minority areas compared to 21 percent in non-minority areas.

Equitable Transit Access

This performance measures evaluates the percent of low income, poverty, and minority populations that are located within one-half mile of a high quality transit stop. In 2010, only a small percentage of the population is located near a high quality transit stop: 14 percent low income and 13 percent minority. With the 2035 MTP/SCS, access to transit would increase to 48 percent for low income and 47 percent for minority populations. Figure 5-2 highlights the transit accessibility of the region.

Vehicle Miles Traveled

The number of vehicle miles traveled (VMT) is an indicator of the travel levels on the roadway system by motor vehicles. VMT is estimated for a given time period. This estimate is based upon traffic volume counts and roadway length and is used to give planners an understanding of the level of usage of the roadway network. VMT is also used to estimate greenhouse gas emissions. However, when examining VMT to understand potential GHGs one must take into account various speeds at which cars travel. A vehicle traveling at slow or very high speeds on a highway emits more greenhouse gas emissions than one traveling at 45 to 55 miles per hour. For this reason planners often look to congested VMT rather than total VMT to gain a better understanding of impact on emissions.

As the region's population continues to grow, VMT will also continue to grow. However, the growth in population is not the only factor fueling the rise in travel. Other factors include economic growth, relatively affordable auto travel costs, tourism, low levels of public transit, and other related factors. As the amount of auto travel increases, the time wasted on congested roadways, the energy used by vehicles and total costs of auto travel increase accordingly. The 2035 MTP/SCS aims to reduce this congested VMT, by providing a host of transportation options such that people do not have to drive everywhere but have alternative options available to them, particularly for shorter distance trips.

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 2035 MTP/SCS dedicates 50 percent of the total funding available for maintenance and rehabilitation projects.

Fatalities and Injuries

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 2010 and 2035 staying at a rate of four 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 2035 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.

Environmental Justice and Title VI

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. For this reason, this Plan distinguished low income from poverty standards when measuring the performance of the proposed transportation improvements. 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

Figure 5-1: Low Income Minority Areas

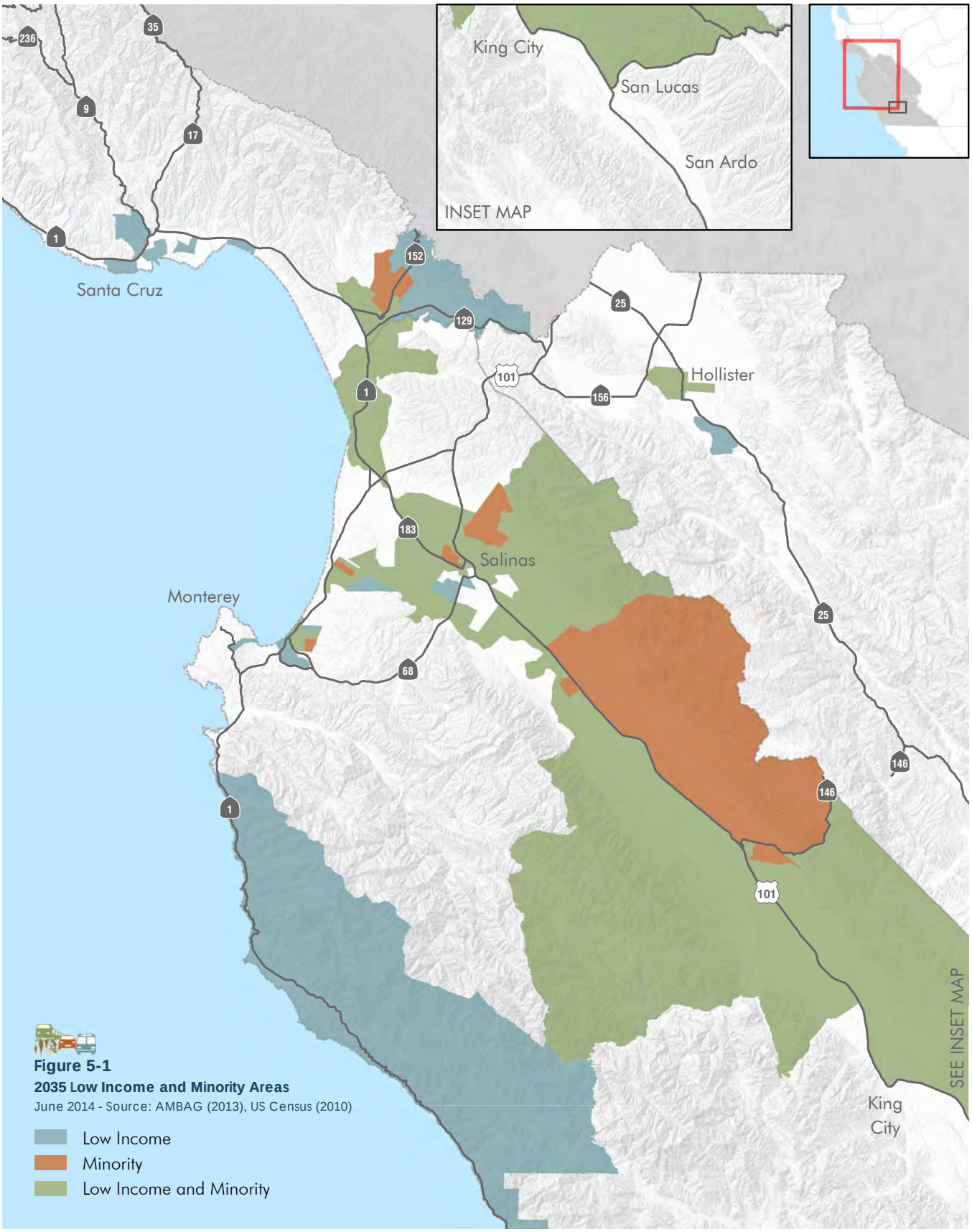


Figure 5-1
2035 Low Income and Minority Areas
June 2014 - Source: AMBAG (2013), US Census (2010)

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.

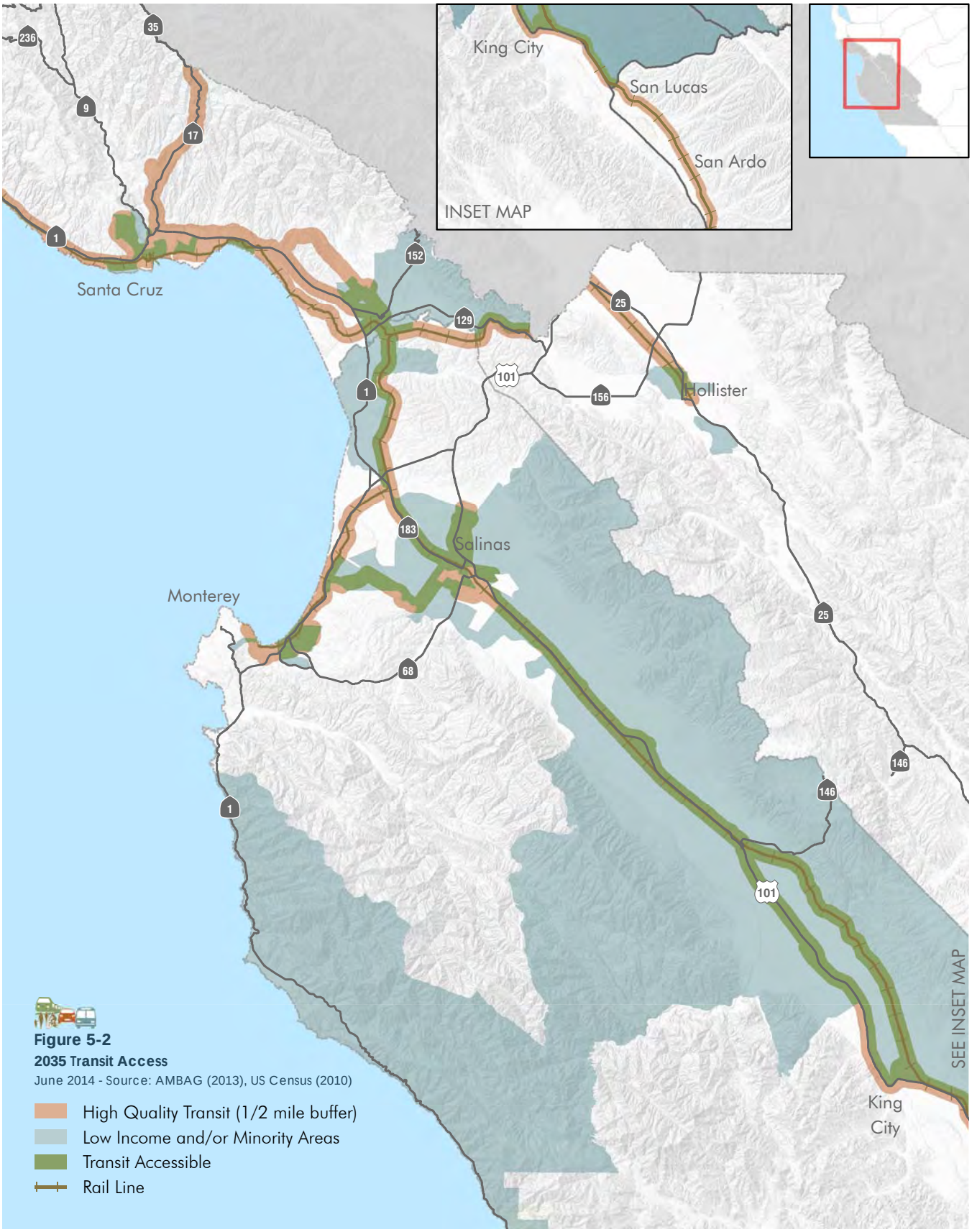
Technical Analysis

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 2035 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 2012 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, poverty, 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 2035 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 2035 MTP/SCS programs and policies. This list is comprised of a large variety of individuals and organizations ranging from

Figure 5-2: Transit Access



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.

6 Public Participation

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Introduction

AMBAG values public participation in the development of the 2035 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 2035 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 2035 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.

Development of the 2035 MTP/SCS has been a multi-year effort that began in 2012. 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. A detailed description of the outreach activities is included in Appendix D.

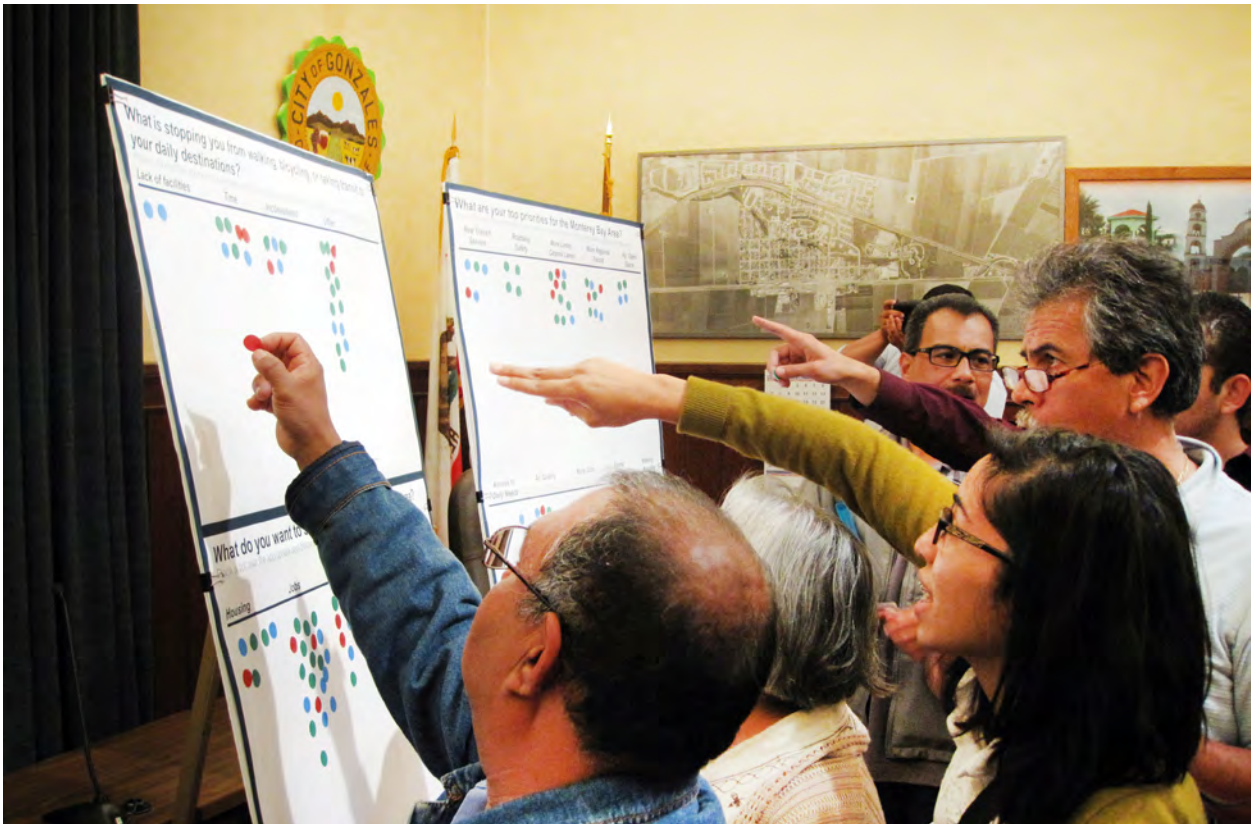
Public Participation Plan

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 2035 MTP/SCS is included in Appendix D.

Engaging the Community

AMBAG engaged the community throughout the development of the 2035 MTP/SCS. These activities include:

- Eighteen community workshops
- Seven public hearings
- A project website (www.MovingForwardMB.org)


CITY OF GONZALES
What is stopping you from walking, bicycling, or taking transit to your daily destinations?
Lack of facilities
Time
What are your top priorities for the Monterey Bay Area?
What do you want to
Housing
Jobs


Take a survey!

- Design and implementation of a geographic information system (GIS) based mapping system called AMBAG LiveMaps
- Three interactive online surveys in English and Spanish
- A telephone survey
- A five-minute video
- Preparation of handout materials, flyers, information sheets, frequently asked questions (FAQs), etc.
- Nine meetings with the Regional Advisory Committee (RAC), a group of key stakeholders made up of environmentalists, business leaders, community activists, and local planning commissioners.

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

Workshops

Three series of six workshops each were held throughout the tri-county region at key milestones that corresponded with the online surveys previously discussed. The 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.

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 May 2013 and 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 in July 2013 and was set up to explain the purpose of the 2035 MTP/SCS and to solicit input on the initial scenarios, which would help create the hybrid scenarios. The third workshop series was held in March to receive input on the Draft 2035 MTP/SCS. At each of the workshops in March AMBAG also conducted public hearings which provided the opportunity for formal comment. A seventh public hearing was held at the March AMBAG Board of Directors meeting. Input received during these workshops and public hearings was then used to make changes to the Final Plan.

Surveys

Public workshops are a great tool to solicit comments from the community; however, not everyone is able or willing to participate. To help increase awareness and to reach more people than conventional workshops, a series of surveys were created at critical points throughout the project.

Online Surveys

The tool utilized for online surveys was MetroQuest, one of the leading digital engagement tools for scenario building, transportation and land use projects. The interface is interactive, intuitive, and can be translated into multiple languages. All surveys were provided in both English and Spanish and were made available through the project website. The general format consisted of three to five panels which include multiple choice and open ended questions, rankings, map identification, and demographic questions.

The online surveys were active during and after the community workshops to maximize number of participants. Three online surveys have been conducted at key milestones of the planning process to (1) establish preferences and priorities, (2) provide feedback on initial scenarios, and (3) provide feedback on the draft 2035 MTP/SCS.

Telephone Survey

A telephone survey was conducted in spring 2013 to assess the community's current trends and priorities for transportation infrastructure needs and investment. Questions were created with input from all three counties. Specifically, the survey focused on:

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 2011 Public Participation Plan.

The Monterey Bay Area Public Participation Plan was originally adopted in 2008. 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. The 2011 update is responsive to the Senate Bill 375 requirement.

- Level of concern about community issues
- Use of the local transportation system
- Transportation infrastructure needs
- Proposed projects for transportation investment
- Themes or messages that may assist public information efforts

The survey reached 450 residents each from Monterey and Santa Cruz Counties and over 300 residents from San Benito County.

Regional Advisory Committee

The Regional Advisory Committee consists of environmentalists, business leaders, community activists, and local planning commissioners. Recommendation for Regional Advisory Committee membership was made by a subcommittee of the AMBAG Board of Directors and was approved by the full AMBAG Board of Directors. The Regional Advisory Committee meets quarterly or as needed to provide input on land use and transportation issues. The Regional Advisory Committee met nine times throughout the planning process and at key milestones to identify priorities, provide guidance on initial scenario development, review draft workshop materials, and to receive project updates including feedback from the community workshops and online surveys.

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 new *AMBAG LiveMaps* system. Surveys were distributed online using an interactive format, facebook was utilized to advertise meetings and a project website and video were distributed.

AMBAG LiveMaps

AMBAG has collected GIS data from the various jurisdictions over the years and has stored the data on an internal server. As part of this project and to

better foster regional coordination, the data was organized into a central database and hosted on a public website and branded as *AMBAG LiveMaps*.

This interactive tool is available to anyone with an internet connection. It is the intent that the data will be regularly updated and new features will be added to enhance the user experience and address comments from jurisdiction staff and other users.

The *AMBAG LiveMaps* tool is organized by Land Use and Planning (city limits, airports, land use, etc.), Natural Features (fault lines, fire hazards, waterbodies, etc.), and Transportation (bus routes, bikeways, trails, etc.). These categories will be expanded and new data added as it is made available and organized.

Project Video and Website

The project website (www.MovingForwardMB.org) is the central portal for information about the project and upcoming events. 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 utilize "Quick Links" to the project video, online survey, LiveMaps, upcoming events, recent news, email sign-up, and the AMBAG Facebook page.

Tabs at the top linked to a variety of pages providing useful information on the history of the project, a glossary of terms and acronyms, frequently asked questions (FAQs), documents and maps, and pages provided within the Quick Links.

In addition to the website, a project video was created in both English and Spanish to introduce the issues, the process, and the outcome for the project. The video is prominently located on the website and is available on YouTube.

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.

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, determine hybrid and preferred scenarios, and ultimately to adopt the 2035 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, and AMBAG. The Planning Directors Forum meets regularly to address regional land use and transportation planning issues. The Planning Directors Forum met ten times throughout the planning process and at key milestones to identify priorities, help establish initial scenario development, review draft workshop materials, and to receive project updates including feedback from the community workshops and online surveys.

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 Regional Transportation Planning Agencies (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 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 2035 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 San Benito County Council of Governments - are important partners in the planning process for the 2035 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 2035 MTP/SCS.

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.

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 2010, 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 2012 MTIP. The Baseline functions as the "No Project" alternative used in the MTP/SCS Program EIR.

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 Rapit 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.

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.

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.

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.

CMIA
Corridor Mobility Improvement Account: A $4.5 billion congestion relief component of Proposition 1B, a measure approved by voters in 2006 that provides nearly $19.9 billion in infrastructure bonds.

CMAQ
Congestion Mitigation and Air Quality Improvement Program: A category of funds contained in

SAFETEA-LU for projects and activities that reduce congestion and improve air quality in regions not yet attaining federal air quality standards.

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.

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.

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 dem 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.

Deficiency Plan
Set of provisions contained in a Congestion Management Plan to address congestion when unacceptable levels of congestion occur. Projects implemented through the Deficiency Plan must, by statute, have both mobility and air quality benefits.

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.

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.

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 seven mandatory elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety.

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, and 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.

JARC
Jobs Access Reverse Commute: The SAFETEA-LU formula fund program that provides support for

capital or operating costs for transportation services and facilities designed to facilitate reverse commute employment-related travel for people with limited means.

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 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.

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.

MBUAPCD
Monterey Bay Unified Air Pollution Control District: The MBUAPCD 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, 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 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 6 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.

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.

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).

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 Assessment: Quantifies the need for housing within each jurisdiction of the AMBAG region based on population 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.

RTPA
Regional Transportation Planning Agency: A state-designated agency responsible for preparing the RTP, and for administering state transportation 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 the journey to school on foot or bike more feasible 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.

SAFETEA-LU
Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users: Federal legislation signed into law on August 10, 2005 authorizing $244.1 billion for Federal surface transportation programs for highways, highway safety, and transit for the five-year period between 2005 and 2009. At the time of this writing, Congress had not yet passed a re-authorization of a multi-year transportation bill. In its place, Congress has approved a series of extensions, known as Continuing Resolutions, to keep federal funds flowing at the last approved annual funding level to SAFETEA-LU formula programs.

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.

SCS
Sustainable Communities Strategy: A new 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.

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.

STP
Surface Transportation Program: 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.

TEA-21
Transportation Efficiency Act for the 21st Century: Federal legislation enacted in 1998, authorizing the preparation and funding of a surface transportation program. Like previous ISTEA legislation, TEA-21 emphasizes diversity and a balance of modes, as well as the preservation of existing systems before the construction of new facilities.

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.

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).

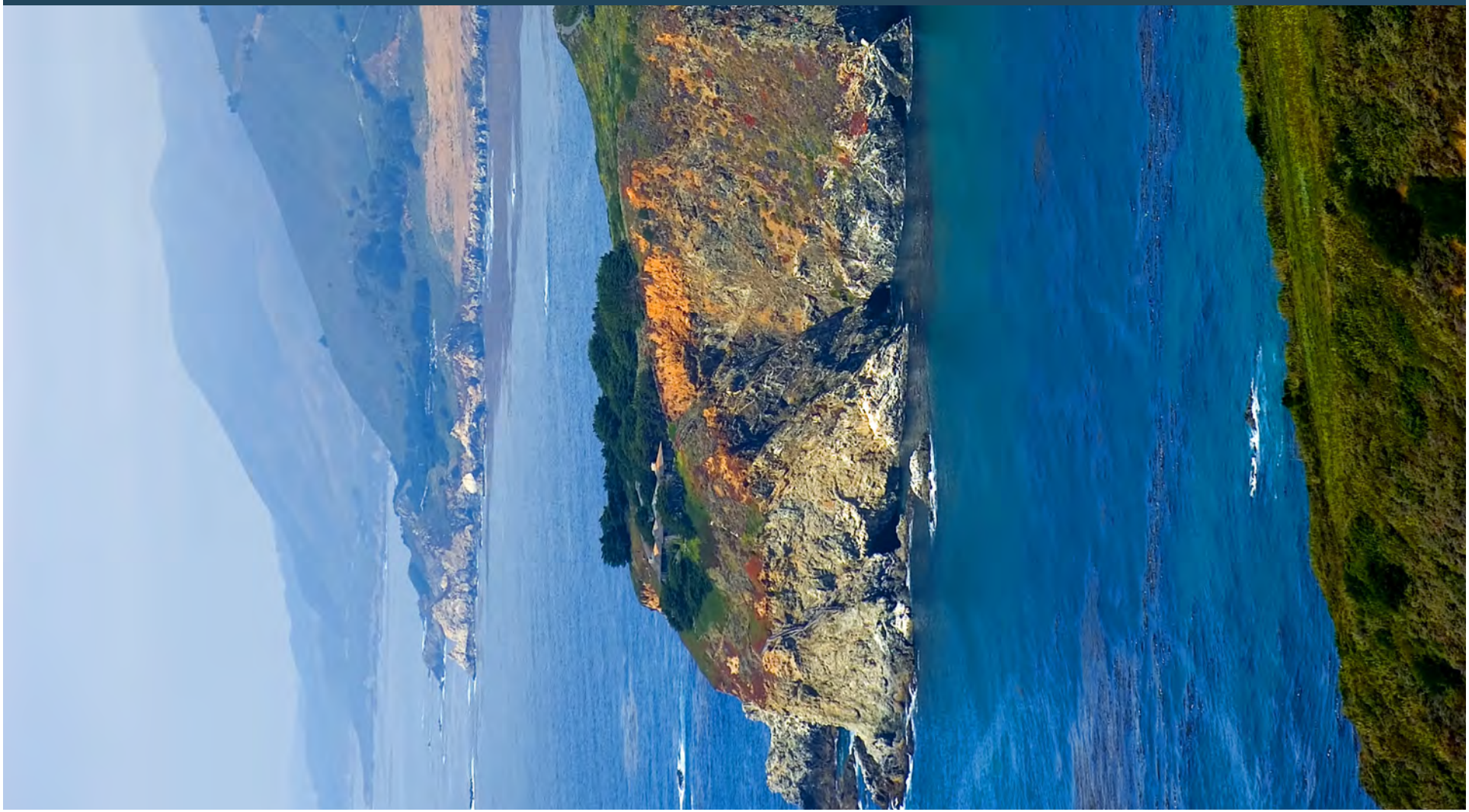
VMT

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.

A Regional Growth Forecast



2014 Regional Growth Forecast

Technical Documentation

Association of Monterey Bay Area Governments
Scheduled for Adoption June 11, 2014

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Executive Summary

As the Metropolitan Planning Organization (MPO), AMBAG carries out many planning functions for the tri-county area including development and maintenance of the regional travel demand model (RTDM), long range transportation planning and programming, and acting as a regional forum for dialogue on issues facing the region. Most of AMBAG's projects are carried out in support of these major functions, including but not limited to the regional growth forecast. AMBAG develops the forecast with a horizon year that matches the planning timeline of the Metropolitan Transportation Plan (MTP) and the model years for the Regional Travel Demand Model (RTDM). In addition to informing regional planning processes, the forecast is used by local jurisdictions and special districts to inform local and subregional planning.

The last regional growth forecast was adopted in 2008. The timing of its adoption coincided with the housing crash of 2008 and while the forecast reflected predictions of a minor recession, it did not reflect the kind of economic downturn that occurred between 2008 and 2012. Given the changed economic climate AMBAG staff began the process of developing a new forecast in spring 2012.

In order to determine the best methodology for development of a new forecast, staff conducted a review of recently completed population, housing, and employment forecasts. The results of this review indicated that most of the other MPOs in California are using a methodology that places greater emphasis on employment growth as the primary driver of long-term population change at the regional scale. The traditional approach to forecasting population uses a cohort component approach which considers three factors - births, deaths, and migration. While births and deaths are fairly easy to obtain data for and therefore have relatively predictable trends, migration tends to be much more difficult to forecast as it is heavily influence by political and economic climates. For the development of the new forecast AMBAG chose to progress towards a more contemporary approach which places a greater emphasis on employment. The assumption is that the economy is a better predictor of population growth. Both approaches use Census data as a basis for development of the forecast.

Under the direction of Stephen Levy, Director of the Center for Continuing Study of the California Economy, this approach was successfully used to develop the most recent regional forecasts for the Association of Bay Area Governments, the Sacramento Area Council of Governments, the Southern California Association of Governments, and the Santa Barbara County Association of Governments. Based on this review AMBAG contracted with Stephen Levy for the development of its regional forecast figures. The regional forecast figures were accepted by the AMBAG Board of Directors at the August 8, 2012 meeting. Additionally, Stephen Levy provided suggested methods for the disaggregation of the regional growth forecast to the subregional level. AMBAG staff applied those methods using a spreadsheet model with the assistance of a demographer, Beth Jarosz. Ms. Jarosz

has more than a decade of experience in demographic and economic estimation, forecasting, and analysis with extensive knowledge in producing forecasts and estimates for use in regional planning. Her expertise was called upon to assist with some of the unique demographic trends within the AMBAG region that needed to be accounted for in the disaggregation process. This technical document provides a description of the methodology for development of the regional growth forecast figures in addition to the methodology for disaggregation of those figures.

Section 1: Process for Forecast Completion

Following the preparation of the regional forecast figures, AMBAG staff began the process of disaggregating the figures to each of the jurisdictions using historical data to develop a baseline disaggregated forecast. The initial results were a purely quantitative application of the methodology. These preliminary draft disaggregated numbers were presented for discussion purposes at one-on-one meetings held by AMBAG staff with each of the jurisdictions, the Local Agency Formation Commissions, the Fort Ord Reuse Authority, the University of California, Santa Cruz, and the California State University, Monterey Bay. AMBAG staff also provided materials for these meetings that outlining the data sources and methodology for the regional forecast figures as well as the preliminary draft disaggregated forecast figures. The intent of the first round of meetings was to gather information and data that was then used to make adjustments to the forecast. (See Appendix A for a list of meeting dates, times and attendees.)

These preliminary draft disaggregated numbers were adjusted based on information and feedback provided by each jurisdiction and were re-circulated for a second round of comments. After the second round of comments were received, AMBAG staff incorporated additional input and prepared a third draft of the disaggregated forecast figures. The third draft was accepted for planning purposes only by the AMBAG Board of Directors at its meeting on February 13, 2013.

After acceptance of the preliminary forecast, adjustments were made as more data became available. In particular, staff updated the employment portion of the regional growth forecast. The Classical Shift Share methodology was used at the county level and therefore staff was able to provide a break out of employment by major industry categories at the county level. However staff was not able to obtain the necessary data from the Employment Development Department in order to conduct a disaggregation of employment at the industry level for the sub-county forecast by February, 2013. New employment data was obtained from InfoUSA, a vendor used by other agencies conducting long range forecasting work. InfoUSA obtains data from a variety of sources and cross checks the data with regular phone surveys of businesses. This new data led to a revision of the sub-county level employment forecast. The revision was distributed to jurisdiction staff and AMBAG staff met one-on-one with planners from each city and county in the region to discuss the revisions. (See Appendix A for a list of meeting dates, times and attendees.) Input from those

meetings was incorporated into a new revised employment forecast which was circulated for comment. Along with the new revised employment forecast, staff circulated the revised population and housing forecast which incorporated additional comments from the Board of Directors regarding institutional housing and planned development projects. The final growth forecast is scheduled for adoption along with the Metropolitan Transportation Plan on June 11, 2014.

Section 2: Development of the Regional Growth Forecast

In June 2012, the Association of Monterey Bay Area Governments (AMBAG) asked the Center for Continuing Study of the California Economy (CCSCE) to prepare regional job projections to 2035 and to assist AMBAG staff in preparing population and household projections. This section documents the findings of the work by CCSCE and includes a summary of the methodology, a description of the projections and an explanation of past, current and projected job growth in the region. The projections and most of the text in this section were originally prepared by Stephen Levy, CCSCE Director.

Summary

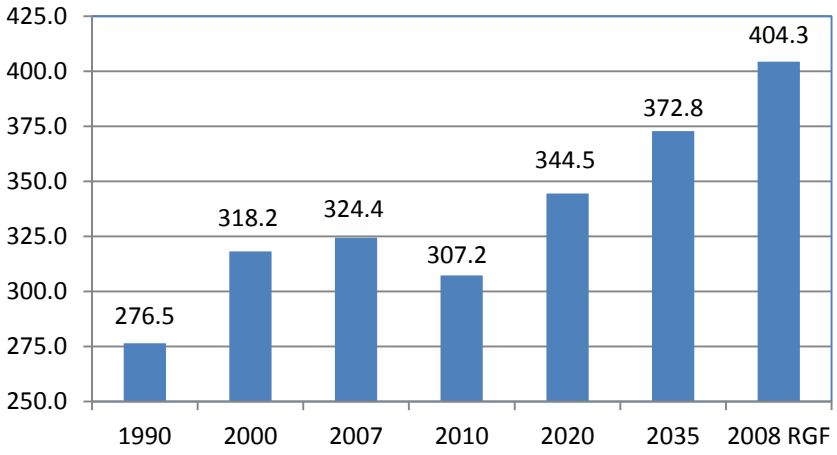
The AMBAG region is projected to add 64,400 jobs between 2010 and 2035. A portion of this job growth (17,200 jobs) represents recovery of jobs lost during the recession. The region is projected to have 372,800 jobs in 2035, which is below the 404,300 jobs projected in the 2008 Regional Growth Forecast.

Table 1: Forecast Comparison of Employment

Forecast by Year Released	2005	2010[1]	2015	2020	2025	2030	2035
2008	326,340	328,880	342,550	357,080	372,150	387,920	404,320
2008 Rate of Growth		1%	4%	4%	4%	4%	4%
2014		308,400	326,000	344,500	353,600	362,900	372,800
2014 Rate of Growth			6%	6%	3%	3%	3%

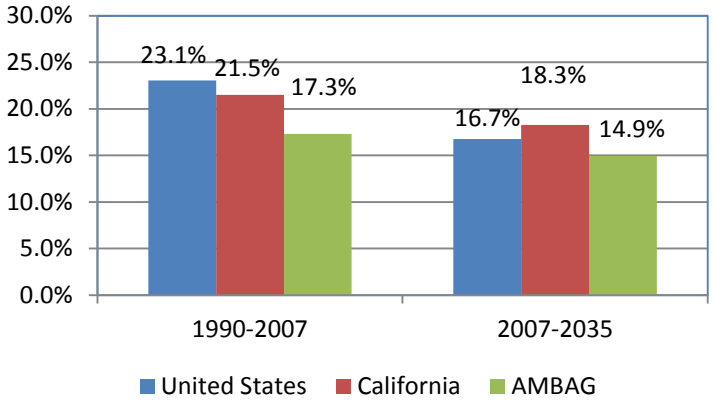
[1] The 2014 forecast has benchmarked 2010 employment to data from the Employment Development Department, Industry Employment and Labor Force by Annual Average 1990-2011, March 2011.

Figure 1: Total Jobs in AMBAG Region (Thousands)



The AMBAG region is projected to grow more slowly than the state and nation to 2035. The job growth rates show the elimination of the effects of the recession by 2025 and show a recovery on the long-term growth rates.

Figure 2: Job Growth



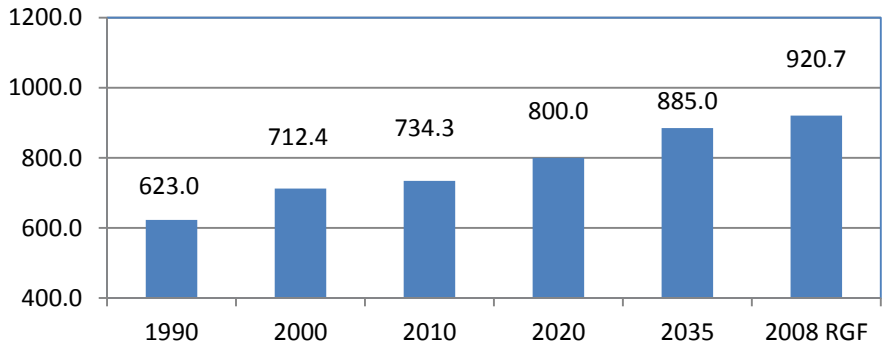
The AMBAG region experienced below average job growth in the period from 1990 to 2007 and this trend is expected to continue. The primary reason is that the region has a below average share of jobs in high growth sectors including information services, professional, technical and scientific services as well as a low exposure to growth in foreign trade.

The region is projected to add 152,292 residents between 2010 and 2035 for an increase of 20.5 percent. The 2035 projected regional population of 885,000 is lower than the 920,700 residents projected in the 2008 Regional Growth Forecast.

Table 2: Comparison of Forecasts for Population

Forecast by Year Released	2005	2010[2]	2015	2020	2025	2030	2035
2008	740,048	774,781	808,560	840,366	868,459	895,577	920,713
2008 Rate of Growth		5%	4%	4%	3%	3%	3%
2014		732,708	766,000	800,000	827,000	856,000	885,000
2014 Rate of Growth			5%	4%	3%	4%	3%

Figure 3: AMBAG Region Population (Thousands)



Despite the lower population forecast, it is expected that AMBAG will continue to see population and housing growth associated with job growth outside of the region. In particular, job growth in Silicon Valley combined with high housing prices is expected to lead to an increase in the number of commuters to Bay Area jobs that live in the AMAG region.

The remainder of this report explains these findings and why the AMBAG region is expected to reverse the lagging job growth of the past decade.

Recent Economic Trends: A Region Beginning to Recover

The AMBAG region is participating in the slow economic recovery being experienced in the state and nation. By June 2012 the Santa Cruz metro area had regained nearly all of the jobs lost since December 2007. Job levels in the Salinas metro area (which encompasses Monterey County) remained 3.3 percent below the December 2007 peak in line with the national trend. San Benito County is included in the San Jose metro area, which had also recovered nearly all of the jobs lost since December 2007 according to the California Employment Development Department estimates for June 2012. As of June 2012, the region's unemployment rate remains high compared to pre-recession levels but was at the lowest level since 2008.

[2] When the 2008 Regional Growth Forecast was prepared it was prior to the 2010 Census, therefore the 2010 year was forecasted. The 2014 Regional Growth Forecast has been benchmarked to the 2010 Census and reflects the actual population counted in the region.

Figure 4: AMBAG Unemployment Rate

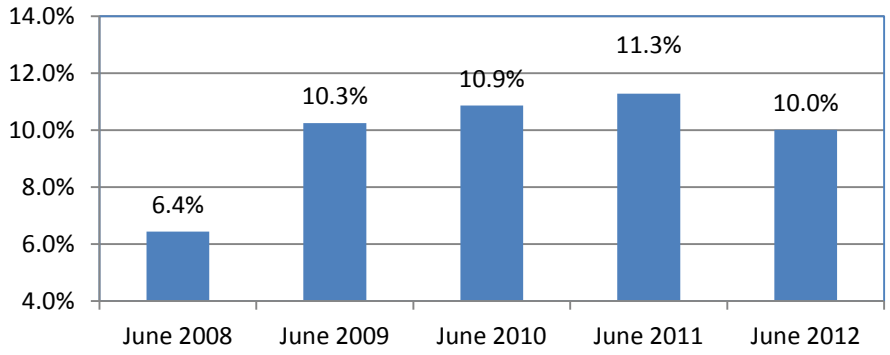
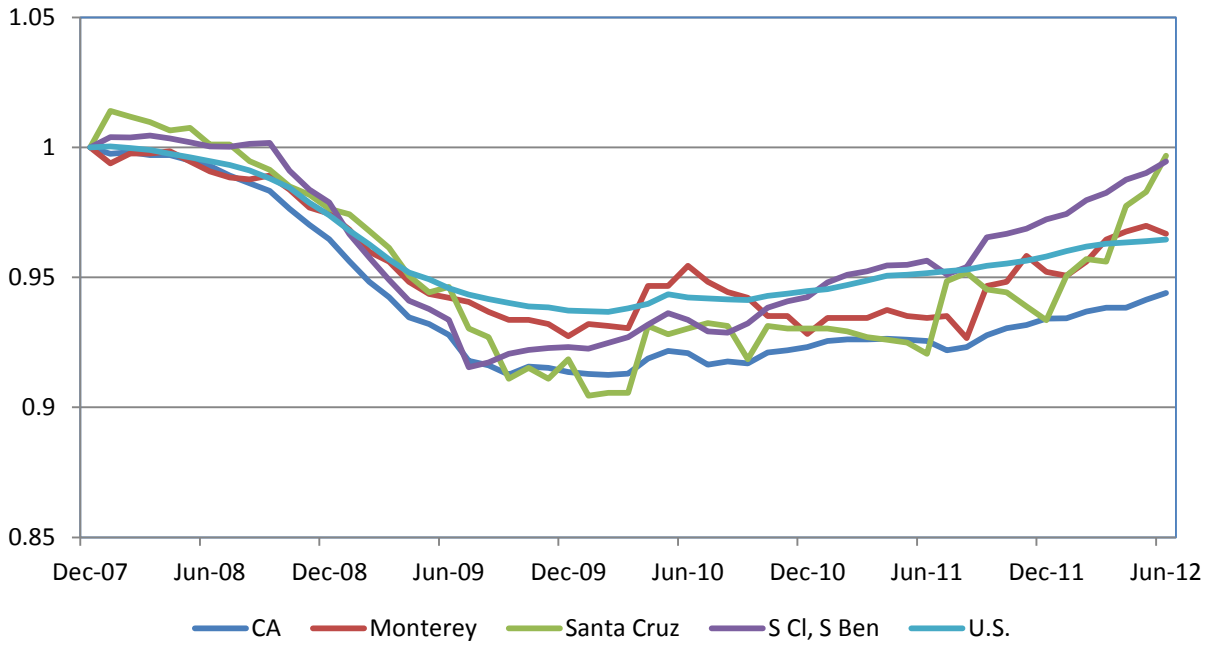


Figure 5: Job Recovery Trends



Job Growth to 2035

The AMBAG region job projections were developed using three guiding principles:

1. The AMBAG region projections were based on projections of job growth in the nation and state. The national and state projections provide the **pool of job opportunities** and the AMBAG region projections reflect judgments about the **share** of national and state job growth that will locate in the AMBAG region.

2. The AMBAG region **share** of national and state job growth is determined by the industry composition of job growth and the projected share of job growth locating in the AMBAG region. If national and state job growth is concentrated in sectors where the AMBAG region has a competitive advantage, the region's projected job growth will be higher than if national and state job growth is concentrated in sectors where the region has a below average share of jobs and a relatively poor competitive position.
3. The analysis of competitive advantage is focused on sectors in the AMBAG region **economic base.** The region's economic base consists of those sectors that sell a high proportion of goods and services to customers outside the region. They export goods and services to customers in world and national markets and markets throughout California. Key examples of economic base sectors in the AMBAG region are agriculture and tourism. The U.C Santa Cruz campus and state prison are also examples of activities that do not primarily serve local residents.

U.S. Job Growth to 2035

The starting point for the AMBAG projections is an examination of future U.S. job growth for total jobs and for major industry sectors. The U.S. job growth projections have three principal components:

1. A new, post-2010 Census set of population projections to 2035
2. Labor force participation rate projections that reflect longer working lives for older workers
3. Industry sector projections developed by CCSCE based on a review of existing national projections

The population and labor force projections determine the amount of job growth projected between 2010 and 2035 and the industry projections identify the structure of job growth as an input to state and AMBAG region job projections. The resulting national projections of job growth are shown below.

Table 3: United States Total Jobs (Millions) and Change[3]

	2010	2020	2035	
Jobs	141.5	159.4	175.1	
Time Period		2010-2020	2020-2035	2010-2035
Change		17.9	15.7	33.6
% Change		12.6%	9.9%	23.8%

[3] The 2010 year data is from the Bureau of Labor Statistics (CLS) and the future years of 2020 and 2035 are from CCSCE.

The nation is expected to add 33.6 million jobs between 2010 and 2035 for an increase of 23.8 percent. Slightly more than half of the projected increase is expected to occur in the next ten years. The percentage increase in jobs (12.6%) between 2010 and 2020 is actually larger than the projected increase (9.9%) for the following 15 years.

The concentration of job growth in the first ten years has two explanations, both of which apply to the state and the AMBAG region job projections:

1. A significant part of the job growth projected to 2020 includes the recovery of job losses incurred during the recession. The nation lost more than 8 million jobs during the recession. The national forecasts reviewed by CCSCE all have the nation regaining full employment by 2015 or 2016. As a result the 2020 projections include erasing the recession job losses plus added gains in the latter half of this decade. The job growth numbers look different when measured from the peak before the recession. Job growth between 2007 and 2020 is projected to be 9.4 million and the projected growth rate is 6.2 percent compared to the 17.9 million jobs and 12.6% growth rate measured from 2010.
2. After 2020 labor force and job growth slows as the tidal wave of baby boomer retirements takes effect. U.S population is projected to increase faster than the projected job growth and the reason is the retirement of the baby boom generation.

California Job Growth to 2035

The state is projected to experience job growth that is slightly faster than the nation's job growth to 2035. California is expected to recover the recession job losses by 2015 or a year later and the unemployment rate will return to full employment levels between 2015 and 2017 according to the forecasts reviewed by CCSCE.

In addition the state has a favorable industry composition given the expected U.S. job growth in technology, trade and tourism. California is outpacing the nation in job growth in 2012 and is forecast to continue the above average growth to 2020 in the latest UCLA Anderson Forecast. These results are confirmed by CCSCE's industry jobs analysis.

Table 4: California Total Jobs (Thousands)[4]

	2010	2020	2035	
Jobs	15,742.8	18,300.7	20,260.6	
Time Period		2010-2020	2020-2035	2010-2035
Change		2,557.9	1,960.0	4,517.9
% Change		16.2%	10.7%	28.7%

[4] The 2010 year was obtained from the Employment Development Department. The future years were prepared by CCSCE.

California is projected to add 4.5 million jobs between 2010 and 2035 with the largest absolute and percentage gains in the first decade as the recession job losses are regained and before the heart of the baby boom retirement wave.

The state is projected to see a 28.7 percent increase in total jobs or slightly above the projected national increase of 23.8 percent to 2035. As with the national projections, the picture changes if job growth is measured from the pre-recession peak. The 2007-2020 gain is then 1.2 million jobs instead of 2.6 million and the percentage increase is 6.8 percent or slightly above the national job growth rate for this period. The pattern of California industry job growth is shown below and was used in developing AMBAG region job projections.

Table 5: California Jobs by Major Industry (Millions)[5]

Industry	2007	2010	2020	2035	2007-35	2010-35
Agriculture	0.38	0.38	0.39	0.37	-2.8%	-2.6%
Mining	0.03	0.03	0.03	0.03	8.2%	7.8%
Construction	0.89	0.56	0.80	0.85	-5.1%	51.4%
Manufacturing	1.46	1.24	1.23	1.18	-19.3%	-4.7%
Wholesale Trade	0.72	0.64	0.72	0.74	4.0%	15.6%
Retail Trade	1.69	1.51	1.67	1.71	1.2%	13.0%
Transp., Warehouse, & Utilities	0.51	0.47	0.55	0.60	18.0%	28.4%
Information	0.47	0.43	0.49	0.53	12.8%	24.2%
Financial Activities	0.90	0.76	0.90	0.95	6.1%	25.2%
Prof. & Bus. Services	2.26	2.07	2.65	3.19	40.8%	53.7%
Educ. & Health Serv.	1.68	1.79	2.37	2.94	75.2%	64.4%
Leisure & Hospitality	1.56	1.50	1.77	2.06	32.1%	37.3%
Personal Services	0.51	0.48	0.57	0.61	20.1%	26.8%
Government	2.49	2.45	2.58	2.86	14.5%	16.7%
Self Employed	1.57	1.42	1.57	1.63	3.8%	14.6%
Total Jobs	**17.13**	**15.74**	**18.30**	**20.26**	**18.3%**	**28.7%**

The projections do show substantial differences in the expected growth rate among industries between 2007 and 2035 and these differences tell a story about where job growth is expected and where job levels will remain flat or decline. These differences directly influenced the AMBAG region job projections described below.

[5] The 2007, and 2010 years were obtained from the Employment Development Department. The future years were prepared by CCSCE.

These projections also help to identify which industry job growth is due primarily to a regaining of jobs lost during the recession and which industries have long-term job growth potential. Some of the major trends in California are as follows:

- Construction job growth between 2010 and 2020 recovers jobs lost during the recession after which the industry will have modest growth.
- Manufacturing job levels are expected to end the decade close to 2010 levels and decline thereafter, never reaching the pre-recession totals. Manufacturing production is projected to increase substantially between 2010 and 2035 as in recent decades although job growth will lag. This is due to a continuing increase in productivity within the sector. Put simply, over time manufacturing firms can produce more with fewer workers. The size of the U.S. market measured by population growth is below one percent per year while manufacturing productivity has been close to five percent per year over the long term. Even with expanding manufacturing export markets and new advanced manufacturing opportunities, the sector will see a decline in overall job levels between 2010 and 2035.
- By far the largest percentage job growth is expected in Professional and Business Services and Educational and Health Services. The Professional and Business Service sector includes the fast-growing, high wage professional, scientific and technical services industries.
- The largest and fastest-growing industries in Education and Health Services are within health and social services and are driven by the aging of the population.
- Retail trade and financial services are sectors undergoing restructuring and growth for each sector is driven by technology in different ways. As more customers take advantage of online shopping retail trade growth will slow and fall to below average. In finance, technology such as online banking and mobile phone applications is reducing the demand for personnel in banks and making it easier to process financial transactions. As such job growth in this sector is also expected to be relatively small.
- Leisure and Hospitality is the other fast-growing sector and includes tourist destinations, hotels and large restaurants.

The AMBAG Region Economy and Job Growth

The previous section provided an overview of the current trends in the California economy. As previously noted the AMBAG region's job projections are based on an analysis of the regional economy and its relationship to the growth forecasted for California. The national and state projections provide the **pool of job opportunities** and the AMBAG region projections reflect judgments about the **share** of national and state job growth that will locate in the AMBAG region. What follows is a description of the current structure of the regional economy as well as the resulting job projections based on the region's share of industries.

The AMBAG Economy

The database used for analysis and projections consists of annual data from 1990 through 2011 for each of the three counties in the region and added together to produce an AMBAG region jobs database.[6]

The largest sectors measured in terms of number of jobs are Agriculture and Government with approximately 55,000 jobs in each sector. The next largest sectors are Leisure and Hospitality (including hotels and restaurants) and Self Employed workers each with approximately 32,500 jobs. Other sectors with more than 20,000 jobs in 2011 include Retail Trade, Education and Health Services, and Professional and Business Services. Other sectors including Construction, Manufacturing, and Finance had fewer than 15,000 jobs in 2011.

Figure 6: Jobs in Largest Sectors in 2011

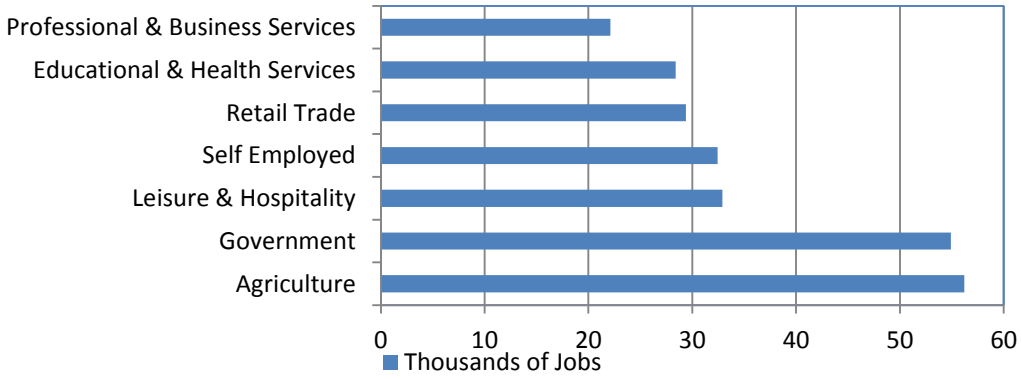
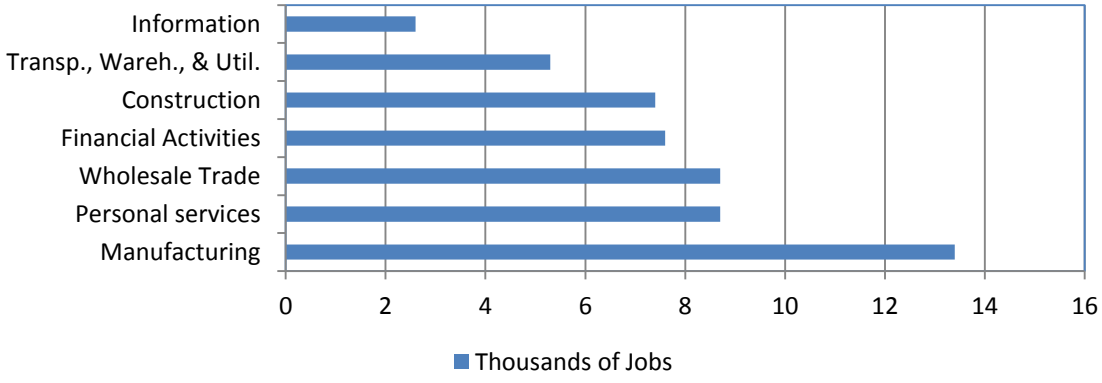


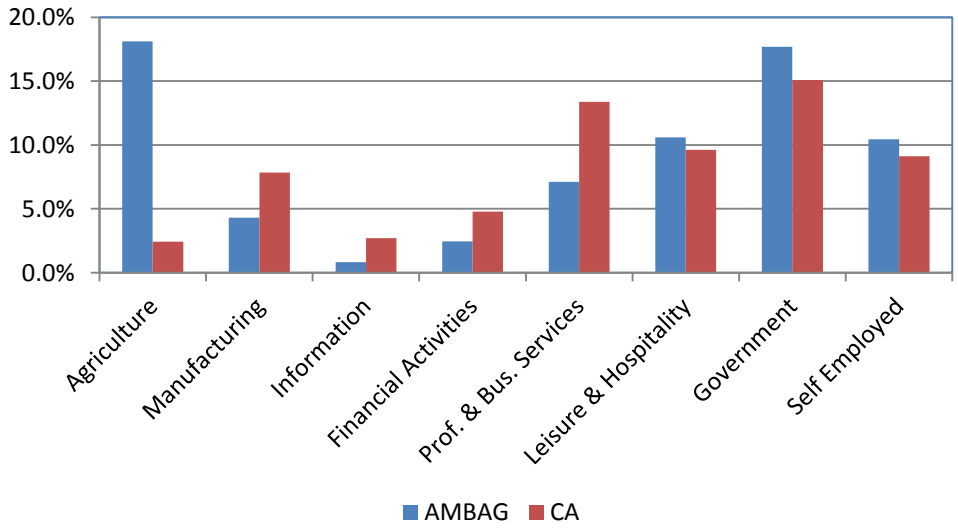
Figure 7: Jobs in Smaller Sectors in 2011



[6] At the time of this analysis 2011 was the most recently available year for data from the Employment Development Department.

The AMBAG regional economy has an industry structure that is quite different in some ways than the statewide structure or the industry structure in regions like Southern California or the San Francisco Bay Area. One difference is the large share of jobs in Agriculture. More than 18 percent of total jobs in the AMBAG region are in Agriculture compared to 2.4 percent statewide. Other sectors with above average shares in the region include Leisure and Hospitality, Government and Self Employed. On the other hand the AMBAG region has a below average share of jobs in the fast-growing high wage Information (internet services) and Professional, Scientific and Technical Services sectors as well as in Manufacturing and Finance. In addition the region's Leisure and Hospitality sector has not kept pace with statewide job growth since 2000.

Figure 8: Share of Total Jobs in 2011



Projection Methodology and Key Findings

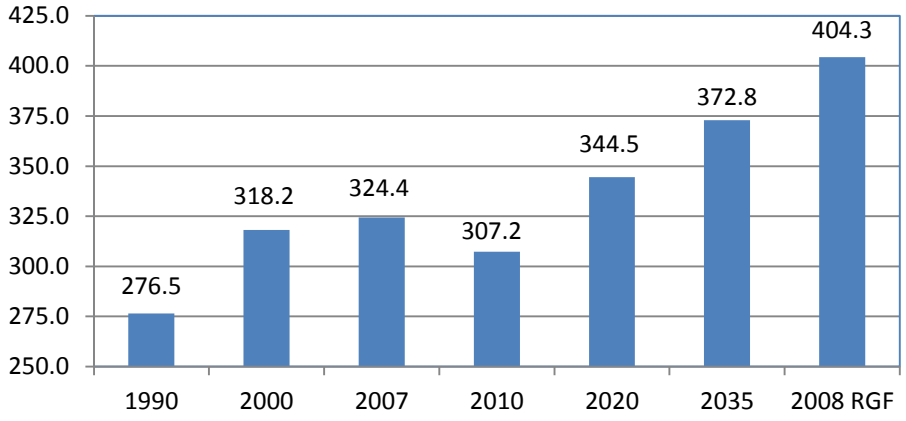
Job projections to 2020 and 2035 were developed for each major industry category by projecting the AMBAG region share of state job growth based on the analysis of trends in the period from 1990 to 2007 and 2011.

The region is projected to experience job growth at a slightly slower rate than the state and nation. The primary reasons for this below-average job growth is the region's below-average concentration in fast-growing sectors that apply technology to the development of goods and services that are sold to customers around the world. Information and professional services are where the largest job gains are projected for the state's economic base. The region also has a below-average exposure to growth in foreign trade.

Positive factors include an expected above-average performance relative to state trends in agriculture and growth in the tourism sector.

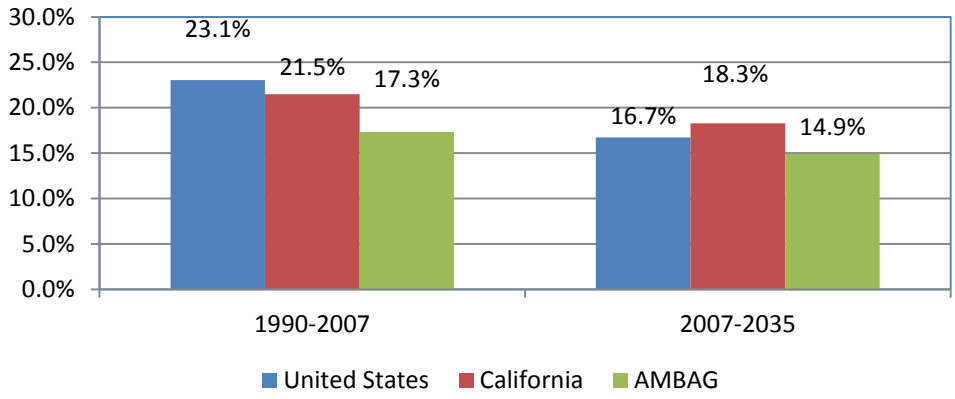
The AMBAG region is projected to add 64,400 jobs between 2010 and 2035. A portion of this job growth (17,200 jobs) represents recovery of jobs lost during the recession. The region is projected to have 372,800 jobs in 2035, which is below the 404,300 jobs projected in the 2008 Regional Growth Forecast. [7]

Figure 9: Total Jobs in AMBAG Region (Thousands)



The AMBAG region is projected to grow more slowly than the state and nation to 2035. The job growth rates shown below start in 2007 to eliminate the effect of the recession and recovery on the long-term growth rates. Regional job growth measured from 2010 to 2035 is 21.3 percent compared to 28.7 percent for the state and 23.7 percent for the nation.

Figure 10: Job Growth



[7] While this forecast is primarily focused on the growth trends of employment within various industries as it related to state and nation-wide trends, it is recognized that the closure of redevelopment agencies has affected jurisdictions' ability to stimulate economic development and has potentially hampered economic recovery.

Major Industry Job Trends

Agricultural jobs are projected to increase modestly and, in 2035, will be the second largest major industry sector after Government. Government job levels are projected to increase modestly following recent cutbacks as the region will serve more than 150,000 additional residents in 2035 compared to the 2010 population.

The largest job gains in absolute numbers and percentage increases are in Education and Health Services —17,900 jobs (+76.5%) compared to pre-recession 2007 job levels led by growth in sectors associated with health care and social services for an aging population.

Three sectors are projected to add approximately 10,000 jobs—Professional and Business Services, Leisure and Hospitality and Government.

Construction job levels will rebound from recent lows but remain below pre-recession levels in 2035. Although this is a substantial gain measured from 2010 job levels, it is primarily driven by a slow return to more normal construction levels in the region.

Manufacturing job levels are projected to remain near current levels and not regain job losses that occurred during the past 20 years driven by the disparity between high productivity gains and slow increases in domestic demand as population growth slows and the population continues to age. These projections do not include any major move of high tech manufacturing jobs from Silicon Valley to the AMBAG region.

The national trends of slow growth in retail trade and finance are also expected in the AMBAG region.

Table 6: AMBAG Region Jobs by Major Industry[8]

	2007	2010	2020	2035	2007-35	2010-35
Agriculture	52.2	56.3	58.9	60.3	15.6%	7.2%
Mining	0.2	0.2	0.2	0.2	1.4%	1.4%
Construction	12.4	7.1	10.7	11.3	-8.7%	59.5%
Manufacturing	15.3	13.4	13.2	12.7	-16.9%	-5.1%
Wholesale Trade	9.6	8.8	9.3	9.5	-0.6%	8.4%
Retail Trade	31.9	28.6	32.0	32.8	2.8%	14.7%
Transp., Warehouse, & Util.	5.4	5.1	6.2	6.7	24.6%	31.9%
Information	3.4	2.7	2.8	2.9	-15.0%	7.0%
Financial Activities	10.1	7.8	8.3	8.5	-15.6%	9.3%
Prof. & Bus. Services	23.6	21.2	26.2	30.1	27.7%	42.2%

[8] The data for 2007 and 2010 were obtained from the Employment Development Department. Data for future years was obtained from CCSCE.

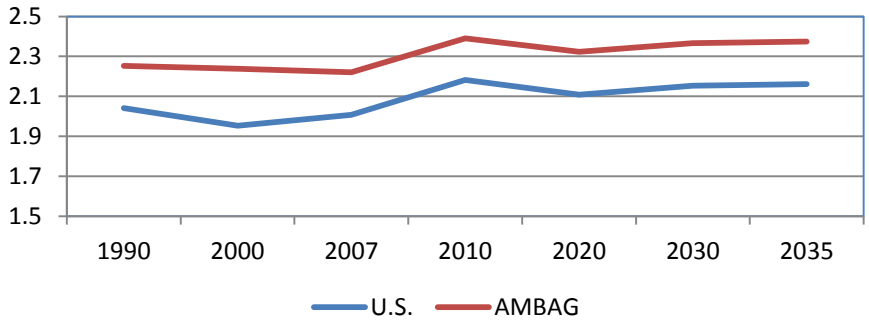
	2007	2010	2020	2035	2007-35	2010-35
Educ. & Health Serv.	25.8	27.6	36.8	45.5	76.5%	65.0%
Leisure & Hospitality	34.1	32.0	36.7	41.3	21.0%	28.9%
Personal Services	9.0	8.7	10.3	11.0	22.1%	26.3%
Government	56.6	55.9	59.1	65.4	15.5%	17.0%
Self Employed	34.8	31.8	33.8	34.4	-1.0%	8.2%
Total Jobs	324.4	307.2	344.5	372.8	14.9%	21.3%

Translating Job Growth into Regional Population Growth

CCSCE assisted AMBAG staff in developing population projections through suggesting a methodology for developing age and ethnic group projections for population and households and by providing a projection of regional population growth. All subregional job, population and household distributions among jurisdictions were done by the AMBAG staff in consultation with local jurisdictions.

The AMBAG region has more residents per job than the nation and that is expected to continue to 2035.

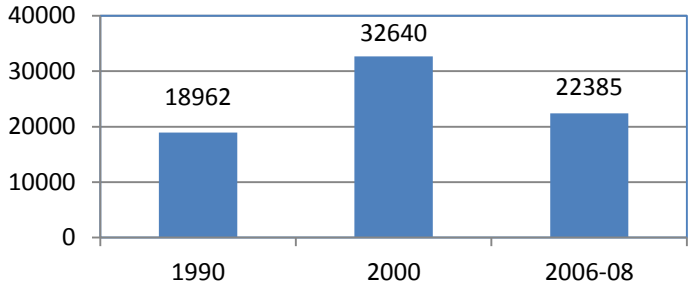
Figure 11: Population per Job



There are four explanations for the higher ratio of people to jobs in the AMBAG region—two major causes and two smaller explanations.

The major cause of the region's comparatively high ratio of people to jobs is that AMBAG residents commute to jobs outside the region, principally to jobs in Santa Clara County. This net out-commuting means there are residents in the region not connected to AMBAG region job growth. Net out-commuting surged between 1990 and 2000 as the "dot.com boom" pushed Silicon Valley (Santa Clara County) job levels higher. Out-commuting declined after 2000 as jobs levels in Silicon Valley fell. ABAG projects a 28.2 percent increase in Santa Clara County jobs between 2010 and 2035, which, combined with high housing prices in Santa Clara County, will increase the incentive for people to search for cheaper housing in portions of the AMBAG region.

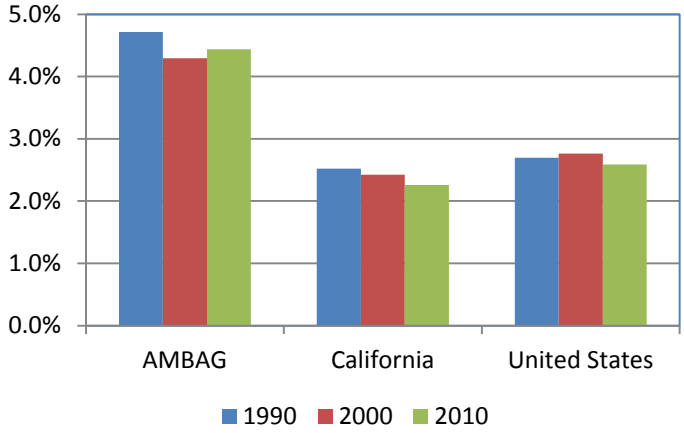
Figure 12: Net Out-Commuting from AMBAG Region



Source: 1990 & 2000 - Census Journey to Work and 2006-2008 - American Community Survey Special Tabulations for the Census Transportation Planning Package.

Another major cause for the high ration of people to jobs is that the AMBAG region 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.

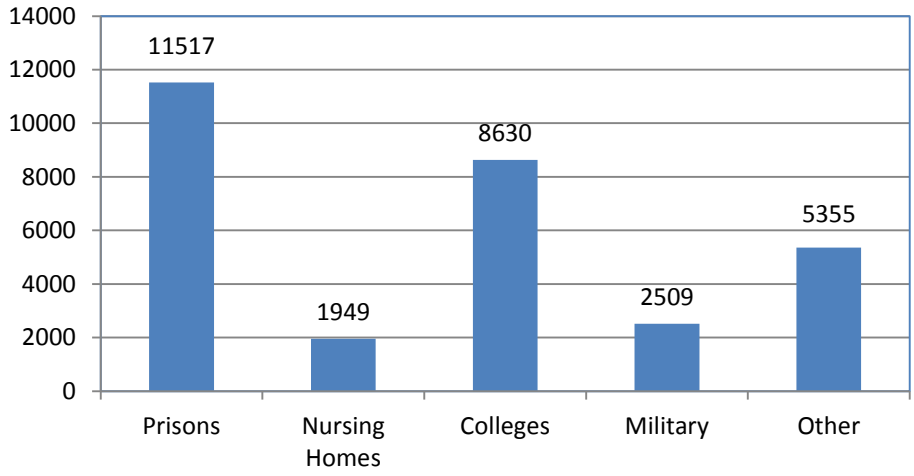
Figure 13: Group Quarters as a Percent of Population



In 1990 there was a substantial military group quarters presence around the Fort Ord base. Since then the military population has declined due to the closure of the base, but that group quarters population has been offset by an increase at colleges (primarily UC Santa Cruz and CSU Monterey Bay) and an increase in state prison population. In future years it will be important to continue watching the development and growth of military institutions in the region. There is still a strong military and naval presence in Monterey County including the Presidio area as well as Fort Hunter Liggett in the southern portion of the County.[9]

[9] While Fort Hunter Liggett has a small permanent population, they are a large training facility and host a substantial amount of trainees every year. Not only will it be important to follow the FHL plans for expansion from a population perspective, but it will also be important to consider the presence of the FHL in transportation planning given the Fort's heavy reliance on Highway 101.

Figure 14: AMBAG Group Quarters Population in 2010



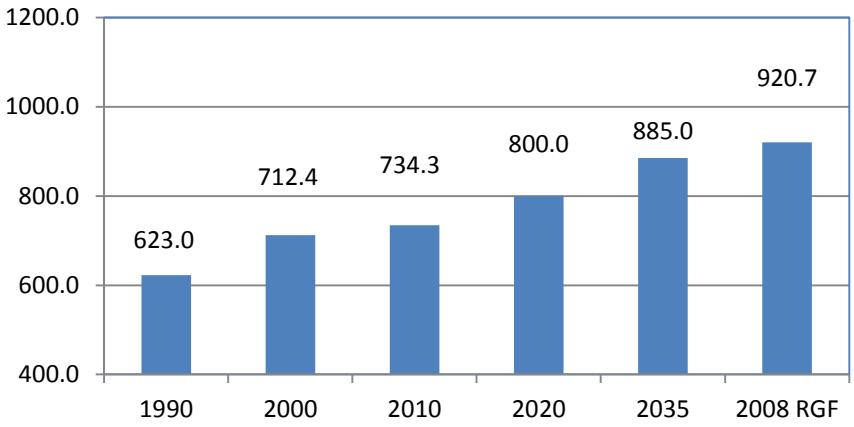
Another reason for a high person to job ratio is due in part to the recession. The number of people per job surged during the recession as job levels fell while population continued to grow. Between 2010 and 2020 job levels will increase faster than population as previously unemployed residents find work during the economic recovery. However, between 2020 and 2035 job levels will grow more slowly than population as baby boomers retire from the workforce but remain in the population.

The AMBAG region population projections were derived by anticipating that the regional population to job ratio will move in line with the national trend as it has in the past. 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. Based on this analysis the regional population is forecasted to increase from 732,708 in 2010 to 885,000 in 2035 for an increase of 20.5 percent or 152,292 residents. The regional population forecast in 2035 is below the 920,700 residents forecasted in the 2008 Regional Growth Forecast reflecting lower anticipated job growth.

All population projections are benchmarked to the 2010 Census counts which include people whose primary residence is within the region. It is recognized that the region is home to a population of seasonal workers who are undocumented by the Census. It has been observed through informal surveys in the AMBAG Regional Agricultural Vanpool Feasibility Study that this undocumented population, which is traditionally referred to as a seasonal population, is also moving towards a trend of year-round residence, particularly with regard to agricultural jobs. The California growing season extends throughout most of the year and therefore people can stay employed for a majority of the year. Given this trend, this undocumented population then puts a housing burden on local jurisdictions that is very difficult to plan for as the State and the Census do not recognize these people as part of the local population. However, because these people are not counted in this primary source of data they cannot be included within the regional growth forecast as the growth

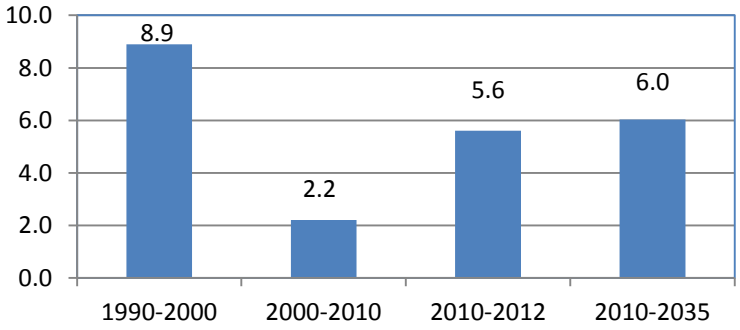
forecast must be benchmarked to the Census. When or if national policies regarding immigration reform allow an easier path to citizenship then California may see an increase in the number of people that get counted every Census year.

Figure 15: AMBAG Region Population (Thousands)



The region is projected to add 6,000 residents per year between 2010 and 2035. This is less than the 8,900 average between 1990 and 2000 and above the recession-affected growth of 2,200 between 2000 and 2010. Recent growth has averaged 5,600 per year, close to the projected long-term growth rate.

Figure 16: Average Annual Population Growth (Thousands)



Issues and Policy Choices

Housing for Commuters

Economic analysis supports the finding that there will be increased pressure to build housing for workers who will work in the Bay Area, primarily in Santa Clara County. The amount of out-

commuting has tracked job growth in Santa Clara County and a 28.2 percent increase in total jobs is projected for the county by 2035 in the new ABAG regional projections. At the same time housing prices and rents are surging in many Santa Clara County communities. The combination of continuing job growth and a large housing cost differential will provide the incentive for more workers to live in portions of the AMBAG region and commute into Silicon Valley. The timing and amount of this commuting/housing trend will depend in part on decisions by developers and workers and in part by land use decisions in local jurisdictions likely to feel the pressure to house commuters.

A New Technology Complex

While the region has a below average share of jobs in technology sectors in manufacturing, information services and professional, scientific and technical services, there is a small technology complex in Santa Cruz County. The AMBAG regional job projections do not anticipate a large diversion of technology jobs from Silicon Valley to the AMBAG region. If there were a large influx of high tech jobs, the regional job and population growth rates would be higher.

High Speed Rail

Currently the high speed rail connection to the Bay Area is planned to pass through the region at Pacheco Pass. That segment is scheduled for many years in the future and the high speed rail project is not currently fully funded or designed. However, if the high speed rail service does come through the region and connect the region to the Bay Area, this would increase the attractiveness of living in the region and commuting to the Bay Area as travel times would be much lower than they currently are. Moreover, the high speed rail could provide an incentive for job growth near the service corridor.

Section 3: Disaggregation of the Regional Forecast

Following the preparation of the regional forecast figures, AMBAG staff began the process of disaggregating the figures to the county and city level using historical data. This process resulted in preliminary draft estimates at the jurisdictional level that were used for discussion purposes with staff at each of the cities and counties within the region. In addition to the cities and counties, staff met with the Local Agency Formation Commissions (LAFCOs) for each county, the Fort Ord Reuse Authority, the University of California, Santa Cruz, and California State University, Monterey Bay to discuss the results. Adjustments were made to the forecast based on these conversations to incorporate growth on the basis of planned developments, specific and General Plan research and economic development plans. The process of revision and meeting with local jurisdictions one-on-one was repeated several times to reach a consensus on the forecast.

County and Sub-County Disaggregation Method for Population

In order to disaggregate the tri-county regional population forecast, the Implicit Shift-Share method was selected. This particular technique was chosen because it provides a relatively simple, yet rigorous, method for estimating the future geographic distribution of the regional population based on historic estimates of local and regional population growth.

The Implicit Shift-Share formula is comprised of two distinct mathematical functions. These are sometimes known as the regional share and the local shift. The regional share function calculates what the total population growth in the local area (i.e. a city or county) would be if that area were to grow at the same rate as the region as a whole. The second function then adjusts for historic changes in the local area's share of the total regional population. Combined with an accurate estimate of the size of the base population obtained from the 2010 Decennial Census, the regional share and local shift functions provide a reasonable estimate of the future local area population, taking into account past changes in the percentage share of the regional population. Historical data is obtained from the Department of Finance. The Department of Finance does benchmark their historical estimates to the Decennial Census for 1990, 2000, and 2010.[10]

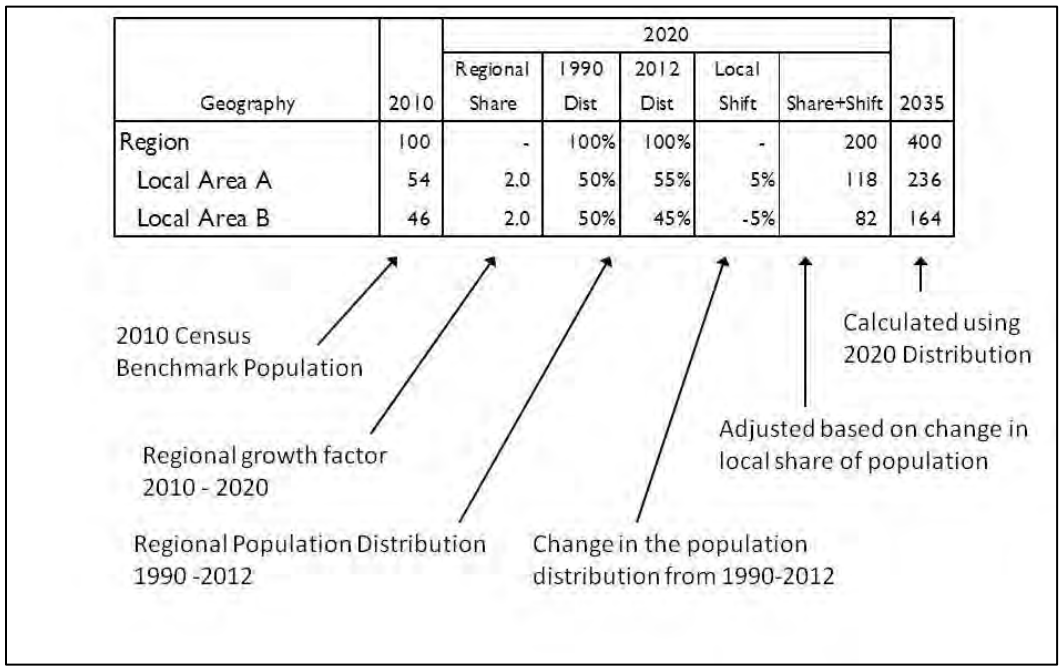
Figure 17: Implicit Shift Share Equation

$$E^{t+n} = E^{t}\left(\frac{R^{t+n}}{R^{t}}\right) + \alpha R^{t+n}\left(\frac{E^{t}}{R^{t}} - \frac{E^{t-m}}{R^{t-m}}\right)$$

E = Local Value *R* = Regional Value
t = time (year) *m,n* = number of years

[10] Department of Finance, E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 1990-2000, August 2008; Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2001-2010, September 2011 and Department of Finance, E-1 Population Estimates for Cities, Counties, and the State, 2011 and 2012, August 2009.

Figure 18: Example of Implicit Shift Share



Estimating the County Population, Households, and Housing Units

In order to convert county level population forecast estimates into the estimates of housing units, staff created a set of demographic profiles that describe the age, sex, race, and ethnicity characteristics of the future population. The basis for the demographic profiles is a set of detailed population projections developed by the California Department of Finance (DOF) in 2007.[11] The profiles were developed by calculating the share of total projected population growth within each county that may be attributed to each age, sex, race, and ethnic category. Age and sex are shown below in Figure 19 through Figure 21. Because the DOF only forecasted population in 10 year increments, staff had to interpolate estimates of population growth for the intermediate years. This was done using the average annual growth rate for each age, sex, race, and ethnic category. The next step was to calculate the total population change forecasted within each category during each five-year increment. By dividing the projected population change within each category by the total population change for each county, staff was able to derive a set of growth shares, or growth coefficients, for each age, sex, race, and ethnicity category. Finally the new disaggregated county level estimates were multiplied by this set of growth shares to generate estimates of the regional and county-level population by detailed age, sex, race, and ethnicity category.

[11] On May 7, 2012, the DoF published its Interim Population Projections for California and Its Counties 2010-2050. As of December 2012, they had not yet released their detailed population projections by age, sex, race and ethnicity.

Figure 19: 2010 Demographic Profile (All Races)

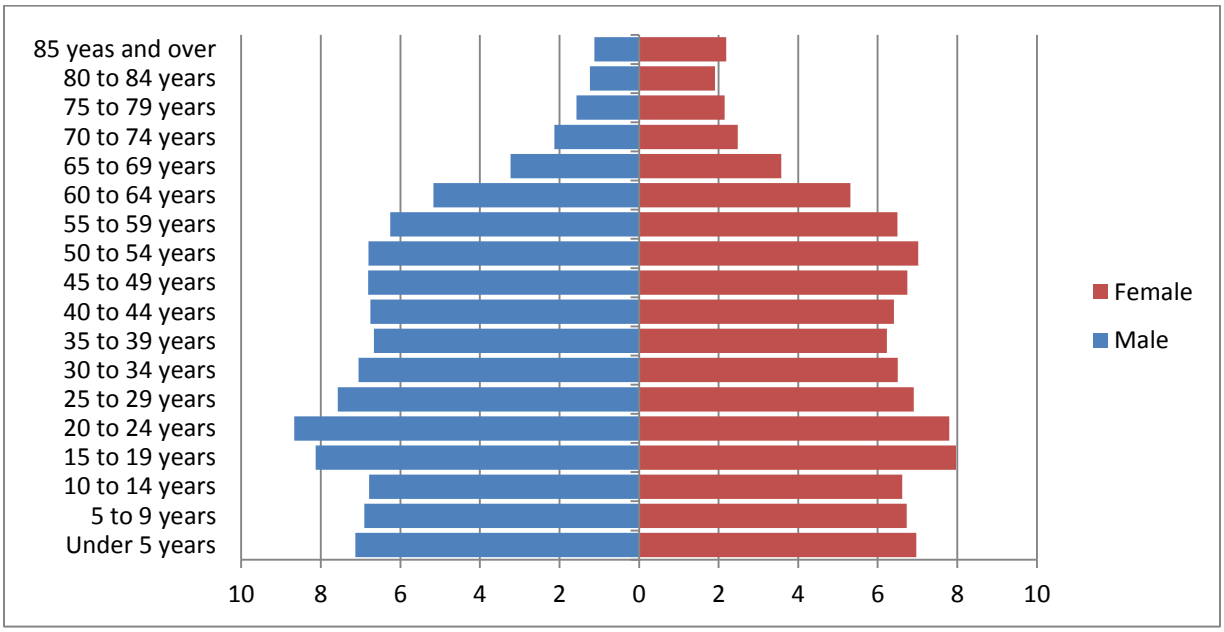


Figure 20: 2020 Demographic Profile (All Races)

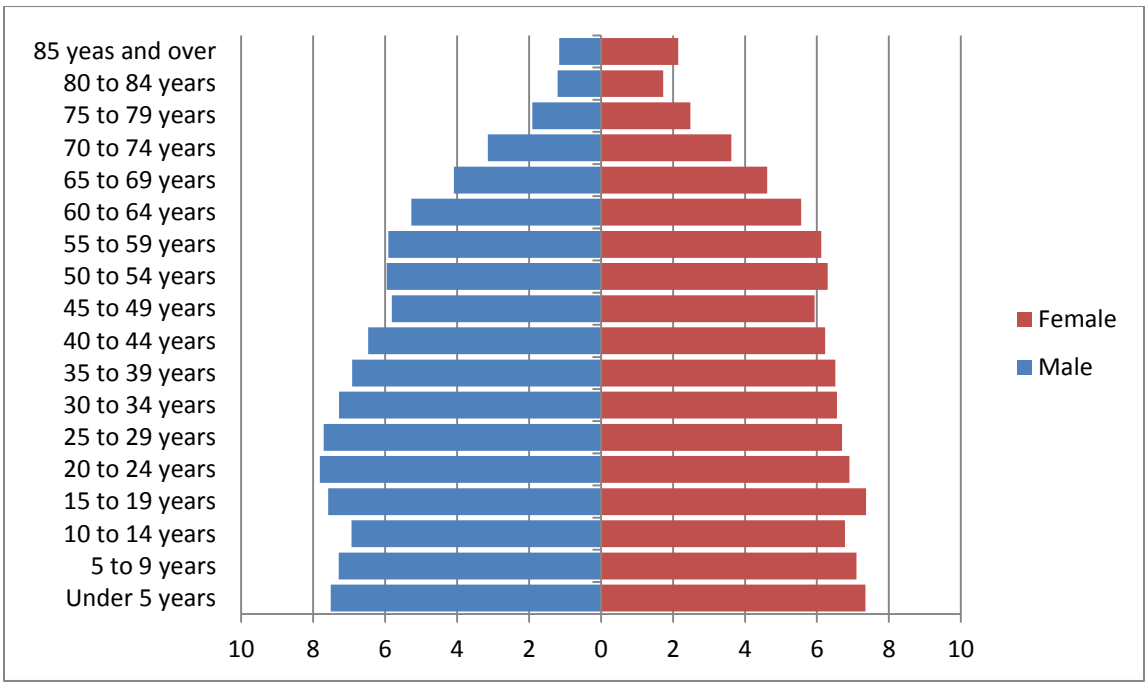
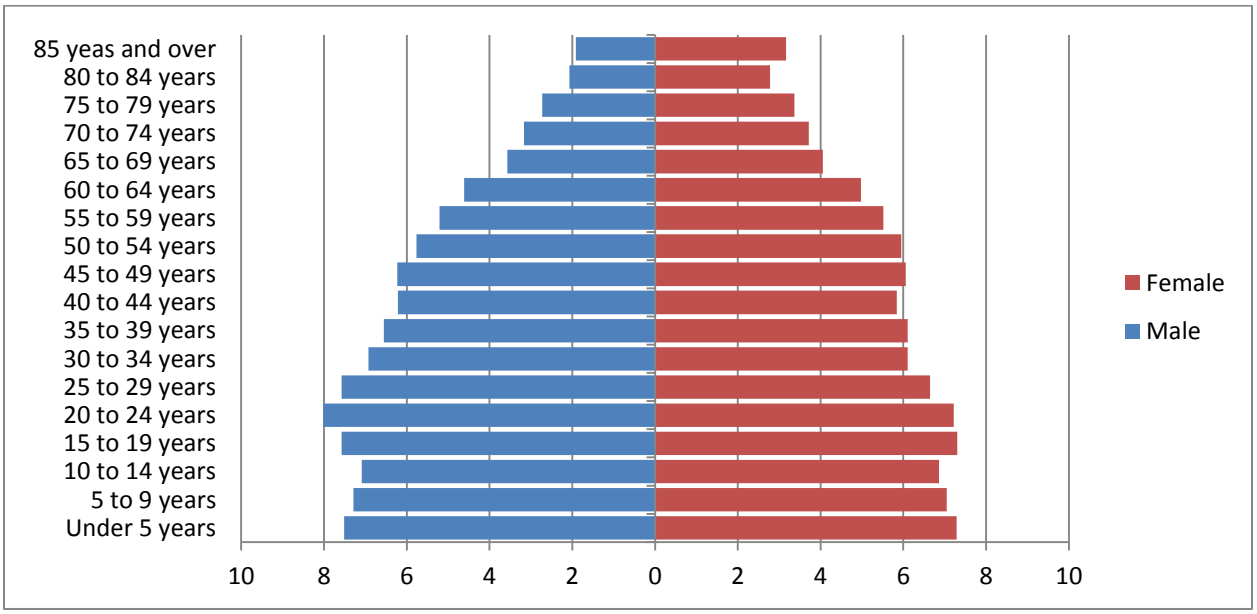


Figure 21: 2035 Demographic Profile (All Races)



The first step toward translating the county demographic profiles into estimates of total housing units was to subtract the group quarters population from the total population. Staff calculated a set of group quarters rates by dividing the group quarters population in each age, sex, race, and ethnic category as provided by the 2010 Census[12] by the total 2010 age, sex, race, and ethnic population in each county. In order to estimate the group quarters population in each county, staff multiplied the group quarters rates within each category by the total population in each category. This population was then removed from the total population to provide an estimate of the number of people living in households.

Next, to generate estimates of the total number of households in each county, staff calculated a set of head of householder rates. These also are frequently referred to as "headship rates" or "household formation rates." As with the group quarters rates, these are derived from 2010 Census data.[13] To generate the head of householder rates, staff divided the 2010 estimates of the number of individuals within each age, race, and ethnic category who were reported to be the head of a household by the total number of individuals within each age, race, and ethnic population category less the group quarters population.[14] By multiplying the household population estimates for each category by the head of householder rates, staff derived new set of head of household estimates. Note that for each head of household there is, by definition, one household. Thus, by adding up all

[12] U.S. Census Bureau, 2010 Decennial Census, Summary File 1, Table QTP-12.
[13] U.S. Census Bureau, 2010 Decennial Census, Summary File 2, Table PCT-12.
[14] The householders data for the "Some other race alone, not Hispanic or Latino" and "Native Hawaiian and Other Pacific Islander alone, not Hispanic or Latino" categories of population in San Benito County was suppressed because there was not a population of greater than 100. For these ethnic categories the regional rate was used instead given the lack of data on this population.

of the head of householders, staff was able to generate estimates of the total number of households within each county.[15]

Finally, vacant units were added to the total number of households in order to obtain an estimate of housing units. Vacancy data was obtained from the Census for 1990, 2000 and 2010 and from the Department of Finance for in between years.[16] To better understand what a normal housing vacancy rate might be, staff reviewed historical data on residential vacancy for the last two decades. Once a vacancy rate was established, this was used to calculate the total number of vacant housing units, using the number of households as a proxy for the number of occupied housing units. By adding together estimates of the total number of vacant and occupied housing units, staff derived estimates of the total housing stock within each county.

Estimating the Sub-County Population, Households, and Housing Units

To derive city-level estimates of population, household population, households, and housing units, staff used a simplified version of the methodology described above. The MPO is not required to develop detailed demographic characteristics for city-level estimates. As such the household and housing unit conversion was done using aggregate group quarters and household formation rates for each city, as reported in the 2010 Census.[17] Vacancy rates were derived from a 20-year average as reported from the Department of Finance.[18] The Department of Finance does benchmark their estimates to the decennial Census.

Some of the jurisdictions within the region show a declining population over the last 10 to 20 years. Because the Implicit Shift Share method was used for estimating 2020 population and the method reflects the change in population over time, for those jurisdictions that have experienced population decline there will be a continuation of that decline reflected for the year 2020. After 2020 the share of the regional population calculated for each jurisdiction was held constant. This has the effect of showing an increase in population after 2020 even if the 2020 estimate is lower than the 2010 estimate. In other words, while the 2020 estimate will reflect historical constraints to population growth by showing a decline, there is too little information to know whether those same constraints will exist after 2020, so instead of assuming continual decline, growth was held at a constant. There will be forecast revisions before 2020 that will take into account changes of these trends through an analysis of historical years.

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[15] The Census does include "second dwelling units" or accessory units within their counts of households if the unit has its own bathroom and kitchen facilities. However, there are likely illegal "granny units" that are not counted through this process.
[16] Department of Finance, E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 1990-2000, August 2008; and Department of Finance, E-5 Population and Housing Estimates for Places, 2001-2010, with 2000 Benchmark, September 2011.
[17] U.S. Census Bureau, 2010 Decennial Census, Summary File 1, Tables QTP-12 and PCT-12.
[18] Department of Finance, E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 1990-2000, August 2008; Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2001-2010, September 2011 and Department of Finance, E-1 Population Estimates for Cities, Counties, and the State, 2011 and 2012, August 2009.

Adjusting the Implicit Shift Share Method

Initially AMBAG staff provided jurisdictions with a forecast using the straight application of the implicit shift-share method with a historical time period of 1990-2012 as a benchmark. However, feedback from jurisdictions uncovered the need for modifications to account for exogenous growth factors (e.g. military, college, and prison population changes), geographic boundary changes and overall differences in growth patterns from the 1990s to current trends.

Selecting the Benchmark Time Period

There are several factors to consider in selecting a forecast benchmark period: the quality of available data, the length of the forecast, and whether or not any changes have occurred that make an older historical period out-of-sync with the expected future. While many forecasting methods rely on historical data, the Implicit Shift Share method is particularly sensitive to changes in population trends over time. For this reason it is very important to consider major shifts in population trends when selecting the historical time period for use with the implicit shift share method.

Historical time-series population estimates from the California Department of Finance and decennial census data from the U.S. Census Bureau make it possible to benchmark the forecast against virtually any time period from the 1800s to the present.

A longer forecast benchmark period is preferable if reliable data are available and if population trends are stable over time. However, a benchmark period that is too long can be just as problematic as one that is too short, particularly if a major demographic or economic shift occurred during the historical period.

Historical information will be presented from 1970 to 2010 and forecast analysis will focus on the period from 1990 to 2010.

Demographic History of the AMBAG Region

The AMBAG region grew at a faster rate than California in the 1960s and 1970s, and grew at approximately the same rate as the state in the 1980s (24 % in AMBAG region, 26% statewide). Both the state and the AMBAG region grew at the same rate in the 1990s (14%). The AMBAG region's growth fell far below the statewide average between 2000 and 2010, increasing by only three percent while the state grew by 10 percent.

AMBAG Region: 1970 to 1990

Between 1970 and 1990 the AMBAG region population grew by more than 110,000 each decade, increasing by 29 percent from 1970 to 1980 and by 24 percent from 1980 to 1990. Growth slowed in the 1990s. The slowdown can be attributed, in part, to the closure of Fort Ord in 1994. The AMBAG region population grew by 88,500 (14%) between 1990 and 2000.

Fort Ord

Established in 1917, Fort Ord was eliminated during the Base Realignment and Closure Act of 1990, closing in 1994. This resulted in the loss of more than 30,000 residents in Monterey County, primarily in the jurisdictions of Marina and Seaside, as described in the Fort Ord Reuse Plan:

> *Fort Ord has been a significant presence in Monterey County since 1917… maintained a large military population numbering approximately 14,500 military personnel and 17,000 family members of active-duty personnel… the resident population of Fort Ord totaled 31,270 in 1991.*[19]

In addition…

> *The on-post resident population was divided between the two municipalities of Marina and Seaside. Through 1990, 17,139 people (56%) were within the Seaside city limits and 13,321 people (44%) were within the Marina city limits (Harding Lawson Associates, 1991, Workplan remedial investigation/feasibility study, Fort Ord, CA).*[20]

These population losses greatly affected the growth rates of the communities of Marina and Seaside prior to 2000. Concurrent civilian job losses affected population growth in the AMBAG region more broadly.

AMBAG Region: 2000 to 2010

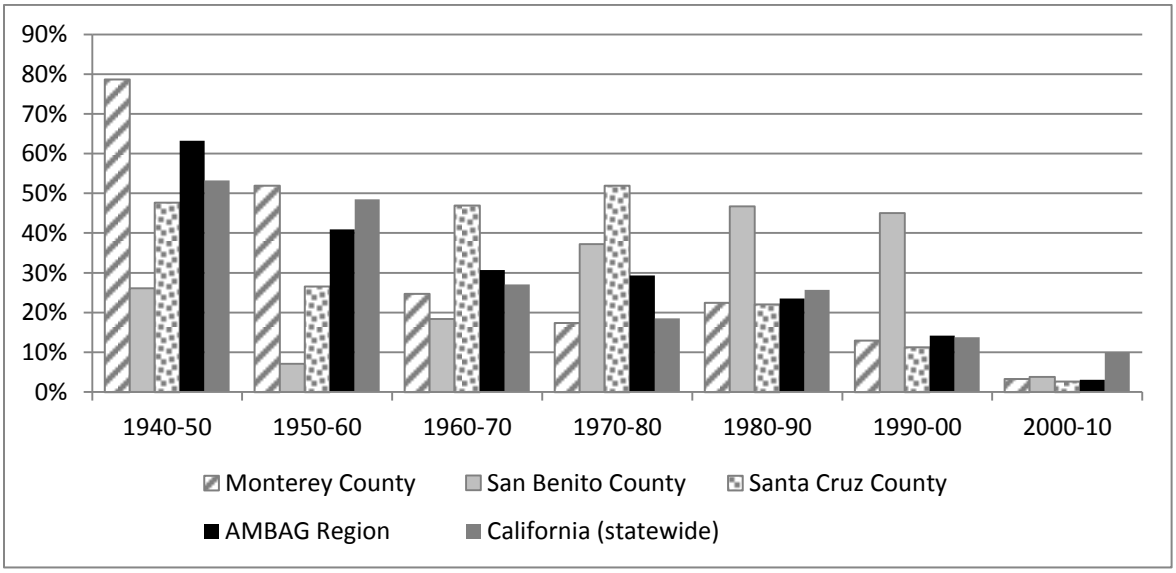
In the following decade, population growth slowed considerably. The AMBAG region population grew by only 22,100 (3%) during the decade between 2000 and 2010. This pattern of slowing population growth reflects an aging population and lower net migration into the AMBAG region. Lowered net migration could be due to several factors including but not limited to water resource constraints, the closure of Fort Ord as well as increasing housing costs followed by a major recession.

Demographic History of AMBAG Counties

Population growth details for all three counties are shown below. County-specific summaries follow the charts.

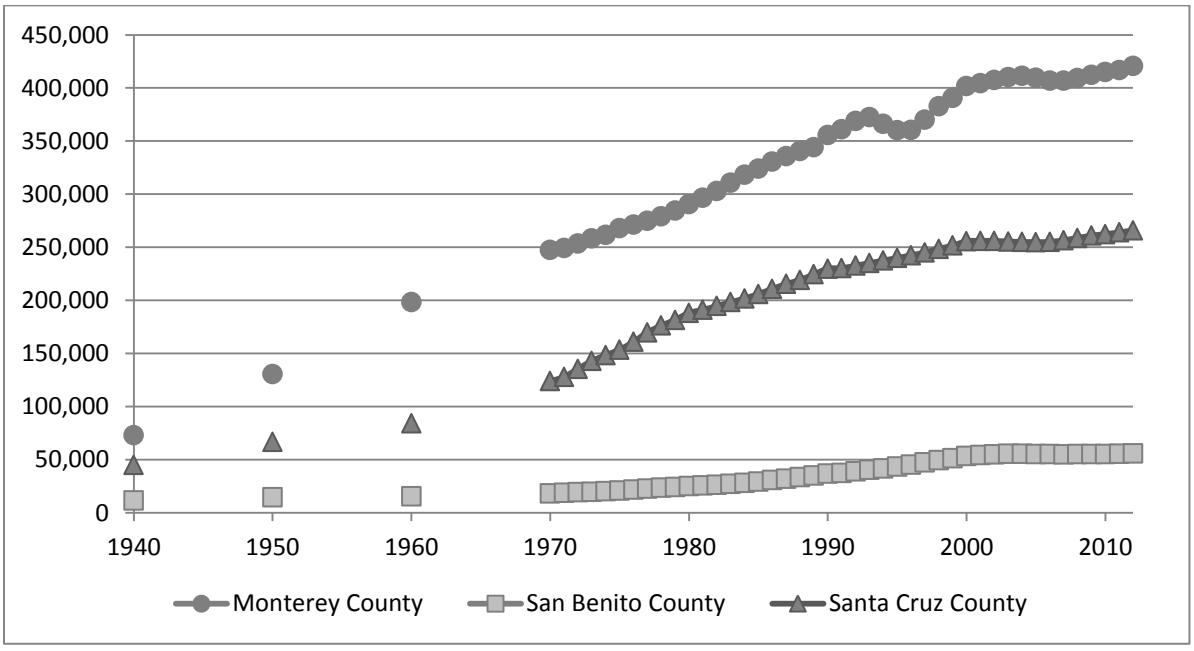
[19] Fort Ord Reuse Plan, Volume 1: Context and Framework. June 1997.
[20] Fort Ord Reuse Plan, Volume 2: Reuse Plan Elements. June 1997.

Figure 22: Population Growth Rates in Monterey County, San Benito County, Santa Cruz County, AMBAG Region, and California (statewide) 1940-2010



Source: California Department of Finance

Figure 23: Population in Monterey, San Benito, and Santa Cruz Counties 1940-2012

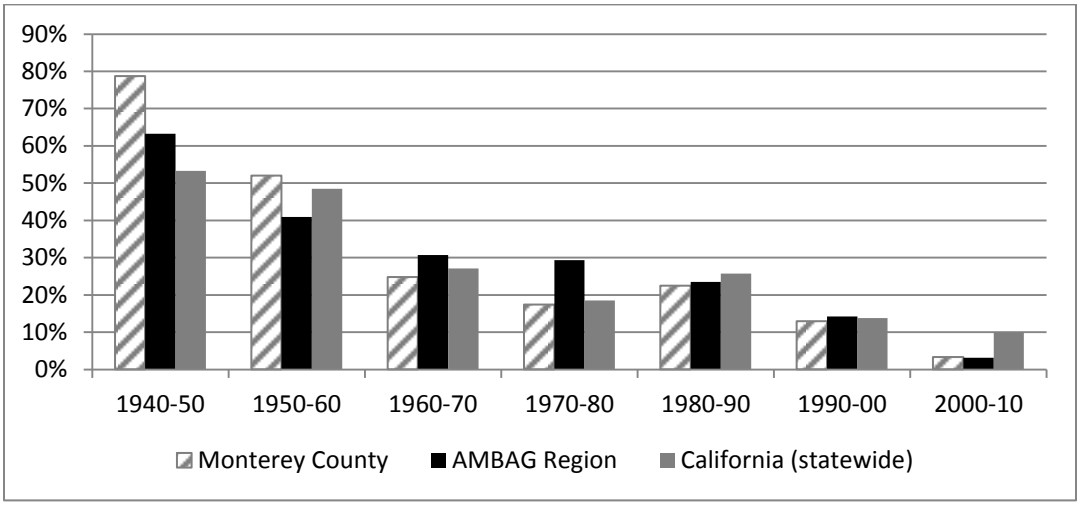


Source: California Department of Finance

Monterey County

Between 1960 and 2000, Monterey County has grown at a rate slower than the AMBAG region as a whole. Between 2000 and 2010 Monterey County grew at the same rate at the region. (See figure below)

Figure 24: Population Growth Rate in Monterey County, AMBAG Region, and California (statewide) 1940-2010



Source: California Department of Finance

As a result of the closure of Fort Ord, Monterey County experienced a population decline in the middle of the 1990s, yet population growth rebounded later in the decade. The county registered 13 percent growth (an increase of 46,100) between 1990 and 2000. (See Figures 2 and 3, above)

The 1990s also saw the opening of two large institutions: California State University, Monterey Bay, and Salinas Valley State Prison. Both are described in more detail in the Special Populations section below.

While the County as a whole grew, six of the county's thirteen jurisdictions experienced population loss during the 1990s (Carmel-By-The-Sea, -4%; Del Rey Oaks, -1%, Marina, -29%, Monterey, -7%, Pacific Grove, -4%, Seaside, -15%). Conversely, the population of Salinas grew by nearly 34,000 during the decade. Soledad also grew at a rapid clip (16,000 population) largely as the result of Salinas Valley State Prison opening in 1996.

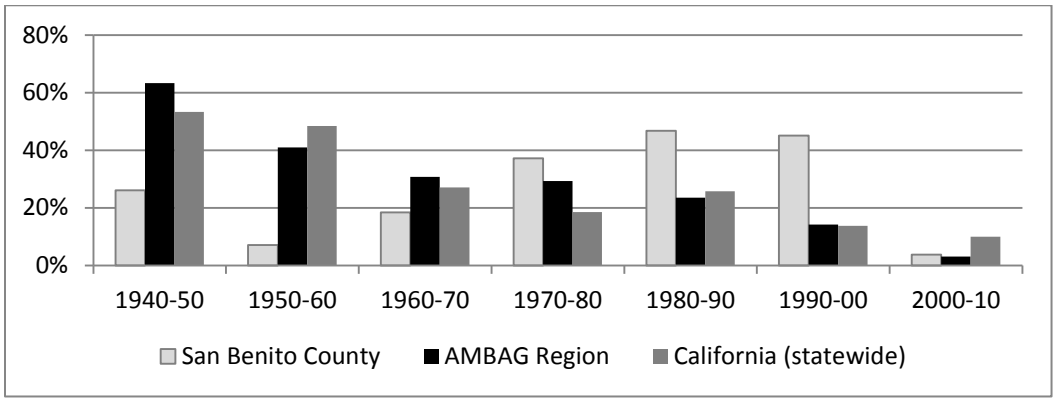
The following decade saw much slower growth, with an increase of less than 13,300 (3%) between 2000 and 2010. Five jurisdictions lost population (Carmel-By-The-Sea, -9%; Del Rey Oaks, -2%, Monterey, -6%, Pacific Grove, -3%, unincorporated Monterey County, -1%). The city of Seaside remained virtually unchanged.

The cities of Salinas and Soledad continued growing (5% and 12%, respectively). Gonzales, Greenfield, King City, and Marina also grew. Sand City recorded a rapid rate of population growth due to its small size, but added only 73 people.

San Benito County

While San Benito County grew at a rate much slower than the AMBAG region prior to the 1970s, the county saw rapid population growth in the 1970s, 1980s, and 1990s. (See Figure 25.)

Figure 25: Population Growth Rate in San Benito, AMBAG Region, and California (statewide) 1940-2010



Source: California Department of Finance

San Benito County registered rapid population growth, adding more than 16,500 population (45%) between 1990 and 2000. During this decade the city of Hollister nearly doubled in population (78%) while the population of San Juan Bautista declined (-1%).

San Benito's population growth slowed to four percent (2,000 population) between 2000 and 2010. The trend of the 1990s was reversed. Hollister grew by only 1 percent while San Juan Bautista increased by 20 percent.

Santa Cruz County

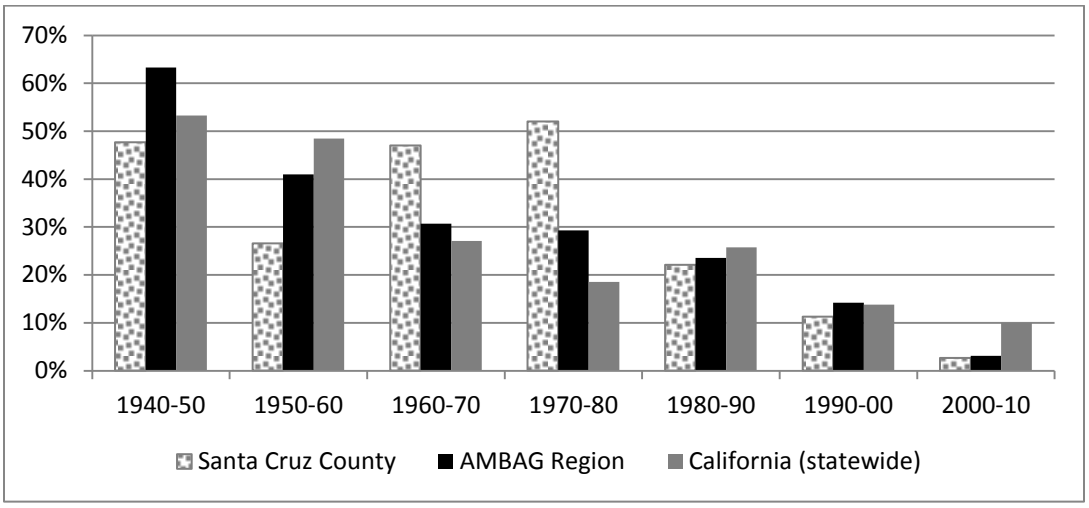
Santa Cruz County grew at a rate faster than the AMBAG region in the 1970s and 1980s, but grew more slowly in every other decade from 1940-2010. (See figure below.)

Santa Cruz County grew by more than 25,800 (11%) between 1990 and 2000. The fastest-growing jurisdiction in Santa Cruz County between 1990 and 2000 was Watsonville (42%) followed by Scotts Valley (31%). Capitola's population fell during the decade (-1%).

The County's growth slowed considerably, adding just under 6,800 population (3%) between 2000 and 2010. The fastest-growing jurisdiction in Santa Cruz County between 2000 and 2010 was

Watsonville (16%, including the annexation area, 11% without) followed by Santa Cruz (10%). Scotts Valley, which grew rapidly during the 1990s, showed only 2 percent population growth during the decade. Capitola's population fell during the decade (-1).

Figure 26: Population Growth Rate in Santa Cruz County, AMBAG Region, and California (statewide) 1940-2010



Source: California Department of Finance

Comparison of Forecast Periods

After examining the growth characteristics of each decade staff tested two baselines, a 1990-2012 and a 2000-2012 benchmark period. The results including the advantages and disadvantages of each are described in more detail below.

While the 1990 to 2012 benchmark period offers a longer time series for model estimation, the period also includes major structural shifts including the closure of a major military base, the opening of a new university, and the opening of a new correctional facility.

In addition, there were substantial shifts in the distribution of population by jurisdiction between 1990 and 2000 that appear to have stabilized between 2000 and 2012 (e.g. Gonzales, Marina, Salinas, Seaside, Soledad, Hollister). (See table below)

Table 7: Jurisdiction Population as a Percent of AMBAG Region Total (1990, 2000, 2010, 2012)

	1990	2000	2010	2012
AMBAG Region	100.0%	100.0%	100.0%	100.0%
Monterey County	57.2%	56.5%	56.6%	56.7%
Carmel-By-The-Sea	0.7%	0.6%	0.5%	0.5%
Del Rey Oaks	0.3%	0.2%	0.2%	0.2%
Gonzales	0.7%	1.1%	1.1%	1.1%
Greenfield	1.2%	1.8%	2.2%	2.2%
King City	1.2%	1.6%	1.8%	1.8%
Marina	4.3%	2.7%	2.7%	2.7%
Monterey	5.1%	4.2%	3.8%	3.8%
Pacific Grove	2.6%	2.2%	2.1%	2.0%
Salinas	17.5%	20.1%	20.5%	20.5%
Sand City	<0.1%	<0.1%	<0.1%	<0.1%
Seaside	6.2%	4.7%	4.5%	4.5%
Soledad	1.2%	3.2%	3.5%	3.5%
Balance Of County	16.1%	14.3%	13.7%	13.7%
San Benito County	5.9%	7.5%	7.5%	7.5%
Hollister	3.1%	4.8%	4.8%	4.8%
San Juan Bautista	0.3%	0.2%	0.3%	0.2%
Balance Of County	2.5%	2.4%	2.5%	2.5%
Santa Cruz County	36.9%	36.0%	35.8%	35.8%
Capitola	1.6%	1.4%	1.4%	1.3%
Santa Cruz	8.0%	7.7%	8.2%	8.3%
Scotts Valley	1.4%	1.6%	1.6%	1.6%
Watsonville	5.0%	6.2%	7.0%	7.0%
Balance Of County	20.9%	19.0%	17.7%	17.6%

Benchmark: 2000 to 2012

The 2000 to 2012 benchmark period reflects current demographic trends, including the growth of the AMBAG region after the closure of Fort Ord and the opening of both CSUMB and Salinas Valley State Prison (SVSP).

Moreover, the time period for estimating the shift[21] is a better fit to the time period to which the shift is applied. The first forecast increment is 2012 to 2020, an eight-year horizon. The twelve year 2000 to 2012 benchmark period for the shift portion of the shift-share is a better fit than the 22 year shift from 1990 to 2012.

[21] In this context, "shift" refers to the shift portion of the shift-share forecast method.

In addition, results of the forecast for this benchmark period were in closer alignment with local knowledge gathered from jurisdictions with respect to their anticipated rate of future growth. As a result, the 2000 to 2012 benchmark is the preferred time period for the forecast disaggregation analysis.

Adjustments for Special Populations

In small area demographic analysis, some populations grow or decline as a result of exogenous factors, rather than in response to demographic or economic conditions. For example, uniformed military populations, college populations, and prison populations may grow or decline as new facilities are added or older facilities are phased out of use. These population changes involve facilities that are outside the authority of local land use agencies.

Changes in these facilities can result in population "shocks" that affect the rate of population change within an area, independent of larger demographic and economic trends.

As a result of their unique characteristics, these populations are referred to as "special populations" and are often treated separately in forecasting.

> *Special populations include people associated with military bases, tourists, prisons, and colleges and universities. The size of a special population may have no connection to the general trends affecting the area. A special population can be stable for long periods of time, balloon quickly, and deflate, or, in the case of military bases, disappear rapidly through a closure program. It is best to develop a detailed understanding of the nature of the special population and set out the projection for it separately.*[22]

Over the past two decades, the AMBAG region has been home to several "special populations" including the military resident population at Fort Ord, students at UCSC and CSUMB, and inmates at SVSP.

In the preliminary forecast, AMBAG staff began the shift-share analysis at 1996 to address the population "shocks" resulting from the closure of Fort Ord and the opening of both California State University Monterey Bay and the Salinas Valley State Prison. While this adjustment was effective at addressing some of the special population concerns, it has a key weakness: it does not allow for independent forecasting of special populations.

The following discussion provides a method for addressing that issue.

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[22] Merc, Stuart. "Projections and Demand Analysis." Planning and Urban Design Standards. published by the American Planning Association. Sept 2012. http://books.google.com/books?id=NXpncFYj73QC&pg=PA299&lpg=PA299&dq=%22special+population%22+forecasting&source=bl&ots=L2fSbUMT8R&sig=uV05NN3-rNYcpCr97xU2hTpYt6s&hl=en&sa=X&ei=eEC5UMT8O42tqAGAvIDQCQ&ved=0CG0Q6AEwCQ#v=onepage&q=%22special%20population%22%20forecasting&f=false

History of Special Populations in the AMBAG Region

Fort Ord

Established in 1917, Fort Ord was eliminated during the Base Realignment and Closure Act of 1990, closing in 1994. This resulted in the loss of more than 30,000 residents in Monterey County, primarily in the jurisdictions of Marina, Seaside, as described in the Fort Ord Reuse Plan:

> *Fort Ord has been a significant presence in Monterey County since 1917… maintained a large military population numbering approximately 14,500 military personnel and 17,000 family members of active-duty personnel… the resident population of Fort Ord totaled 31,270 in 1991.*[23]

In addition…

> *The on-post resident population was divided between the two municipalities of Marina and Seaside. Through 1990, 17,139 people (56%) were within the Seaside city limits and 13,321 people (44%) were within the Marina city limits (Harding Lawson Associates, 1991, Workplan remedial investigation/feasibility study, Fort Ord, CA).*[24]

These population losses greatly affected the communities of Marina and Seaside. However, the forecast was developed using the 2000 to 2012 time period as historical reference. By 2000 abnormalities in growth rates caused by the closure of Fort Ord had self corrected. As the development plans for the area become implemented and the jurisdictions within the bounds of Fort Ord start to grow, population data will begin to reflect a growth rate that accounts for this growth.

University of California Santa Cruz

Founded in 1965, the University of California, Santa Cruz grew to 9,800 students by the 1991-92 academic year, 10,885 students by the 1999-2000 academic year, and 16,300 full-time equivalent students in the 2009-2010 academic year.[25] The most recent master plan projects full-time equivalent enrollment of 19,500 by 2020.[26]

California State University, Monterey Bay

Founded in 1995, California State University Monterey Bay grew to 2,265 students during the 1999-2000 school year and 4,000 students by 2010.[27] Although not created by the Fort Ord Reuse Plan, the University is a significant component of the Base Reuse Plan and as it continues to grow will help

[23] Fort Ord Reuse Plan, Volume 1: Context and Framework. June 1997.
[24] Fort Ord Reuse Plan, Volume 2: Reuse Plan Elements. June 1997.
[25] University of California, Santa Cruz Department of Planning and Budget. http://planning.ucsc.edu/irps/thirdWeek.asp accessed December 2012. Figures based on 3-quarter average measured in the spring quarter of the academic year.
[26] UC Santa Cruz Long-Range Development Plan 2005–2020. September 2006.
[27] California State University Monterey Bay historical timeline http://about.csumb.edu/node/4287 accessed November 2012.

to stimulate the economic development of the Fort Ord Area. The most recent master plan projects full-time equivalent student enrollment of 7,170 by 2014 and 12,000 by 2025.[28]

Salinas Valley State Prison

Opened in 1996, Salinas Valley State Prison has a design capacity of 3,888.[29] According to annual reporting by the California Department of Finance, the facility had a resident population of 4,100 at the beginning of the 2000s decade and a population of 3,630 on January 1, 2010.[30] The facility has a maximum capacity of 4,400, according to the 2010 Master Plan Annual Report.[31]

Soledad Correctional Training Facility

Opened in 1946, Soledad Correctional Training Facility has a design capacity of 3,301. According to annual reporting by the California Department of Corrections and Rehabilitation and counts from the 2000 and 2010 decennial census, the facility had a resident population of between 6,000 and 7,200 during the decade. [32]

Table 8: Historical Special Population Counts

	1990	2000	2010
Fort Ord Military Population Prior to Closure (total)	31,270*	0	0
Marina portion Prior to Closure	17,139	0	0
Seaside portion Prior to Closure	13,321	0	0
Unincorporated Monterey County portion	0	0	0
University of California, Santa Cruz	9,800**	10,885	16,300
California State University Monterey Bay	0	2,265	4,000
Salinas Valley State Prison	0	4,100	3,630
Soledad Correctional Training Facility	0	7,120	6,148

*This figure is a known estimate for 1990.
**1990 figure for University of California Santa Cruz reflects data from the 1991-92 academic year, the earliest year reported.

[28] Recirculated Draft Environmental Impact Report for the California State University Monterey Bay 2007 Master Plan. July 2008.
[29] California Department of Corrections and Rehabilitation website for Salinas Valley State Prison. Figure reported for fiscal year 2009-2010. http://www.cdcr.ca.gov/Facilities_Locator/SVSP-Institution_Stats.html accessed December 9, 2012.
[30] California Department of Finance. Exclusion and Dorm Report. November 2012.
[31] Master Plan Annual Report: Calendar Year 2010. California Department of Corrections and Rehabilitation. January 2011.
[32] California Department of Corrections and Rehabilitation website for Soledad Correctional Training Facility. Figure reported for fiscal year 2007 http://www.cdcr.ca.gov/Facilities_Locator/CTF-Institution_Stats.html accessed December 9, 2012. Population counts derived from institutionalized group quarters counts from Census 2000 and Census 2010, U.S. Census Bureau.

Proposed Adjustments to the Population Projections

Developing Special and Non-Special Population Estimates

As noted above,

> *Special populations provide a challenge to the population projections, because their growth and decline is often not determined by factors that impact the rates of change of the general population… This is particularly true of college students, prison inmates, and military personnel and their dependents. Residents of nursing homes, while also a special population, share many of the characteristics of the general population, and their growth and decline often mirrors the demographic changes of the larger community. To deal with the special population issue, a common procedure applied in population projections is to exclude the special populations by using group quarters data and to project the adjusted population separately, i.e. the total population minus the special population. At the end of the projection module, the special population is added back to the projected adjusted population to produce the projected total population… The special population is either held constant or projected separately.*[33]

Thus, projections for AMBAG jurisdictions (Marina, Santa Cruz, Seaside, Soledad, and unincorporated Monterey County) should be adjusted to account for special populations independent of the non-special population trends.

To accomplish this, special populations should be subtracted from the census year population estimates used in developing the shift-share model population shares. Independent projections of the special populations (e.g. from master plan documents) should then be addressed separately in the population forecast.

Incorporating Special Populations into the Final Projections

As noted above, Fort Ord has closed, and thus major military populations can be assumed to be minimal throughout the remainder of the forecast. While there are military personnel still living in the region, the remaining military populations live amongst non-special populations and therefore are captured in non-special population projections.

For the universities and the prison, master plan documents provide useful information about expected future populations. These population plans can be used to fill in horizon-year projections, which are then kept constant for any remaining years of the AMBAG forecast. Additionally, staff

[33] Rayer, Stephan. MISER Population Projections for Massachusetts, 2000–2020. July 2003. http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&ved=0CEUQFjAD&url=http%3A%2F%2Fwww.umass.edu%2Fmiser%2Fpopulation%2FDocuments%2FMAProjMethodology.doc&ei=-ke5UNPKDMmdqgH0h4GgDQ&usg=AFQjCNF6tP0wQ9CqtSb8X7-EUtMm9rmMrw&sig2=8pz3atGy03rNWjtvjbdjeg

worked closely with UCSC to develop conservative estimates for growth after the horizon year of their long range development plan.

Translating Population Growth into Housing

Special population adjustments for Fort Ord require no special processing, as the military population in special housing on Fort Ord is zero in all future forecast years. Military populations living amongst non-special populations are captured within the Census data and our forecasted forward along with non-special populations.

However, university populations for UCSC and CSUMB pose a special case. While housing will be provided by the universities, it is likely that at least some students will reside in housing "in town" as part of the resident population of surrounding jurisdictions. For this reason, university population projections and housing projections were completed separately from the jurisdiction population projections.

Population projection adjustments for SVSP and SCTF require no special processing for housing unit projections. These populations will be classified as group quarters, and thus are not considered in housing calculations.

Adjustments for Annexations

The shift-share approach outlined above presumes that most population change is a result of demographic and economic forces that can be represented by the rate of change over time. The shift-share approach is intended for use with jurisdictions that retain consistent geographic boundaries over time. Because the shift-share method presumes constant geographic boundaries, annexations, which by definition change jurisdiction boundaries, pose a unique problem. Adjustment techniques are needed to address these cases. Between 1990 and 2010 there was one populated annexation in the AMBAG region. This case, the Watsonville annexation, is described in more detail below.

History of Annexations in the AMBAG Region

Watsonville

In 2000 the city of Watsonville annexed a portion of unincorporated Santa Cruz County. Known as the Freedom-Carey annexation, the change was recorded in July 2000, after the 2000 decennial Census.

Historical population estimates for the City of Watsonville, unincorporated Santa Cruz County, and Freedom-Carey annexation area are shown in Table 9 below.

The data for 2000 reflect reports published by the Local Agency Formation Commission with respect to the annexation area. Data for 1990 were derived using trend extrapolations based on the rate of growth in associated census tracts (1106 and 1107). Similarly, data for 2010 were derived using trend extrapolations based on the rate of growth in associated census tracts (1105.02, 1106, and 1107).

If the annexation of 2,022 residents were simply attributed to the population growth of Watsonville between 2000 and 2010, it would account for forty percent of the growth in the city's population during that period of time. Conversely, the loss of annexed population would account for more than half of the decline in unincorporated population between 2000 and 2010.

Since the shift reflects an administrative boundary change, not a demographic one, the shift-share model was adjusted accordingly.

Table 9: Historical Population Estimates for the Watsonville Annexation Area

	1990	2000	2010
City of Watsonville	31,099	44,246	51,199
Excluding Annexation Area	31,099	44,246	49,229
Unincorporated County of Santa Cruz	130,086	135,345	129,739
Excluding Annexation Area	128,426	133,323	129,739
Annexation Area	1,660	2,022	1,970

Proposed Adjustments to the Population Projections

Adjusting the Watsonville and unincorporated Santa Cruz County projections

In order to ensure that the population shift resulting from annexation does not skew the shift-share results for Watsonville or unincorporated Santa Cruz County, population projections for Watsonville, unincorporated Santa Cruz County, and the annexation area were estimated separately.

To complete this adjustment, the estimated annexation area population was subtracted from the unincorporated Santa Cruz County population totals in 1990 and 2000. Similarly, the projected population from the annexation area population was added to Watsonville in 2010.

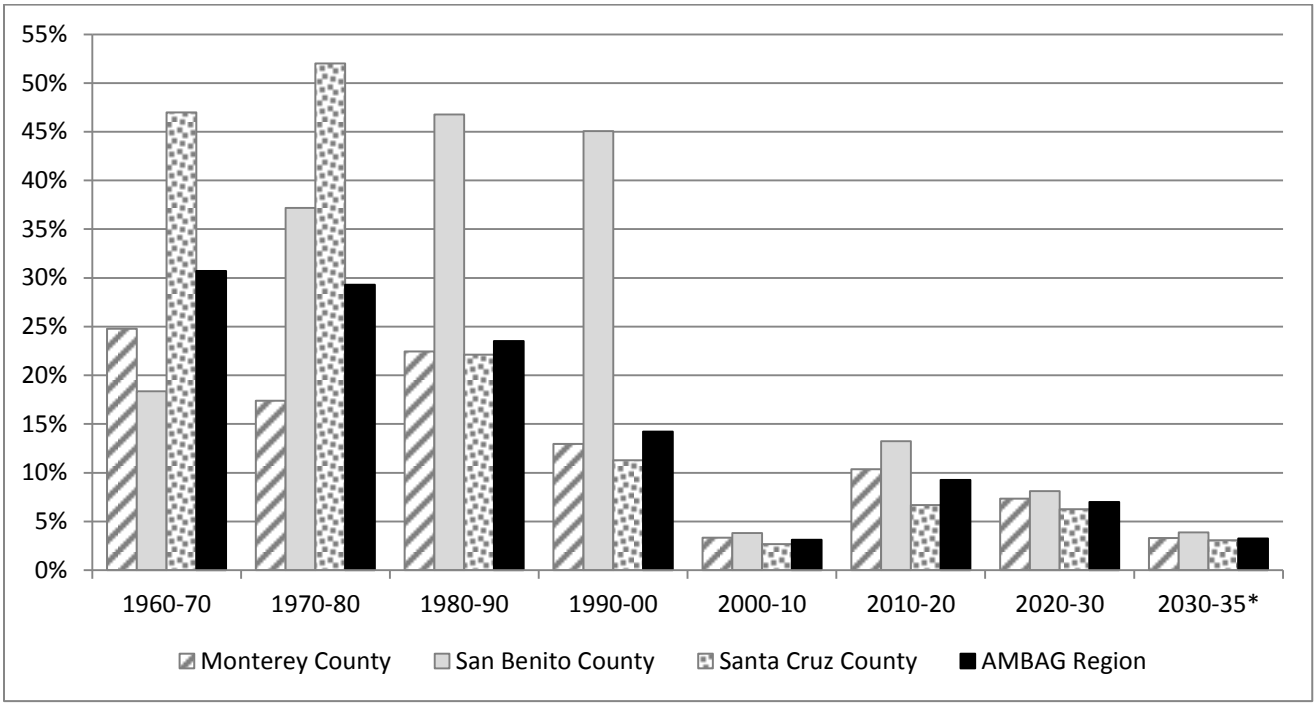
Independent shift-share projections were developed for each of the three sub-areas: Watsonville excluding the annexation area, unincorporated Santa Cruz County excluding the annexation area, and the annexation area.

To complete the projections, the annexation area projected population growth was added to Watsonville. Unlike the special population projections described above, there are no further adjustments needed to translate the resulting population projections into housing projections.

Summary of Population Forecast Results

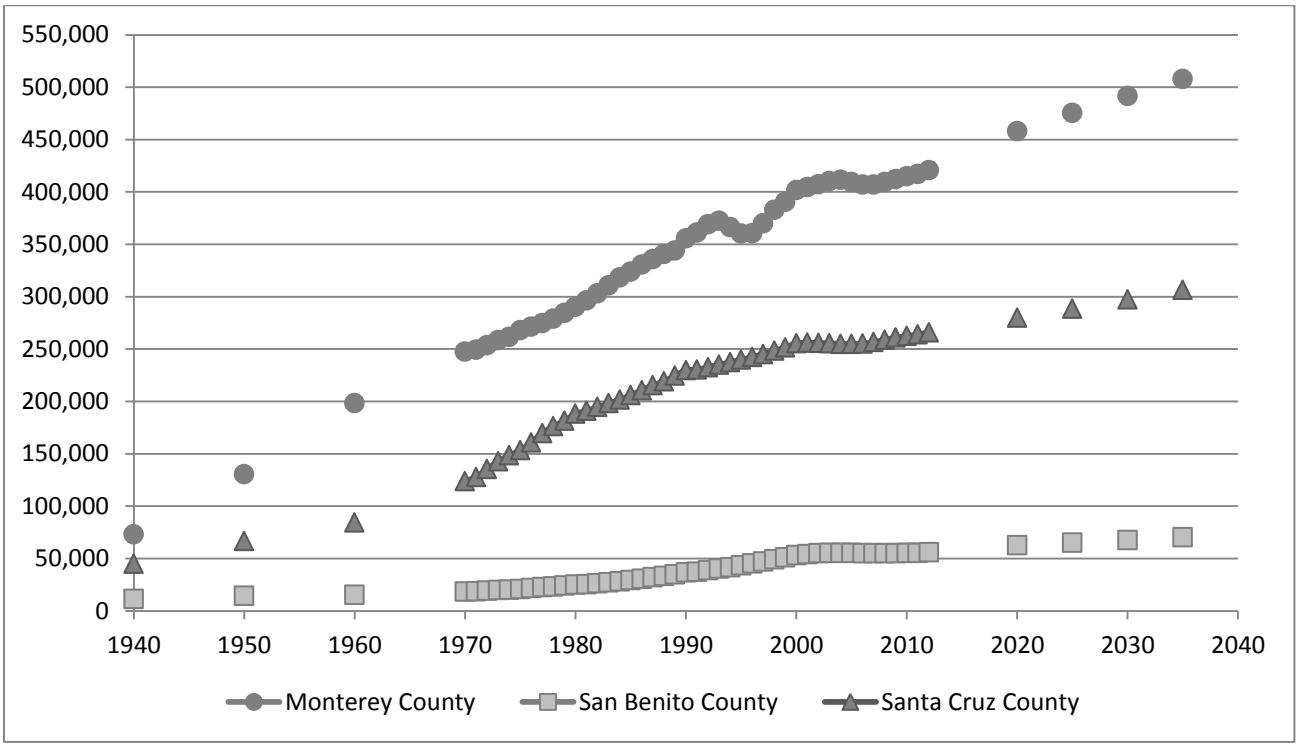
The following figures summarize the historical trend and projected populations for each county based on the revised forecast. Forecast figures are based on the 2000 to 2012 benchmark period and take into account the special population adjustments described above. (See figures below.)

Figure 27: Population in Monterey County, San Benito County, and Santa Cruz County, and AMBAG Region 1960-2035



Source: Historical data - California Department of Finance; Forecast years - AMBAG calculations

Figure 28: Population in Monterey, San Benito, and Santa Cruz Counties 1940-2035



Source: California Department of Finance; AMBAG calculations

Table 10: Population Forecast

Geography	2010	2020	2025	2030	2035	Compound Annual Growth Rate	Change Over Forecast Period
AMBAG Region	732,708	800,000	827,000	856,000	885,000	0.76%	20.78%
Monterey County	415,057	447,516	463,884	479,487	495,086	0.71%	19.28%
Carmel-By-The-Sea	3,722	3,541	3,661	3,789	3,917	0.20%	5.24%
Del Rey Oaks	1,624	1,889	2,345	2,806	3,468	3.08%	113.55%
Gonzales	8,187	13,340	13,955	16,194	19,333	3.50%	136.14%
Greenfield	16,330	21,341	22,061	22,835	23,609	1.49%	44.57%
King City	12,874	14,568	16,398	17,759	18,620	1.49%	44.63%
Marina	19,718	21,315	22,651	23,388	24,225	0.83%	22.86%
Monterey	27,810	28,004	28,839	29,743	30,647	0.39%	10.20%
Pacific Grove	15,041	15,394	15,914	16,472	17,030	0.50%	13.22%
Salinas	150,441	156,793	161,405	166,912	172,499	0.55%	14.66%
Sand City	334	1,048	1,198	1,414	1,550	6.33%	364.07%
Seaside	33,025	36,120	40,260	41,308	42,256	0.99%	27.95%
Soledad	25,738	31,316	32,050	32,839	33,628	1.08%	30.66%
Balance Of County	100,213	102,847	103,147	104,028	104,304	0.16%	4.08%
San Benito County	55,269	73,103	75,604	78,418	81,332	1.56%	47.16%
Hollister	34,928	39,975	41,704	43,551	45,397	1.05%	29.97%
San Juan Bautista	1,862	1,993	2,015	2,053	2,092	0.47%	12.35%
Balance Of County	18,479	31,135	31,885	32,814	33,843	2.45%	83.14%
Santa Cruz County	262,382	279,381	287,512	298,095	308,582	0.65%	17.61%
Capitola	9,918	9,119	9,427	9,758	10,088	0.07%	1.71%
Santa Cruz	59,946	66,860	70,058	73,375	76,692	0.99%	27.94%
Scotts Valley	11,580	11,638	11,696	11,754	11,813	0.08%	2.01%
Watsonville	51,199	59,446	61,452	63,607	65,762	1.01%	28.44%
Balance Of County	129,739	132,318	134,879	139,601	144,227	0.42%	11.17%

Table 11: Housing Unit Forecast

Geography	2010	2020	2025	2030	2035	Compound Annual Growth Rate	Change Over Forecast Period
AMBAG Region	261,394	280,765	286,649	295,936	303,245	0.60%	16.01%
Monterey County	139,048	147,106	150,260	154,585	157,992	0.51%	13.62%
Carmel-By-The-Sea	3,417	3,417	3,417	3,417	3,418	0.00%	0.03%
Del Rey Oaks	741	898	1,035	1,246	1,521	2.92%	105.26%
Gonzales	1,989	3,400	3,591	3,958	4,607	3.42%	131.62%
Greenfield	3,752	4,734	4,795	4,982	5,105	1.24%	36.06%
King City	3,218	3,838	3,944	4,395	4,484	1.34%	39.34%
Marina	7,200	8,248	9,264	9,608	9,797	1.24%	36.07%
Monterey	13,584	13,665	13,695	13,750	14,001	0.12%	3.07%
Pacific Grove	8,169	8,169	8,169	8,274	8,478	0.15%	3.78%
Salinas	42,651	43,174	43,989	45,795	46,883	0.38%	9.92%
Sand City	145	439	496	586	629	6.05%	333.79%
Seaside	11,335	12,556	12,907	13,311	13,664	0.75%	20.55%
Soledad	3,876	5,231	5,325	5,533	5,670	1.53%	46.28%
Balance Of County	38,971	39,337	39,633	39,730	39,735	0.08%	1.96%
San Benito County	17,870	22,620	23,221	24,200	25,057	1.36%	40.22%
Hollister	10,401	11,176	11,534	12,114	12,620	0.78%	21.33%
San Juan Bautista	745	834	843	852	861	0.58%	15.57%
Balance Of County	6,724	10,610	10,844	11,234	11,576	2.20%	72.16%
Santa Cruz County	104,476	111,039	113,168	117,151	120,196	0.56%	15.05%
Capitola	5,534	5,534	5,534	5,537	5,553	0.01%	0.34%
Santa Cruz	23,316	26,890	27,547	28,297	29,355	0.93%	25.90%
Scotts Valley	4,610	4,655	4,692	4,771	4,785	0.15%	3.80%
Watsonville	14,089	16,382	16,933	17,733	18,188	1.03%	29.09%
Balance Of County	56,927	57,578	58,462	60,813	62,315	0.36%	9.46%

Employment Disaggregation Method

This section describes the methods used to disaggregate the tri-county regional employment forecast to provide estimates of employment at the county and sub-county level.

County Disaggregation Method for Employment

In order to disaggregate the tri-county regional industry employment forecast by county, AMBAG staff selected what is known as a Classical Shift-Share model. The Classical Shift-Share formula is similar to the Implicit Shift-Share formula used to disaggregate the population forecast, except that it is comprised of three mathematical functions rather than two. In this case, they are referred to as the regional share, industry mix, and competitive shift functions. The regional share function estimates what employment growth in a certain industry would look like in the local area (i.e., county), if it were to grow at the same rate as the total all-industry employment in the region as a whole. The second industry mix function then adjusts for the difference in the rate of employment growth in a certain industry, compared to all industry employment. The industry mix function is calculated using regional employment values. The third function, known as the competitive shift, adjusts the estimate to account for faster or slower industry employment growth in the county, compared to the region.

Figure 29: Classical Shift Share Equation

$$E_i^{t+n} = E_i^t \left[\frac{R_A^{t+n}}{R_A^t} + \left(\frac{R_i^{t+n}}{R_i^t} - \frac{R_A^{t+n}}{R_A^t} \right) + \alpha \left(\frac{E_i^t}{E_i^{t-m}} - \frac{R_i^t}{R_i^{t-m}} \right) \right]$$

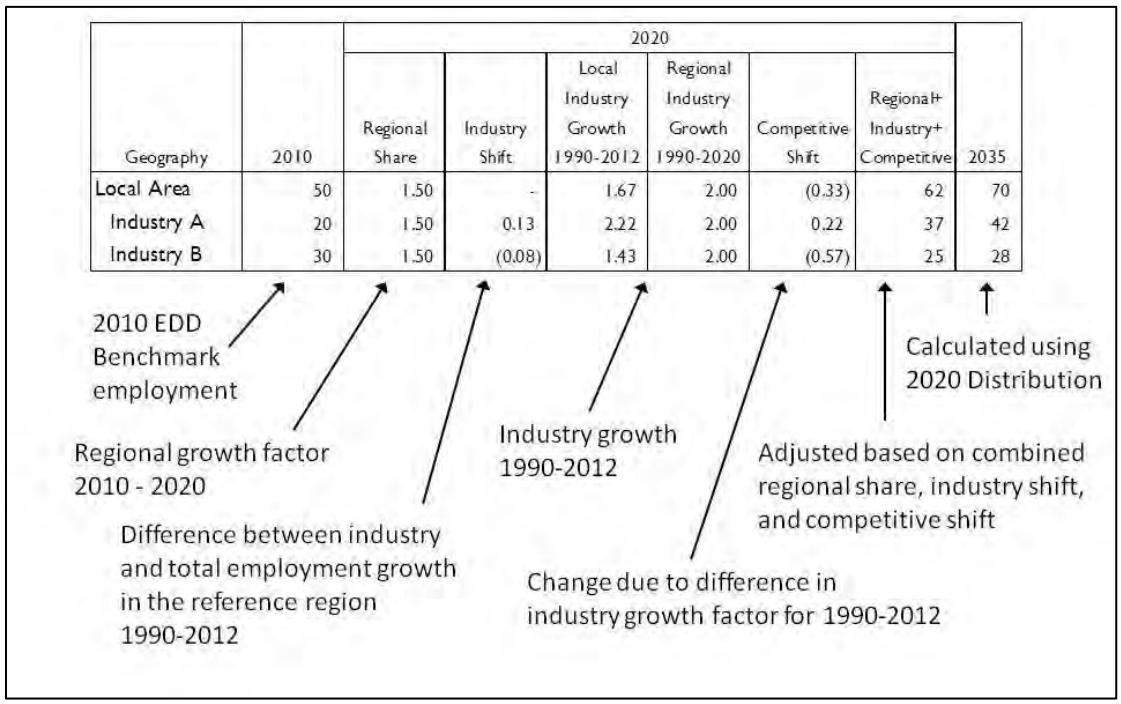
E = local Value R = Regional Value
i = industry A = All industries
t = time (year) m,n = number of years

Incorporating Census Data on Self Employment

One important limitation of the California Economic Development Department's (EDD) historic industry employment dataset is that it excludes all self-employed persons, unpaid family workers, and private household employees. To supplement the EDD dataset, staff collected data on the self-employed population by place of residence from the U.S. Census Bureau. The specific dataset uses included the Decennial Census' for 1990, 2000, and 2010. In addition, the Census Bureau offered American Community Survey (ACS) 1-Year estimates for Monterey and Santa Cruz counties for the period from 2006 to 2009. Data for San Benito County was collected from the ACS 3-Year estimates for the period from 2008 to 2010 and the ACS 5-Year estimates for the period from 2006 to 2010. To estimate self-employment for the intermediate years between census estimates, staff calculated the compound average annual growth rate for each county, which was then applied to

the appropriate base year value. County-level estimates of the self-employed population for the intermediate years were then adjusted to account for rounding error.

Figure 30: Example of Classical Shift Share



Sub-County Disaggregation Method for Employment

To develop the baseline disaggregation model for employment, staff began by collecting historic employment data from InfoUSA. While originally the intent was to collect data from the EDD, EDD was unable to provide this data in a timely fashion. The InfoUSA data is based off of hundreds of different sources including but not limited to postal records, white pages listings, new business registrations, utility connections, real estate data (deeds & assessments), and industry directories. The data is then verified and supplemented with regular phone surveys. InfoUSA data is used by many other regional Councils of Governments to conduct forecast work and is a reputable source of data.

The InfoUSA data was used to calculate the share of employment for each industry in each jurisdiction in 2010. This percent share was then carried forward to future years in order to calculate the number of jobs located in each jurisdiction by industry. While the County level totals use the Classical Shift Share method as described above, the sub-county level forecast is a constant share approach. However, because the sub-county level forecasts are based on the County totals by industry the Classical Shift Share method does influence the sub-county trends.

A revised forecast was distributed to planning staff at each jurisdiction using the InfoUSA data. AMBAG staff held one-on-one meetings to gather comments and additional information from planning staff at each jurisdiction. (See Appendix A for a list of meeting dates, times, locations and attendees.) Economic studies, entitled development, the establishment of enterprise zones and other information from local planners are used to supplement the employment assumptions at the jurisdictional level. These comments and additional pieces of information have been incorporated into the current draft of the forecast. While there is flexibility built into the forecasting process at the subregional level, the total regional and county level employment figures were not changed.

Table 12: Draft Employment Forecast

Geography	2010	2020	2025	2030	2035	Compound Annual Growth Rate	Change Over Forecast Period
AMBAG Region	308,400	344,500	353,600	362,900	372,800	0.76%	20.88%
Monterey County	182,000	205,977	211,218	216,486	222,137	0.80%	22.05%
Carmel-By-The-Sea	2,282	2,645	2,716	2,793	2,875	0.93%	25.99%
Del Rey Oaks	414	640	602	592	573	1.31%	38.37%
Gonzales	2,922	4,084	4,416	4,802	5,234	2.36%	79.10%
Greenfield	6,935	7,404	7,497	7,673	7,862	0.50%	13.37%
King City	4,274	5,007	5,336	5,569	5,669	1.14%	32.64%
Marina	4,951	5,727	6,191	7,242	8,305	2.09%	67.74%
Monterey	26,934	31,249	32,512	33,597	34,828	1.03%	29.31%
Pacific Grove	8,792	10,161	10,499	10,827	11,194	0.97%	27.32%
Salinas	54,504	62,527	63,742	65,162	66,883	0.82%	22.71%
Sand City	1,561	1,839	1,873	1,908	2,500	1.90%	60.17%
Seaside	7,790	8,828	9,092	9,344	9,628	0.85%	23.60%
Soledad	2,571	2,868	2,947	3,022	3,143	0.81%	22.23%
Balance Of County	58,071	62,998	63,795	63,955	63,443	0.35%	9.25%
San Benito County	16,200	18,513	18,836	19,187	19,546	0.75%	20.65%
Hollister	10,497	12,175	12,449	12,732	13,031	0.87%	24.14%
San Juan Bautista	411	490	497	508	516	0.91%	25.44%
Balance Of County	5,292	5,848	5,890	5,947	5,999	0.50%	13.36%
Santa Cruz County	110,200	120,010	123,546	127,227	131,117	0.70%	18.98%
Capitola	6,170	6,550	6,691	6,850	7,018	0.52%	13.75%
Santa Cruz	37,077	40,391	41,279	42,546	43,863	0.67%	18.30%
Scotts Valley	5,164	5,151	5,219	5,253	5,289	0.10%	2.41%
Watsonville	21,505	24,359	25,680	26,976	28,543	1.14%	32.73%
Balance Of County	40,284	43,559	44,681	45,670	46,404	0.57%	15.19%

Table 13: 2010 Employment by Industry

	Agricultural	Construction	Industrial	Retail	Service	Public	TOTAL
AMBAG Region	56,300	8,100	13,400	37,400	109,700	83,500	308,400
Monterey County	45,100	4,300	5,600	20,100	60,900	46,000	182,000
Carmel-By-The-Sea	11	6	59	431	1,651	124	2,282
Del Rey Oaks	-	15	26	112	36	225	414
Gonzales	1,968	8	160	238	257	291	2,922
Greenfield	5,542	21	59	138	685	489	6,934
King City	1,441	50	306	416	1,060	1,000	4,273
Marina	18	276	212	926	2,249	1,270	4,951
Monterey	810	818	1,205	2,653	12,085	9,362	26,933
Pacific Grove	-	167	121	1,022	4,930	2,552	8,792
Salinas	9,830	922	2,114	7,270	17,149	17,217	54,504
Sand City	-	156	113	703	455	135	1,562
Seaside	-	204	196	949	2,743	3,698	7,790
Soledad	300	41	62	196	890	1,083	2,572
Balance Of County	25,179	1,616	968	5,045	16,710	8,553	58,071
San Benito County	1,600	800	2,500	2,400	5,100	3,800	16,200
Hollister	339	575	1,109	1,403	3,641	3,430	10,497
San Juan Bautista	1	6	25	56	222	102	412
Balance Of County	1,260	219	1,367	941	1,238	267	5,292
Santa Cruz County	9,600	3,000	5,300	14,900	43,700	33,700	110,200
Capitola	-	-	38	1,694	3,306	1,132	6,170
Santa Cruz	488	496	2,140	3,813	13,435	16,704	37,076
Scotts Valley	32	106	804	759	2,532	932	5,165
Watsonville	2,869	1,100	1,439	3,397	7,315	5,385	21,505
Balance Of County	6,211	1,298	879	5,238	17,112	9,547	40,285

Table 14: 2020 Employment by Industry

	Agricultural	Construction	Industrial	Retail	Service	Public	TOTAL
AMBAG Region	58,900	10,900	13,200	41,300	124,300	95,900	344,500
Monterey County	47,432	5,902	5,651	23,306	71,430	52,256	205,977
Carmel-By-The-Sea	11	8	57	506	1,924	139	2,645
Del Rey Oaks	-	150	25	181	41	243	640
Gonzales	2,080	36	395	277	802	494	4,084
Greenfield	4,556	29	57	160	1,056	1,546	7,404
King City	1,453	124	287	553	1,518	1,072	5,007
Marina	19	379	526	1,079	2,326	1,398	5,727
Monterey	856	1,123	948	3,099	14,363	10,860	31,249
Pacific Grove	-	229	117	1,198	5,900	2,717	10,161
Salinas	10,386	1,266	2,050	8,441	20,861	19,523	62,527
Sand City	-	214	110	820	546	149	1,839
Seaside	-	380	190	1,111	3,182	3,965	8,828
Soledad	300	56	60	243	1,002	1,207	2,868
Balance Of County	27,771	1,908	829	5,638	17,909	8,943	62,998
San Benito County	1,498	912	2,896	2,719	6,297	4,191	18,513
Hollister	228	655	1,471	1,564	4,498	3,759	12,175
San Juan Bautista	16	8	32	67	263	104	490
Balance Of County	1,254	249	1,393	1,088	1,536	328	5,848
Santa Cruz County	9,970	4,086	4,653	15,275	46,573	39,453	120,010
Capitola	-	-	32	1,742	3,576	1,200	6,550
Santa Cruz	517	676	1,799	3,912	14,503	18,984	40,391
Scotts Valley	34	125	675	774	2,576	967	5,151
Watsonville	3,039	1,497	1,209	3,552	8,632	6,430	24,359
Balance Of County	6,380	1,788	938	5,295	17,286	11,872	43,559

Table 15: 2025 Employment by Industry

	Agricultural	Construction	Industrial	Retail	Service	Public	TOTAL
AMBAG Region	59,500	11,100	13,000	41,500	127,600	100,900	353,600
Monterey County	47,927	6,010	5,559	23,418	73,414	54,890	211,218
Carmel-By-The-Sea	11	8	56	509	1,986	146	2,716
Del Rey Oaks	-	100	25	182	43	252	602
Gonzales	2,101	47	553	279	822	614	4,416
Greenfield	4,615	29	56	161	1,065	1,571	7,497
King City	1,538	150	292	585	1,520	1,251	5,336
Marina	19	386	526	1,085	2,715	1,460	6,191
Monterey	865	1,144	827	3,116	14,787	11,773	32,512
Pacific Grove	-	233	115	1,205	6,203	2,743	10,499
Salinas	10,493	1,289	2,021	8,481	21,280	20,178	63,742
Sand City	-	218	108	825	565	157	1,873
Seaside	-	385	187	1,117	3,258	4,145	9,092
Soledad	300	57	59	280	1,028	1,223	2,947
Balance Of County	27,985	1,964	734	5,593	18,142	9,377	63,795
San Benito County	1,499	929	2,855	2,734	6,430	4,389	18,836
Hollister	231	667	1,448	1,572	4,600	3,931	12,449
San Juan Bautista	16	8	32	67	269	105	497
Balance Of County	1,252	254	1,375	1,095	1,561	353	5,890
Santa Cruz County	10,074	4,161	4,586	15,348	47,756	41,621	123,546
Capitola	-	-	31	1,752	3,671	1,237	6,691
Santa Cruz	522	688	1,771	3,772	14,924	19,602	41,279
Scotts Valley	34	128	665	776	2,612	1,004	5,219
Watsonville	3,071	1,525	1,192	3,749	9,211	6,932	25,680
Balance Of County	6,447	1,820	927	5,299	17,342	12,846	44,681

Table 16: 2030 Employment by Industry

	Agricultural	Construction	Industrial	Retail	Service	Public	TOTAL
AMBAG Region	59,900	11,300	12,900	41,900	131,200	105,700	362,900
Monterey County	48,256	6,118	5,513	23,644	75,586	57,369	216,486
Carmel-By-The-Sea	12	8	56	514	2,051	152	2,793
Del Rey Oaks	-	80	25	182	45	260	592
Gonzales	2,093	62	561	303	831	952	4,802
Greenfield	4,755	30	56	162	1,075	1,595	7,673
King City	1,549	172	290	590	1,542	1,426	5,569
Marina	19	393	526	1,496	3,293	1,515	7,242
Monterey	871	1,164	792	3,146	15,274	12,350	33,597
Pacific Grove	-	237	114	1,216	6,506	2,754	10,827
Salinas	10,563	1,312	2,080	9,063	22,052	20,092	65,162
Sand City	-	222	107	833	583	163	1,908
Seaside	-	390	186	1,128	3,339	4,301	9,344
Soledad	300	58	58	328	1,054	1,224	3,022
Balance Of County	28,094	1,990	662	4,683	17,941	10,585	63,955
San Benito County	1,501	946	2,835	2,759	6,578	4,568	19,187
Hollister	232	680	1,437	1,586	4,714	4,083	12,732
San Juan Bautista	17	9	32	68	276	106	508
Balance Of County	1,252	257	1,366	1,105	1,588	379	5,947
Santa Cruz County	10,143	4,236	4,552	15,497	49,036	43,763	127,227
Capitola	-	-	31	1,768	3,774	1,277	6,850
Santa Cruz	526	701	1,758	3,820	15,286	20,455	42,546
Scotts Valley	34	130	660	785	2,634	1,010	5,253
Watsonville	3,091	1,553	1,181	3,818	10,036	7,297	26,976
Balance Of County	6,492	1,852	922	5,306	17,374	13,724	45,670

Table 17: 2035 Employment by Industry

	Agricultural	Construction	Industrial	Retail	Service	Public	TOTAL
AMBAG Region	60,400	11,500	12,700	42,300	134,900	111,000	372,800
Monterey County	48,666	6,226	5,425	23,869	77,805	60,146	222,137
Carmel-By-The-Sea	12	8	55	519	2,122	159	2,875
Del Rey Oaks	-	50	24	183	46	270	573
Gonzales	2,089	67	574	328	858	1,318	5,234
Greenfield	4,905	30	55	164	1,087	1,621	7,862
King City	1,562	183	285	594	1,563	1,482	5,669
Marina	19	400	530	1,906	3,871	1,579	8,305
Monterey	878	1,185	692	3,176	15,745	13,152	34,828
Pacific Grove	-	241	113	1,227	6,858	2,755	11,194
Salinas	10,651	1,335	2,173	9,643	23,231	19,850	66,883
Sand City	-	316	105	1,095	784	200	2,500
Seaside	-	395	183	1,139	3,425	4,486	9,628
Soledad	300	59	58	334	1,160	1,232	3,143
Balance Of County	28,250	1,957	578	3,561	17,055	12,042	63,443
San Benito County	1,505	963	2,790	2,786	6,730	4,772	19,546
Hollister	234	692	1,415	1,602	4,830	4,258	13,031
San Juan Bautista	18	10	31	68	283	106	516
Balance Of County	1,253	261	1,344	1,116	1,617	408	5,999
Santa Cruz County	10,229	4,311	4,485	15,645	50,365	46,082	131,117
Capitola	-	-	31	1,785	3,881	1,321	7,018
Santa Cruz	530	713	1,730	3,908	15,493	21,489	43,863
Scotts Valley	35	133	650	792	2,667	1,012	5,289
Watsonville	3,116	1,580	1,164	3,842	10,931	7,910	28,543
Balance Of County	6,548	1,885	910	5,318	17,393	14,350	46,404

Attachment 1:

List of Meetings & Attendees

Table 18: First Round of Meetings on Growth Forecast with Jurisdiction Staff

Agency	Last Contacted	Next Scheduled Meeting	Meeting Time	Meeting Location
City of Capitola	6/25/2012	None	None	None
City of Carmel-By-The-Sea	7/19/2012	7/23/2012	3:30 PM	Carmel City Hall
City of Del Rey Oaks	7/11/2012	7/18/2012	11:00 AM	AMBAG Office
City of Gonzales	7/6/2012	7/17/2012	3:00 PM	AMBAG Office
City of Greenfield	7/9/2012	7/10/2012	9:30 AM	AMBAG Office
City of Hollister	7/9/2012	7/11/2012	9:30 AM	Hollister City Hall
City of King City	7/11/2012	7/24/2012	10:00 AM	King City Hall
City of Marina	7/17/2012	7/20/2012	3:00 PM	Marina Office
City of Monterey	6/28/2012	None	None	None
City of Pacific Grove	7/11/2012	7/20/2012	9:00 AM	Pacific Grove Office
City of Salinas	7/11/2012	7/26/2012	2:30 PM	Salinas Office
City of San Juan Bautista	7/9/2012	7/11/2012	11:00 AM	San Juan City Hall
City of Sand City	7/9/2012	7/10/2012	11:00 AM	Sand City Office
City of Santa Cruz	7/17/2012	7/23/2012	11:30 AM	City Offices
City of Scotts Valley	7/17/2012	7/17/2012	11:00 AM	Scotts Valley Office
City of Seaside	7/16/2012	7/16/2012	2:00 PM	Seaside City Hall
City of Soledad	7/9/2012	7/12/2012	9:30 AM	TBD
City of Watsonville	7/19/2012	7/25/2012	4:00 PM	Watsonville Office
County of Monterey	7/17/2012	7/26/2012	1:00 PM	County Offices
County of San Benito	7/9/2012	7/11/2012	1:00 PM	San Benito Office
County of Santa Cruz	7/17/2012	7/19/2012	9:30 AM	County Offices
Fort Ord Reuse Authority	7/19/2012	7/24/2012	2:00 PM	FORA Office
San Benito COG	7/19/2012	8/2/2012	2:00 PM	Hollister
Santa Cruz County LAFCO	7/18/2012	7/23/2012	9:30 AM	SC LAFCO Office

*All attendees were at the meeting in person unless otherwise noted.

Table 19: Second Round of Meetings on Growth Forecast with Jurisdiction Staff

Agency	Contact Name	Meeting Date	Meeting Time	Meeting Location	Meeting Attendees (AMBAG)*	Meeting Attendees (not AMBAG)*
City of Capitola	Susan Westman	11/14/2012	9:00 AM	City Hall 420 Capitola Avenue, Capitola 95010	Bob Leiter; Anais Schenk	Susan Westman; Ryan Bane
City of Carmel-By-The-Sea	Marc Weiner	11/13/2012	11:00 AM	Carmel City Hall, Monte Verde Street, Carmel 93921	Bob Leiter; Anais Schenk	Marc Weiner
City of Del Rey Oaks	Daniel Dawson	11/14/2012	11:30 AM	City Hall, 650 Canyon Del Rey Blvd, Del Rey Oaks 93940	Bob Leiter; Anais Schenk	Daniel Dawson
City of Gonzales	Thomas Truszkowski	11/27/2012	3:00 PM	Gonzales City Hall 147 Fourth Street, Gonzales 93926	Maura Twomey; Anais Schenk	Tom Truszkowski; Martin Carver (consultant); Scott Funk (City Council/AMBAG Board Rep)
City of Greenfield	Susan Stanton	11/28/2012	3:00 PM	599 El Camino Real Greenfield	Bob Leiter; Anais Schenk	Susan Stanton; Paul Mugan
City of Hollister	Abraham Prado	11/7/2012	10:30 AM	City Hall - 375 5th Street, Hollister 95023	Bob Leiter; Anais Schenk	Abraham Prado; Bill Avera; Jill Morales
City of King City	Michael Powers	11/28/2012	1:00 PM	City Hall, 212 South Vanderhurst Avenue, King City 93930	Bob Leiter; Anais Schenk	Michael Powers; Maricruz Aguilar-Navarro
City of Marina	Theresa Szymanis	11/15/2012	11:00 AM	209 Cypress Street, Marina	Bob Leiter; Anais Schenk	Theresa Szymanis; Justin Meek
City of Monterey	Kim Cole	11/8/2012	8:00 AM	Colton Hall, 570 Pacific Street, Monterey 93940	Bob Leiter; Anais Schenk	Kim Cole

Agency	Contact Name	Meeting Date	Meeting Time	Meeting Location	Meeting Attendees (AMBAG)*	Meeting Attendees (not AMBAG)*
City of Pacific Grove	Lynn Burgess	11/13/2012	1:00 PM	corner of Forest and Laurel, 2nd Floor, PG	Bob Leiter; Anais Schenk	Lynn Burgess
City of Salinas	Tara Hullinger	11/8/2012	11:00 AM	City Hall - 200 Lincoln Avenue, Salinas 93901	Bob Leiter; Anais Schenk	Tara Hullinger; Alan Stumpf
City of San Juan Bautista	Roger Grimsley	11/7/2012	1:00 PM	City Hall	Bob Leiter; Anais Schenk	Roger Grimsley; Trish Paetz
City of Sand City	Chuck Pooler	11/13/2012	9:00 AM	City Hall - One Sylvan Park, Sand City 93955	Bob Leiter; Anais Schenk	Chuck Pooler
City of Santa Cruz	Ken Thomas	11/8/2012	4:30 PM	809 Center Street, Santa Cruz 95060	Bob Leiter; Anais Schenk	Ken Thomas; Juliana Rebagliati; Michelle King
City of Scotts Valley	Corrie Kates	11/9/2012	9:00 AM	City Hall, One Civic Center Drive, Scotts Valley 95066 (front conference room)	Heather Adamson; Anais Schenk	Taylor Bateman; Bill Weisman (RBF); Corrie Kates (phone); Michelle Fodge
City of Seaside	Rick Medina	11/13/2012	2:30 PM	City Hall - 440 Harcourt Avenue, Seaside 93955	Bob Leiter; Anais Schenk	Rick Medina; Diana Ingersoll
City of Soledad	Brent Slama	11/28/2012	11:30 AM	248 Main St. Soledad	Bob Leiter; Anais Schenk	Brent Slama
City of Watsonville	Keith Boyle	11/15/2012	9:00 AM	250 Main Street, Watsonville 95076	Bob Leiter; Anais Schenk	Keith Boyle
County of Monterey	Mike Novo	11/8/2012	10:00 AM	Government Center - 168 W. Alisal Street, Salinas CA 93901	Bob Leiter; Anais Schenk	Mike Novo
County of San Benito	Gary Armstrong	11/7/2012	9:00 AM	2301 Technology Parkway, Hollister 95023	Bob Leiter; Anais Schenk	Gary Armstrong; Byron Turner; Mary Gilbert

Agency	Contact Name	Meeting Date	Meeting Time	Meeting Location	Meeting Attendees (AMBAG)*	Meeting Attendees (not AMBAG)*
County of Santa Cruz	Paia Levine	11/6/2012	2:00 PM	701 Ocean Street, Santa Cruz 95060	Bob Leiter; Anais Schenk	Paia Levine; Kathleen Previsich; Sarah Nuese; Frank Barron; Barbara Mason; Ginger Dykaar
CSU Monterey Bay	Kathleen Ventimiglia	12/11/2012	3:30 PM	CSUMB Mountain Hall, Suite A	Beth Jarosz (phone); Anais Schenk	Kathleen Ventimiglia
Fort Ord Reuse Authority	Steve Endsley	11/28/2012	11:30 AM	FORA Office	Bob Leiter; Anais Schenk	Steve Endsley; Darren McBain; Jonathon Garcia
Monterey County LAFCO	Thomas McCue	11/15/2012	2:00 PM	AMBAG Conference Room	Bob Leiter; Anais Schenk	Thomas McCue; Kate McKenna
Santa Cruz County LAFCO	Patrick McCormick	11/6/2012	3:30 PM	701 Ocean Street, Room 318-D, Santa Cruz 95060	Bob Leiter; Anais Schenk	Patrick McCormick
UC Santa Cruz	John Barnes	11/10/2012	1:30 PM	UCSC Barn G	Anais Schenk	Dean Fitch; Larry Pageler; Alisa Klaus
					*All attendees were at the meeting in person unless otherwise noted.	

*All attendees were at the meeting in person unless otherwise noted.

Table 20: Third Round of Meetings on Growth Forecast with Jurisdiction Staff

Agency	Contact Name	Meeting Date	Meeting Time	Meeting Location	Meeting Attendees (AMBAG)*	Meeting Attendees (not AMBAG)*
City of Gonzales	Thomas Truszkowski	1/29/2013	9:00 AM	Gonzales City Hall 147 Fourth Street, Gonzales 93926	Anais Schenk; Maura Twomey; Bob Leiter	Thomas Truszkowski; Scott Funk

Agency	Contact Name	Meeting Date	Meeting Time	Meeting Location	Meeting Attendees (AMBAG)*	Meeting Attendees (not AMBAG)*
City of Greenfield	Susan Stanton	1/29/2013	1:30 PM	599 El Camino Real Greenfield	Anais Schenk; Maura Twomey; Bob Leiter	Susan Stanton; Paul Mugan
City of King City	Michael Powers	1/29/2013	11:00 AM	City Hall, 212 South Vanderhurst Avenue, King City 93930	Anais Schenk; Maura Twomey; Bob Leiter	Michael Powers; Doreen Liberto-Blanck; Maricruz Aguilar
City of Salinas	Tara Hullinger	2/11/2013	9:00 AM	City Hall - 200 Lincoln Avenue, Salinas 93901	Anais Schenk; Maura Twomey; Bob Leiter (phone); Heather Adamson (phone)	Tara Hullinger; Alan Stumpf; Jeff Weir
City of Scotts Valley	Corrie Kates	1/14/2013	2:30 PM	City Hall, One Civic Center Drive, Scotts Valley 95066 (front conference room)	Anais Schenk; Maura Twomey; Bob Leiter (phone); Heather Adamson	Corrie Kates; Stephany Aguilar; Taylor Bateman; Bill Wiseman
City of Soledad	Brent Slama	1/30/2013	10:00 AM	248 Main St. Soledad	Anais Schenk; Maura Twomey; Bob Leiter	Brent Slama
County of San Benito	Gary Armstrong	1/28/2013	2:00 PM	2301 Technology Parkway, Hollister 95023	Anais Schenk; Bob Leiter	Gary Armstrong; Byron Turner; Lisa Rheinheimer

*All attendees were at the meeting in person unless otherwise noted.

Table 21: Fourth Round of Meetings on Growth Forecast with Jurisdiction Staff

Agency	Contact Name	Meeting Date	Meeting Time	Meeting Location	Meeting Attendees (AMBAG)*	Meeting Attendees (not AMBAG)*
City of Capitola	Rich Grunow	4/26/2013	9:00 AM	City Hall 420 Capitola Avenue, Capitola 95010	Anais Schenk; Heather Adamson	Rich Grunow
City of Carmel-By-The-Sea	Marc Weiner	4/18/2013	9:00 AM	Carmel City Hall, Monte Verde Street, Carmel 93921	Heather Adamson	Marc Weiner
City of Del Rey Oaks	Daniel Dawson	4/30/2013	9:30 AM	AMBAG Conference Room	Anais Schenk; Maura Twomey	Daniel Dawsom
City of Gonzales	Thomas Truszkowski	4/22/2013	1:30 PM	Gonzales City Hall 147 Fourth Street, Gonzales 93926	Anais Schenk: Maura Twomey; Bob Leiter (phone)	Thomas Truszkowski; Scott Funk
City of Greenfield	Susan Stanton	4/3/2013	10:00 AM	599 El Camino Real Greenfield	Anais Schenk; Heather Adamson	Susan Stanton; Paul Mugan
City of Hollister	Abraham Prado	Scheduling in progress		City Hall - 375 5th Street, Hollister 95023		
City of King City	Michael Powers	4/22/2013	10:30 AM	City Hall, 212 South Vanderhurst Avenue, King City 93930	Anais Schenk: Maura Twomey; Bob Leiter (phone)	Michael Powers

Agency	Contact Name	Meeting Date	Meeting Time	Meeting Location	Meeting Attendees (AMBAG)*	Meeting Attendees (not AMBAG)*
City of Marina	Theresa Szymanis	4/4/2013	11:30 AM	209 Cypress Street, Marina	Anais Schenk	Theresa Szymanis; Justin Meek
City of Monterey	Kim Cole	4/18/2013	11:00 AM	Colton Hall, 570 Pacific Street, Monterey 93940	Heather Adamson	Kim Cole; Chip Rerig
City of Pacific Grove	Lynn Burgess	4/9/2013	9:00 AM	corner of Forest and Laurel, 2nd Floor, PG	Anais Schenk; Heather Adamson	Lynn Burgess
City of Salinas	Tara Hullinger	4/8/2013	11:00 AM	City Hall - 200 Lincoln Avenue, Salinas 93901	Anais Schenk; Maura Twomey	Jeff Weir; Alan Stumpf; Tara Hullinger
City of San Juan Bautista	Roger Grimsley	4/9/2013	1:00 PM	City Hall	Anais Schenk; Maura Twomey	Roger Grimsley
City of Sand City	Steve Matarazzo	2/27/2013	1:00 PM	City Hall - One Sylvan Park, Sand City 93955	Anais Schenk; Bob Leiter; Maura Twomey	Chuck Pooler; Steve Matarazzo
City of Sand City	Steve Matarazzo	4/4/2013	2:30 PM	City Hall - One Sylvan Park, Sand City 93955	Anais Schenk; Bob Leiter (phone)	Chuck Pooler; Steve Matarazzo
City of Santa Cruz & UCSC	Ken Thomas & Dean Fitch	3/28/2013	4:30 PM	809 Center Street, Santa Cruz 95060	Anais Schenk; Bob Leiter; Maura Twomey	Ken Thomas; Ron Marquez; Juliana Rebagliati; Dean Fitch
City of Santa Cruz	Ken Thomas	4/8/2013	4:30 PM	809 Center Street, Santa Cruz 95060	Anais Schenk; Heather Adamson	Ken Thomas; Ron Marquez

Agency	Contact Name	Meeting Date	Meeting Time	Meeting Location	Meeting Attendees (AMBAG)*	Meeting Attendees (not AMBAG)*
City of Scotts Valley	Corrie Kates	4/11/2013	9:00 AM	City Hall, One Civic Center Drive, Scotts Valley 95066 (front conference room)	Anais Schenk; Heather Adamson	Stephany Aguilar; Corrie Kates; Taylor Bateman; Michelle Fodge; Bill Wiseman
City of Seaside	Rick Medina	4/26/2013	11:00 AM	City Hall - 440 Harcourt Avenue, Seaside 93955	Anais Schenk	Rick Medina; Lisa Brinton
City of Soledad	Brent Slama	4/22/2013	3:15 PM	248 Main St. Soledad	Anais Schenk: Maura Twomey; Bob Leiter (phone)	Brent Slama
City of Watsonville	Keith Boyle	4/30/2013	1:15 PM	250 Main Street, Watsonville 95076	Anais Schenk; Maura Twomey	Keith Boyle
County of Monterey	Mike Novo	4/25/2013	1:00 PM	Government Center - 168 W. Alisal Street, Salinas CA 93901	Anais Schenk; Maura Twomey; Bob Leiter	Mike Novo; Martin Carver
County of San Benito	Gary Armstrong	4/9/2013	2:30 PM	2301 Technology Parkway, Hollister 95023	Anais Schenk; Maura Twomey	Gary Armstrong
County of Santa Cruz	Paia Levine	4/8/2013	1:30 PM	701 Ocean Street, Santa Cruz 95060	Anais Schenk; Heather Adamson	Kathleen Previsich; Paia Levine; Frank Barron
City of Marina, Seaside & CSUMB	Anya Spear	3/28/2013	1:00 PM	UC MBEST, 3180 Imjin Road, Marina, CA 93933	Anais Schenk; Bob Leiter; Maura Twomey	Theresa Szymanis; Anya Spear

Agency	Contact Name	Meeting Date	Meeting Time	Meeting Location	Meeting Attendees (AMBAG)*	Meeting Attendees (not AMBAG)*
Monterey County LAFCO	Thomas McCue	4/26/2013	1:30 PM	132 W. Gabilan Street, Salinas	Anais Schenk; Maura Twomey	Kate McKenna; Thomas McCue
Santa Cruz County LAFCO	Patrick McCormick	4/24/2013	3:00 PM	701 Ocean Street, Room 318-D, Santa Cruz 95060	Anais Schenk	Patrick McCormick

*All attendees were at the meeting in person unless otherwise noted.

Table 22: Fifth Round of Meetings on Growth Forecast with Jurisdiction Staff

Agency	Contact Name	Meeting Date	Meeting Time	Meeting Location	Meeting Attendees (AMBAG)*	Meeting Attendees (not AMBAG)*
City of Marina	Theresa Szymanis	6/20/2013	8:00 AM	209 Cypress Street, Marina	Anais Schenk; Heather Adamson	Theresa Szymanis; Justin Meek
City of Seaside	Rick Medina	6/19/2013	1:00 PM	City Hall - 440 Harcourt Avenue, Seaside 93955	Anais Schenk; Maura Twomey	Rick Medina; Lisa Brinton; Tim O'Halloran

*All attendees were at the meeting in person unless otherwise noted.

B Financial Plan

Introduction

Transportation funding has undergone significant transformation from relying on federal and state funds, to increased dependence on local funds over the past 25 years. In general, federal and state formula funding programs are not increasing as fast as the inflationary increases in construction, operating, and maintenance costs and the increases in demand for new facilities. Given this trend, the region has utilized various financing options to implement regionally significant projects.

Revenue Sources

State and federal planning regulations require the development of a Revenue Constrained plan. Such a plan is based on current and reasonably available sources and levels of federal, state, and local transportation revenue, projected out to the year 2035. Chapter 3, the Financial Element, identifies major Federal, State, regional, and local funding sources anticipated being available during the life of the plan. A full list and description of funding sources is included in this appendix.

Federal Revenues

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 highway authorization enacted since 2005, MAP-21 eliminated several funding programs, consolidating them into a few core sources in an effort to create a streamlined, performance-based and multimodal program to address the challenges facing the U.S. transportation system.

Federal revenue sources for the region total just over $1 billion, 14 percent of the region's total forecast revenue through 2035. The region qualifies for federal revenue from almost 20 different programs. However, just two of these programs constitute close to 50 percent of all federal revenue: the Regional Surface Transportation Program and the Urbanized Area Formula Program (Section 5307). The federal revenue sources are detailed below.

Regional Surface Transportation Program

- Total Revenue: $223.5M
- Assumption: RSTP apportionment forecast summary.

Highway Bridge Program (HBP)

- Total Revenue: $102M
- Assumption: Annual average of awarded project list from FFY

12 to FYY 13.

Highway Safety Improvement Program (HSIP)

- Total Revenue: $22.8M
- Assumption: Annual average of the HSIP funds received during the last 5-year period.

FEMA/CALEMA/ER - Emergency Road Repair Funding

- Total Revenue: $61.6M
- Assumption: Average received in recent years for emergency repairs on local roads

Transportation Alternatives Program

- Total Revenue: $6.7M
- Assumption: Based on SB 99/AB 101 (2013), regions projected share based on STIP formulas.

Earmarks

- Total Revenue: $3.5M

  Assumption: Reflects funds previously approved for specific project. No new earmarks assumed.

Metropolitan Planning (FTA 5303)

- Total Revenue: $.23M
- Assumption: Population based formula funds.

FTA 5304

- Total Revenue: $2.4M
- Assumption: Annual average of transit planning funds received during the last five years.

Urbanized Area Formula Program (FTA 5307)

- Total Revenue: $252.5M
- Assumption: Population based transit formula funds for urbanized areas.

Fixed Guideway Capital Investments Grants (FTA 5309)

- Total Revenue: $54.0M
- Assumption: New Starts funding totaling $75 million each for TAMC commuter rail project and Monterey Branch Line project.

Enhanced Mobility of Seniors & Individuals with Disabilities (FTA 5310)

- Total Revenue: $7.0M
- Assumption: Population based formula funds.

Rural Area Formula Grants (FTA 5311)

- Total Revenue: $16.8M
- Assumption: Population based transit formula funds for nonurbanized areas.

Intercity Bus (FTA 5311F)

- Total Revenue: $28.2M
- Assumption: Formula funds for intercity bus.

Safety Authority (FTA 5329)

- Total Revenue: $12.4M
- Assumption: Population based transit formula funds for transit safety and oversight programs. New program under MAP-21.

Bus and Bus Facilities Formula Grants (FTA 5339)

- Total Revenue: $44.0M
- Assumption: Population based transit formula grants for bus and bus facilities.

Very Small Starts

- Total Revenue: $25.0M
- Assumption:

FAA Airport Improvement Program (AIP)

- Total Revenue: $142.8M
- Assumption: Average annual FAA grants from FYY 06 to FFY 11.

State Revenues

State revenue programs total $1.8 billion, or 24 percent of the region's total forecast revenue for the life of the plan. Over 84 percent of this funding comes from two programs, which include a combination of funds from the federal and state highway trust fund accounts (fuel taxes and weight fees) – SHOPP funding and the State Transportation Improvement Program (STIP). The state revenue sources are detailed below.

State Highways Operation and Protection Program (SHOPP)

- Total Revenue: $1,221.4M
- Assumption: Average annual historical funding.

State Transportation Improvement Program

- Total Revenue: $275.4M
- Assumption: Based on statewide estimate and percent for each county (Regional Share); Programmed projects plus $10M average per year (Interregional share).

Proposition 1B – Transportation Bond Program

- Total Revenue: $36.4M
- Assumption: Includes only currently programmed funds included. No future bond funds.

Airport Improvement Program Match

- Total Revenue: $.31M
- Assumption: Average annual of past eight years for each county.

Active Transportation Program

- Total Revenue: $59.4M
- Assumption: 10 percent rural competitive portion using RPTA fund formula and population based for statewide competitive portion.

California Aid to Airports Program

- Total Revenue: $1.13M
- Assumption: $10,000 annually for San Benito and Santa Cruz counties. $30,000 annually for Monterey County.

Freeway Service Patrol

- Total Revenue: $10.1M
- Assumption: Based on funding received in FY 12 for Monterey and Santa Cruz counties.

SAFE

- Total Revenue: $14.7M
- Assumption: Average annual historical funding.

State Transit Assistance

- Total Revenue: $174.0M
- Assumption: Annual average based on FY 13 estimates.

Regional Revenues

The regional revenue sources are detailed below.

AB 2766

- Total Revenue: $42.8M
- Assumption: Annual average based on FY 13 grants.

Local Revenues

At $4.6 billion, local revenues constitute 62 percent of all transportation funding for the Monterey Bay Area in the MTP/SCS. The local revenue sources are detailed below.

City Transportation Sales Taxes (Capitola & Santa Cruz)

- Total Revenue: $38.7M
- Assumption: Based on average designated for transportation projects in annual city budgets

City/County General Fund
- Total Revenue: $211.2M
- Assumption: Based on local jurisdictions calculations.

Local Airport Revenues
- Total Revenue: $80.6M
- Assumption: Based on local jurisdictions budgets.

Miscellaneous Local Revenues
- Total Revenue: $338.4M
- Assumption: Various.

Transportation Development Act
- Total Revenue: $479.1M
- Assumption: Historical annual average and county auditor estimates for FY14

Gas Tax (Highway User Tax)
- Total Revenue: $756.7M
- Assumption: Historical annual average.

Transit Fares and Non-Fare Revenue
- Total Revenue: $652.0M
- Assumption: Based on past and project farebox recovery data from the transit operators.

Developer Fees
- Total Revenue: $613.6M
- Assumption: Based on local jurisdictions calculations.

Local Transportation Sales Tax
- Total Revenue: $1,317.7M
- Assumption: Based on FY13 and FY14 revenues.

Lease Revenues
- Total Revenue: $5.5M
- Assumption: Based on local jurisdictions calculations.

Tolls
- Total Revenue: $149.0M
- Assumption: Based on local jurisdictions calculations.

Proposition 42
- Total Revenue: $.45M
- Assumption: Based on local jurisdictions calculations.

C Project Lists

Introduction

This appendix lists the regionally significant projects included in the 2040 MTP/SCS. Tables are organized by county and project type with corresponding costs that are included in the revenue constrained network. Please refer to the Regional Transportation Planning Agency's Regional Transportation Plan for more detailed information on the list of transportation projects.

Table C-1a: Monterey County Active Transportation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-CAR001-CM	Bike Kiosks	Install bike kiosks at entrance points to the city.	$13
MON-CAR002-CM	Carmel to Pebble Beach Bike/Ped Facility	Construct Class I or Class II bike facility	$86
MON-DRO006-DR	Gen. Jim Morre Bicycle Improvement	Stripe Class II - both sides within City limits.	$10
MON-DRO007-DR	Canyon Del Rey Blvd (Hwy 218) Bicycle Gap	Stripe Class II Bike lanes on East side of Canyon Del Rey Blvd and complete gaps on Westside; Stripe/Restripe bike lanes to the left of right turn lanes.	$500
MON-GON009-GO	Bike Lockers	Install bike lockers.	$1
MON-GON010-GO	Bike Racks	Install Bike Racks.	$1
MON-GON012-GO	River Rd. Bike Lane	Construct Class II bike lane.	$5
MON-GON013-GO	Winery - Alta St. Bike Signs	Sign Class III bike lanes.	$3
MON-GRN001-GR	Apple Avenue Bridge over US 101	Construct new bike/pedestrian bridge parallel to existing overpass.	$1,548
MON-GRN005-GR	Thorne Road Bridge over US 101	Construct new bike/pedestrian bridge parallel to existing overpass.	$1,548
MON-GRN010-GR	12th Street Bike Lanes	Construct Class II bike lanes.	$1
MON-GRN011-GR	13th Street Bike Lanes	Construct Class II bike lanes.	$1
MON-GRN012-GR	2nd Avenue Bike Lanes	Construct Class II bike lanes.	$1
MON-GRN013-GR	3rd Street Bike Lanes	Construct Class II bike lanes.	$1
MON-GRN014-GR	7th Street Bike Lanes	Construct Class III bike lanes.	$1
MON-GRN015-GR	El Camino Real Exit Bike Lane	Construct Class II/III bike lane (Class II preferred).	$1
MON-GRN016-GR	Elm Avenue Bike Lanes	Construct Class II bike lanes.	$1
MON-GRN017-GR	Pine Avenue Bike Lanes	Construct Class II bike lanes.	$1
MON-GRN018-GR	Walnut Avenue Bike Lanes	Construct Class II bike lanes.	$1
MON-KCY008-CK	Airport Road Bike Lane	Sign Class III bike lanes.	$1
MON-KCY009-CK	Metz Road Bike Lane	Stripe Class II, restripe roadway.	$100
MON-KCY038-CK	Vanderhurst Bike Lanes	Install Class II bike lanes.	$10
MON-KCY039-CK	1st Street Bike Lanes	Install Class II bike lanes.	$10
MON-KCY040-CK	Broadway Bike Lanes	Install Class II bike lanes.	$5
MON-KCY045-CK	Division Street Bike Lanes	Install Class II bike lanes.	$25
MON-KCY046-CK	San Antonio Drive Bike Lanes	Install Class II bike lanes.	$25
MON-KCY047-CK	N. Third Street Bike Lanes	Install Class II bike lanes.	$25
MON-KCY048-CK	Fransiscan Way Bike Lanes	Install Class II bike lanes.	$25
MON-MAR030-MA	Crescent Avenue Bike Lanes, Sidewalk	Construct missing sidewalk and bike lanes.	$1,000
MON-MAR039-MA	Downtown Pedestrian Improvements	Sidewalk and crosswalk improvements downtown.	$1,000

Table C-1a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-MAR070-MA	Reservation Road Bike Lanes	Install bike lanes.	$400
MON-MAR082-MA	Sidewalk Improvements	Construct new sidewalks throughout City.	$1,000
MON-MAR087-MA	Beach Road Class II Bike Lanes	Install Class II bike lanes.	$2
MON-MAR088-MA	Bostic Avenue Class II Bike Lanes	Install Class II bike lanes.	$2
MON-MAR091-MA	Cardoza Avenue Class II Bike Lanes	Install Class II bike lanes.	$3
MON-MAR092-MA	Cardoza Avenue Class II Bike Lanes	Install Class II bike lanes.	$3
MON-MAR094-MA	De Forest Road Class II Bike Lanes	Install Class II bike lanes.	$2
MON-MAR101-MA	Lake Drive Class II Bike Lanes	Install Class II bike lanes.	$3
MON-MAR102-MA	Lake Drive Class II Bike Lanes	Install Class II bike lanes.	$3
MON-MAR104-MA	Old Marina Class I Bike Path	Install Class I bike path.	$200
MON-MAR106-MA	Palm Avenue Class II Bike Lanes	Install Class II bike lanes.	$3
MON-MAR108-MA	Remove and Replace Signs, Class III Bikeway	Remove and replace signs at signalized trail intersections; replace with R9-5 signs.	$30
MON-MAR127-MA	Carmel Avenue Bike Lanes	Install class II bike lanes on Carmel Avenue.	$3
MON-MAR157-MA	Reservation Road/Beach Road Improvements	Widen roadway with sidewalk and bike lane improvements.	$1,735
MON-MAR161-MA	Del Monte Boulevard Bike Lanes	Install Class 2 bike lanes and sidewalks.	$262
MON-MRY001-MY	Aguajito Road	Construct new Class I bikeway.	$4,000
MON-MRY002-MY	Del Monte - Washington Improvements	Construct pedestrian bridge over Del Monte and traffic signal improvements.	$4,000
MON-MRY012-MY	Pacific Street Bike/ped Improvements	Bike/ped and traffic flow improvements.	$1,500
MON-MRY013-MY	Recreation Trail Improvements	Widening and rehabilitation of recreation trail.	$10,000
MON-MRY014-MY	Window on the Bay	New bikeway and pedestrian facilities.	$7,000
MON-MRY016-MY	Lower Presidio Pedestrian Connection	New pedestrian connector.	$2,500
MON-MRY020-MY	Monterey City Bikeways Program	Install Class I, Class II and Class III bikeways throughout city.	$10,000
MON-MRY035-MY	Citywide intersection ADA upgrades	Install ADA curb ramps and APS.	$70,000
MON-MRY037-MY	Citywide Wayfinding Sign Program	Provide a comprehensive vehicular, pedestrian and bicycle wayfinding sign program.	$2,000
MON-MYC045-UM	Las Lomas Drive Bicycle Lane & Pedestrian Project	Install Class II bikeway, new sidewalks, curb & gutter, and a new drainage and water system.	$2,673
MON-MYC046-UM	Laureles Grade Road	Install Class II bikeway.	$6,497
MON-MYC053-UM	Metz Road	Install Class III bikeway.	$24
MON-MYC059-UM	Nacimiento-Ferguson Rd	Shoulder widening and geometrics.	$18,500
MON-MYC068-UM	Porter Drive	Install Class III bikeway.	$30
MON-MYC075-UM	River Road Operational Improvements	Widen shoulders and improve geometrics, and install class II bike lanes.	$16,308
MON-MYC115-UM	Corral de Tierra	Install Class II bikeway.	$8,508
MON-MYC118-UM	Williams Road	Install Class III bikeway.	$2
MON-MYC129-UM	Arroyo Seco Road Project (CA PFH 129-1)	Rehab Arroyo Seco Road from Carmel Valley Road to Los Padres National Forest.	$50
MON-MYC135-UM	Bluff Road	Install class III bikeway.	$5
MON-MYC145-UM	Castro Street	Install class III bikeway	$1

Table C-1a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-MYC149-UM	Central Avenue	Install Class III bikeway.	$22
MON-MYC150-UM	Chualar River Road	Install Class III bikeway.	$8
MON-MYC151-UM	Cooper - Nashua Road	Install Class III bikeway.	$15
MON-MYC152-UM	Cooper Road	Install Class III bikeway.	$9
MON-MYC172-UM	Elkhorn Road	Install Class II bikeway.	$194
MON-MYC185-UM	Geil Street	Install Class III bikeway.	$1
MON-MYC186-DR	Gen Jim Moore Path	Install Class I bikeway.	$1,206
MON-MYC193-UM	Harrison Road	Install Class II bikeway.	$82
MON-MYC240-UM	San Benancio Road	Install Class II bikeway.	$5,182
MON-MYC258-UM	Sanctuary Scenic Trail Segment 7	Install class I bikeway	$3,411
MON-MYC291-UM	Reservation Road Bicycle Lanes	Install Class II bicycle Lanes.	$250
MON-PGV004-PG	Lighthouse Avenue Corridor	Decorative Improvements, traffic calming and other mobility improvements from 12th Street to Lobos Street.	$3,601
MON-PGV006-PG	Congress - Walkway	Install walkway.	$300
MON-PGV008-PG	Recreation Trail Improvements	Add landscaping, hardscape, stairs, benches, handrails, crosswalks and signs.	$1,000
MON-PGV011-PG	Recreational Trail Repairs	Repair failing sections of recreational trail.	$1,500
MON-PGV017-PG	Forest Avenue Bike Lanes	Install class II bike lanes on Forest Avenue.	$300
MON-PGV019-PG	Pine Avenue Bike Lanes	Install class II bike lanes on Pine Avenue and Wayfinding signage.	$250
MON-PGV026-PG	David Avenue Bikeway	Install class II/III bikeway and wayfinding signage along David Avenue.	$200
MON-SCY009-SA	Bike Path Lighting	Install lighting on existing Class I path.	$325
MON-SCY010-SA	Class I Bike Path	Complete connection of Monterey Bay Coastal Trail Class I bike path through Sand City.	$400
MON-SCY011-SA	Class I Bike Path along Railroad	Install Class I bike path along railroad ROW.	$1,300
MON-SCY012-SA	Class III Bikeways	Install Class III bikeway signage.	$15
MON-SCY015-SA	Tioga Widening	Widen Tioga at Del Monte; install class II bike lanes and fill sidewalk gaps.	$600
MON-SEA029-SE	Lightfighter Drive Pedestrian Improvements	Sidewalk improvements and landscaping upgrades.	$389
MON-SEA033-SE	Bike Upgrades - Citywide	Install class II bike lanes citywide.	$2,000
MON-SEA036-SE	Fremont Bike Lanes	Install Class II bike lanes on Fremont.	$2,500
MON-SEA037-SE	ADA Transition Plan Upgrades	Roadway and sidewalk improvements.	$32,000
MON-SNS003-SL	ADA Access Ramp Installations	Install ADA access ramp locations throughout city.	$4,800
MON-SNS005-SL	Alisal Road Bikeway	Install bike route along Alisal Road south to city limits.	$6
MON-SNS007-SL	Alvin Drive Bike Lanes	Install bike lanes along Alvin between McKinnon and Natividad.	$172
MON-SNS014-SL	Bridge Street Bike Lanes	Install bike lanes along entire length of Bridge Street.	$419
MON-SNS019-SL	Davis Road Bike Path	Install .57 mile bike path.	$350
MON-SNS046-SL	Reclamation Ditch Bike System	Construct Class 1 bike path along ditch # 1665.	$3,500
MON-SNS057-SL	Williams Road Bike lanes	Install Class II bike lanes along entire length.	$200
MON-SNS063-SL	Boronda Rd Class III Bike lanes	Install Class III bikeway signage.	$8
MON-SNS064-SL	Calle Del Adobe / West Laurel Dr Bike lanes	Install Class II bikelanes.	$156

Table C-1a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-SNS065-SL	Carr Lake Bikeways	Construct Class I and Class II bikeways	$5,000
MON-SNS066-SL	East Alisal St (Future St) and Freedom Parkway (Future St) Bike	Install Class II bike lanes.	$200
MON-SNS071-SL	John Street Class III Bikeway	Install Class III bikeway signage.	$5
MON-SNS072-SL	Los Palos Drive Class III Bike lane	Install Class III bikeway signage.	$1
MON-SNS073-SL	Market Street Class II Bikeway	Install Class II bikeway signage.	$1
MON-SNS075-SL	N Maderia/King St Class III Bikeway	Install Class III bikeway signage.	$1
MON-SNS076-SL	N Maderia / Saint Edwards Ave Class III Bikeway	Install Class III bikeway signage.	$5
MON-SNS077-SL	N Main/Espinosa Rd Class II Bike lane	Install Class II bike lane.	$5,000
MON-SNS078-SL	Natividad Creek Bike Path	Install new bike path.	$680
MON-SNS080-SL	Rossi St Extension Class II Bike lanes	Install Class II bike lanes.	$175
MON-SNS083-SL	Russell Rd Class II Bike lanes	Install Class II bike lanes.	$155
MON-SNS084-SL	San Juan Grade Class II Bike lanes	Install Class II bike lanes.	$230
MON-SNS086-SL	Station Place (ITC Bridge)	Install bike and ped bridge over railroad.	$1,500
MON-SNS087-SL	Trevin Ave Class II bike lanes	Install Class II bike lanes.	$25
MON-SNS089-SL	W Laurel/US 101 Overpass/Adams St Class III Bikeway	Install Class III bikeway signage.	$3
MON-SNS129-SL	Street Sidewalk Repair	Annual sidewalk repairs.	$1,050
MON-SNS131-SL	Downtown Vibrancy Plan	Circulation/parking/pedestrian improvements in Downtown.	$375
MON-SNS137-SL	East Alisal Street Vibrancy Plan	Circulation/parking/pedestrian improvements on East Alisal Street.	$2,500
MON-SNS138-SL	Bardin Road ATP	Circulation, SR2S and roundabout.	$5,430
MON-SNS139-SL	Alvin Drive	Circulation, SR2S, traffic signals and cycle tracks.	$3,259
MON-SNS140-SL	Linwood Drive	SR2S and bike lanes.	$700
MON-SNS141-SL	Laurel Drive Sidewalks	Sidewalk lighting.	$4,000
MON-SNS162-SL	Laurel Drive Trail	New bike and ped trail connections between Acosta Plaza and soccer fields.	$3,500
MON-SNS163-SL	Sidewalk Repairs	Sidewalk and tree repairs at 6000 locations.	$45,000
MON-SNS164-SL	Rossi - Rico Bike Trail	Bike trail repairs along Rossi Rico Park.	$400
MON-SOL006-SO	Bicycle Racks and Lockers	Install bicycle racks and lockers.	$35
MON-SOL043-SO	Pedestrian Lighting	Construct pedestrian lighting along various City streets.	$900
MON-SOL044-SO	Pinnacles Bike Route	Construct a class I bike path/class II bike lanes along Metz Rd to encourage bicycle tourism.	$500
MON-TAMC006-TAMC	Monterey County Bicycle and Pedestrian Improvement Projects	Various bicycle and pedestrian improvement projects throughout Monterey County.	$12,741
MON-TAMC010-TAMC	Fort Ord Regional Trail and Greenway (FORTAG)	Approximately 30 mile bike and pedestrian access path through the former Fort Ord.	$40,000
MON-TAMC011-TAMC	Safe Routes to Schools	Countywide Safe Routes to Schools program.	$20,000

Table C-1b: Monterey County Highway Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-CT011-CT	SR 68 - Commuter Improvements	Widen existing roadway to 4-lanes between existing 4 lane segment at Toro Park and Corral de Tierra Road (MON-68-4.0/15.0).	$25,555
MON-CT015-CT	SR 1 - Seaside - Sand City	Interchange and related local road improvements in the vicinity of Canyon Del Rey and Fremont Avenues.	$22,900
MON-CT017-CT	SR 68 - (Holman Hwy - access to Community Hospital)	Widen Holman Highway SR 68 from CHOMP to SR 1 to 4 lanes and make operational improvements at the SR 68/SR 1 EA interchange. (EA 05-44800) PM 3.8/L4.3.	$26,620
MON-CT022-CT	SR 156 - Corridor Widening Project	Construct new 4 lane highway south of existing alignment, and convert existing highway to frontage road, and construct new at US 156 and 101.	$304,000
MON-CT030-SL	US 101 - Salinas Corridor	Widen US 101 to 6 lanes within the existing right of way at locations where feasible.	$52,000
MON-CT031-CT	US 101 - South County Frontage Roads	Construct Frontage Roads from Harris Road to Chualar, then to Soledad. (EA 05-OH330)	$112,000
MON-CT036-CT	SR 156 - Castroville Blvd Interchange	Construction new interchange for SR 156 and Catroville Boulevard/Blackie Road.	$30,000
MON-CT044-SL	US 101 - Harris Road Interchange	Construct new Interchange on US 101 at Harris Road (PM 83.71).	$57,662
MON-CT045-MA	SR 1 - Monterey Rd Interchange	Construct new interchange. (PM EB R80.75/R83.27).	$3,700
MON-GON015-GO	US 101 Gloria Road Interchange	US 101/Gloria Road Interchange Improvements .(EA 05-OP930) PM 68.4/70.4.	$39,500
MON-GRN008-GR	US 101 - Walnut Avenue Interchange	Relocate and replace existing US 101/Walnut Avenue Interchange and widen to six lanes. (EA 05-OP160) PM 53.4/54.3.	$28,800
MON-KCY006-CK	US 101 - 1st Street Interchange (Lonoak Street I/C)	Extend San Antonio over railroad tracks from Lonoak to US 101/First Street Interchange. (PM R39.77)	$32,580
MON-MAR134-MA	SR 1 & Imjin Bridge	Restripe bridge for two WB lanes and one EB lane.	$26
MON-MAR135-MA	SR 1 & Imjin Bridge	Convert SB off-ramp.	$2,000
MON-MAR136-MA	SR 1 & Imjin Bridge	Widen NB off-ramp to two lanes.	$590
MON-MAR137-MA	SR 1 & Imjin Bridge	Widen SB on-ramp to two lanes.	$500
MON-MAR155-MA	Imjin Parkway at SR 1	Construct new interchange (Caltrans Regional TIP).	$40,000
MON-MAR156-MA	Del Monte Boulevard at SR 1	Construct new interchange (Caltrans Regional TIP).	$12,375
MON-MRY028-MY	SR 68 Roundabout at CHOMP	Construct roundabout at Community Hospital of Monterey Peninsula on SR 68.	$12,000
MON-SOL002-SO	US 101 - North Interchange	Install new interchange north of US 101 and Front Street.	$17,500
MON-SOL003-SO	US 101 - South Interchange	Install new interchange south of US 101 and Front Street.	$21,760
MON-SOL014-SO	SR 146 Bypass	Construct to 4 lanes from SR 146 (Metz Road) to Nestles Road. Install Class II bike facility.	$21,000

Table C-1c: Monterey County Highway Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-CT040-CT	State Highway Operations and Protection Program (SHOPP)	Unspecified SHOPP projects / 3 Categories	$615,364
MON-MAR084-MA	SR 1 - Reservation Road	Install new traffic signals PM BR86.48/EB R86.51.	$2,250
MON-MYC153-UM	SR 68 - Safety and Traffic Flow - Salinas to Monterey	Construct safety, congestion relief and wildlife connectiviity projects along SR 68 from Blanco Road to SR 1.	$52,000
MON-PGV010-PG	SR 68 - Bishop to Sunset	Mobility Improvements including sidewalks, lighting, landscaping and roadways overlay.	$10,502
MON-SNS122-SL	US 101/Sanborn/Elvee	Highway off-ramp/Intersection Improvements.	$3,100
MON-SNS123-SL	US 101/Boronda Improvements	Auxillary lanes/ramp improvements.	$960
MON-SNS126-SL	US 101/Kern Street Traffic Signal	Traffic signal or roundabout at US 101/Kern.	$500
MON-SOL046-SO	Intersection Improvements at SR 146 (Metz Rd) and SR 146 (East St)	Construct intersection, install roundabout.	$900
MON-TAMC008-TAMC	Holman Highway 68 Safety & Traffic Flow	Make safety and operational improvements to Holman Highway in Pacific Grove; includes bicycle, pedestrian and traffic safety and ADA improvements.	$17,300

Table C-1d: Monterey County Local Streets and Road Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-FRA003-MA	8th Street	Upgrade/construct 2-lane arterial; Install Class II Bike Lanes (FORA CIP FO5).	$3,946
MON-MAR001-MA	Marina - Salinas Corridor	Widen Davis Road to 4 lanes from Blanco Road to Reservation Road; construct new 4 lane bridge over the Salinas River; widen Reservation Road to 4 lanes from Davis Road to existing 4 lane section adjacent to East Garrison at Intergarrison Road; widen Imjin Pkwy to 4 lanes from Reservation Road to Imjin Road, construct new Imjin Parkway interchange at SR 1. Include accomodations for bicyclists, pedestrians and transit; consider high quality transit service along corridor.	$71,500
MON-MRY005-MY	Del Monte Corridor	Add eastbound lane from El Estero to Sloat Ave. Intersection improvements to Sloat Ave and Aguajito Ave including addition of left turn lanes and signal operations improvements.	$30,000
MON-SNS011-SL	Boronda - Main Improvements	Construct interchange improvements and widen road by 12' for 200'.	$462
MON-SNS012-SL	Boronda Road Widening	Widen to 6 lanes from San Juan Grade Road to Williams Road; install Class II bike lanes and fill sidewalk gaps.	$15,671
MON-SNS029-SL	John Street - US 101	Widen to 4 lanes between Work to Wood Streets with grade separated overpass.	$8,513
MON-SNS035-SL	Lincoln Avenue Widening	Widen Lincoln to 4 lanes between West Market and Gavilan.	$1,117
MON-SNS037-SL	Main Street (North) Widening	Widen to 6 lanes from Market to Casentini including bicycle and pedestrian improvements.	$5,060
MON-SNS044-SL	Natividad Road Widening	Widen from 2 to 4 lanes.	$4,296
MON-SNS048-SL	Romie Lane Widening	Widen from 2 lanes to 4 lanes between S. Main to East of California Street.	$1,218
MON-SNS050-SL	Russell Rd Widening	Widen street from US 101 to San Juan Grade Road.	$3,078
MON-SNS059-SL	Williams Road Widening	Widen from 2 to 4 lanes.	$5,500
MON-SNS090-SL	Russell Road Extension	Extend 4 lane arterial.	$17,557
MON-SNS092-SL	San Juan - Natividad Collector	Construct an east - west 2 lane collector roadway.	$3,635
MON-SNS093-SL	Independence Boulevard Extension	Extend as 2 lane collector.	$1,374
MON-SNS094-SL	Hemingway Drive Extension	Construct 2 lane road.	$2,871
MON-SNS095-SL	Constitution Boulevard Extension	Construct 4 lane street.	$9,556
MON-SNS096-SL	Sanborn Road Extension	Construct 4 lane arterial.	$6,895
MON-SNS097-SL	Williams Russell Collector	Construct new north - south connection.	$8,115
MON-SNS098-SL	Alisal Street Extension	Extend as 2 lane collector street with bike lanes.	$5,119
MON-SNS099-SL	Moffett Street Extension	Extend as 4 lane collector.	$3,336
MON-SNS100-SL	Rossi Street Widening	Widen to 4 lanes.	$1,231
MON-SNS101-SL	Bernal Drive Extension	Extend as 4 lane arterial.	$6,976
MON-SNS102-SL	Constitution Boulevard Extension	Construct new 2 lane street.	$3,403
MON-SNS103-SL	Williams Road Widening	Widen from 3 to 4 lanes.	$2,975
MON-SNS104-SL	Alisal Street Widening	Widen from 2 to 4 lanes.	$2,908
MON-SNS108-SL	Laurel Drive Widening	Widen to 6 lanes and add left turn channelization west of Constitution.	$2,161
MON-SNS121-SL	McKinnon Street Extension	Extend 2 lane collector.	$3,710

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-CAR005-CM	Rio Road Parking Facility	Construct Rio Road off site parking facility with jitney pick up station.	$20
MON-CAR007-CM	San Carlos Streetscaping	Install streetscaping.	$155
MON-CAR009-CM	San Carlos Rehabilitation	San Carlos St. between Ocean Ave. and 6th Ave. in Carmel-by-the-Sea. Removing concrete and repaving and rehab/improvements to: curb and gutter, replace storm drain lines, and sidewalk	$100
MON-CAR010-CM	Mission Street Rehabilitation	Rehabilitate Mission Street including repaving street and curb, gutter and sidewalk improvements.	$338
MON-CAR011-CM	5th Ave Rehabilitation	Repave and sidewalk repairs	$110
MON-DRO002-DR	Carlton Drive Resurfacing	Resurface Carlton Drive	$99
MON-DRO003-DR	Work Avenue Resurfacing	Resurface street	$55
MON-FRA004-MA	Patton Parkway (Abrams Road)	Construct a new 2-lane arterial and Class II bike lanes (FORA CIP FO2).	$732
MON-FRA010-MA	Crescent Court	Extend existing Crescent Court southerly to join proposed Abrams Drive on the former Fort Ord (FORA CIP off-site 8).	$875
MON-FRA018-SE	Giggling Road	Upgrade/construct new 4-lane arterial (FORA CIP FO7)	$5,914
MON-FRA023-MA	Salinas Avenue	Construct new 2 lane arterial (FORA CIP FO11).	$2,930
MON-FRA025-MA	2nd Avenue Phase 2	Construct new arterial road and Class II bike lanes (FORA CIP FO8).	$2,000
MON-FRA026-MA	2nd Avenue Phase 3	Construct new arterial road and Class II bike lanes (FORA CIP FO8).	$2,000
MON-FRA027-DR	So. Boundary Rd. Improvements	Reconstruct street, add sidewalks, bike lanes, street lights etc.	$4,162
MON-GON001-GO	5th Street - Fano Road	Install signal improvements.	$270
MON-GON005-GO	Fano Road	Widen from 4 to 6 lanes and install Class II bike lanes.	$4,250
MON-GON007-GO	La Gloria Rd Widening	Widen road approximately one-half mile.	$4,228
MON-GON011-GO	Park and Ride Lot	Construct Park and Ride Lot.	$100
MON-GON014-GO	US 101/5th Street Operations	Operational improvement at 5th St. ramps for US 101 (#ST-01); install roundabouts.	$7,500
MON-GRN003B-GR	Oak Road Bridge over US 101	Remove and replace existing Oak Avenue bridge.	$30,000
MON-GRN003-GR	Oak Road Bridge over US 101	Widen bridge for dual left turn lanes.	$2,000
MON-GRN006-GR	Thorne Road roadway realignment at US 101	Realign Thorn Road and add traffic signal.	$5,300
MON-GRN007B-GR	Traffic Signal Installations	Install traffic signals	$350
MON-GRN019-GR	Oak Avenue Pavement Overlay	Overlay Street.	$276
MON-GRN021-GR	Citywide Street Rehabilitation	Repair, overlay, seal coat all City Streets.	$3,000
MON-GRN022B-GR	Pine Avenue Overcrossing at US 101	Construct new bridge over US 101 to improve E-W traffic flow.	$4,000
MON-KCY003-CK	Bitterwater Road	Reconstruct road.	$1,500
MON-KCY017-CK	Bypass (Lon Oak connection)	Road and ped/bike construction.	$2,270
MON-KCY043-CK	Roundabout at US 101/Broadway Street/San Antonio Drive	Install Roundabout at US 101/Broadway Street/San Antonio Drive.	$5,000
MON-KCY044-CK	Lonoak Railroad Crossing improvements	Railroad crossing improvements.	$300
MON-KCY049-CK	Vivian Street/Haven Street /Carlson Street Repaving	Vivian Street/Haven Street /Carlson Street Repaving.	$500
MON-MAR002-MA	Imjin Parkway - 3rd Avenue Signal or Roundabout	Install new traffic signal or roundabout.	$1,200
MON-MAR005-MA	2nd Avenue - 3rd Street	Install new traffic signal or roundabout.	$550
MON-MAR006-MA	2nd Avenue - 8th Street	Install new traffic signal or roundabout.	$250
MON-MAR007-MA	2nd Avenue - 10th Street	Install new traffic signal or roundabout.	$250
MON-MAR009-MA	Abdy Way; Cardoza to Healy	Construct new sidewalk and pavement	$200
MON-MAR013-MA	Beach Road - Del Monte Boulevard	Construct new roundabout.	$2,000
MON-MAR018-MA	California Avenue - Reservation Road	Install new traffic signal.	$250
MON-MAR020-MA	California Avenue Rehab	Construct new sidewalk and pavement.	$600
MON-MAR022-MA	California Avenue - Reindollar	Install new traffic signal or roundabout.	$250
MON-MAR025-MA	California Extension - 8th Avenue	Install new traffic signal or roundabout.	$1,100

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-MAR026-MA	Cardoza Avenue	Construct new sidewalk and pavement.	$700
MON-MAR027-MA	Carmel Avenue Rehab	Construct new sidewalk and pavement.	$1,000
MON-MAR032-MA	De Forest Road	Construct new sidewalk and pavement.	$500
MON-MAR035-MA	Del Monte Boulevard - Marina Green Drive	Install new traffic signal or roundabout.	$1,200
MON-MAR037-MA	Del Monte Boulevard Sidewalks	Construct new sidewalk and pavement.	$300
MON-MAR040-MA	Eucalyptus Street - Reservation to Peninsula	Construct new sidewalk and pavement.	$600
MON-MAR042-MA	Healy Avenue	Construct new sidewalk and pavement.	$600
MON-MAR049-MA	Lake Drive Rehab	Construct new sidewalk and pavement.	$400
MON-MAR050-MA	Lake Drive - Reservation Road	Install new signal.	$160
MON-MAR051-MA	Marina Drive Rehab	Construct new sidewalk and pavement.	$600
MON-MAR052-MA	Marina Drive Rehab	Construct new sidewalk and pavement.	$1,860
MON-MAR054-MA	Michael Drive New Connection	Construct new street.	$1,860
MON-MAR057-MA	Palm Avenue Rehab	Construct new sidewalk and pavement.	$300
MON-MAR058-MA	Palm Avenue at TAMC RR	Widen/construct new gates.	$688
MON-MAR062-MA	Reindollar Avenue Rehab	Construct new sidewalk and pavement.	$936
MON-MAR077-MA	Salinas Avenue Rehab	Construct new sidewalk and pavement.	$1,915
MON-MAR079-MA	Salinas Avenue - Reservation Rd New Signal	Install new signal.	$1,120
MON-MAR080-MA	Seaside Circle - Reservation to East End	Construct new sidewalk and pavement.	$500
MON-MAR081-MA	Seaside Court	Construct new sidewalk and pavement.	$500
MON-MAR116-MA	California Avenue	Reconstruct roadway.	$1,980
MON-MAR118-MA	Del Monte Boulevard	Roadway improvements, sidewalk and utilities.	$2,347
MON-MAR131-MA	Imjin Road & 8th Street	Construct new roundabout.	$1,024
MON-MAR132-MA	Imjin Parkway & 4th Avenue	Signalize and widen intersection.	$500
MON-MAR133-MA	California & 8th Street	Construct new roundabout.	$1,100
MON-MAR138-MA	Imjin Parkway & California Avenue	Lane configuration improvements or roundabout.	$2,500
MON-MAR139-MA	Imjin Parkway & Marina Heights Drive	Signalize or roundabout.	$870
MON-MAR140-MA	4th Avenue & Intergarrison	Signalize or roundabout.	$675
MON-MAR141-MA	Imjin Parkway & Reservation Road	Lane configuration improvements.	$1,250
MON-MAR142-MA	Imjin Parkway & 2nd Avenue	Lane configuration improvements.	$4,307
MON-MAR143-MA	Reservation Road & Del Monte Boulevard	Lane configuration improvements.	$106
MON-MAR145-MA	California Avenue & Marina Heights Drive	Signalize or roundabout.	$870
MON-MAR146-MA	General Jim Moore & 1st Street	Signalize or roundabout.	$870
MON-MAR147-MA	Imjin Parkway & Preston Drive	Construct new roundabout.	$870
MON-MAR148-MA	Melanie Road & Vista Del Camino Road	Regrade intersection.	$200
MON-MAR150-MA	2nd Ave Extension	Construct new roadway.	$9,900
MON-MAR151-MA	Del Monte Blvd, Sta 42+00 to 48+00	Pavement, sidewalk and drainage improvements.	$1,856
MON-MAR152-MA	8th Street Reconstruction	Reconstruct roadway.	$7,000
MON-MAR153-MA	Patton (Abrams) Pkwy Extension	Construct new roadway.	$1,150
MON-MAR154-MA	Imjin Parkway Widening Project	Measure X project to widen Imjin Parkway to 4 lanes from Reservation Road to Imjin Road.	$20,000
MON-MAR158-MA	Sign Retroreflectivity Program	Citywide sign upgrade.	$91
MON-MAR159-MA	Pavement Management Program	Citywide roadway maintenance.	$17,052
MON-MAR164-MA	Reservation Road Traffic Calming	Install traffic calming measures.	$2,704
MON-MAR166-MA	2nd Avenue Improvements	Restripe to remove Class 2 bike lanes for 4-lane roadway.	$92
MON-MAR167-MA	Median Landscape Improvements	Citywide landscaping improvements to roadway medians.	$250
MON-MAR168-MA	Marina Drive Drainage Improvements	Improve on existing drainage system, regrade roadway.	$150
MON-MRY003-MY	Del Monte/Aguajito and Del Monte/El Estero	Signal Improvements.	$900
MON-MRY006-MY	Fremont - Aguajito Intersection Improvements	Widen north leg for left turn pocket; modify signal to 8-phase operations; provide median landscaping.	$800

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-MRY007-MY	North Fremont Intersection Improvements and Class II Bikeway	Reconstruct intersections, realign roadways, install signals and install Class II bikeway.	$18,200
MON-MRY008-MY	Lighthouse Corridor Improvements Phase II	Improve traffic circulation on Lighthouse Avenue and Foam Street.	$3,000
MON-MRY009-MY	Mar Vista and Soledad Storm Drains	Extend storm drains to Mar Vista and Soledad.	$774
MON-MRY011-MY	Munras Abrego - Webster Improvements	Widen roadway from 36' to 48' curb to curb with improvements on both sides of road.	$650
MON-MRY017-MY	Munras - Soledad intersection Improvements	Capacity and operational improvements and Class II bikeway.	$900
MON-MRY018-MY	York Road Improvements	Road rehabilitation, widening, bikelanes and signal installations and modification.	$6,000
MON-MRY019-MY	Sloat - Mark Thomas Intersection Improvements	New left turn lane and intersection improvements; install bike detection for left-turning bicyclists.	$700
MON-MRY021-MY	Citywide Street Overlay (Phases 1-13)	Street overlay program phases 1-13.	$20,000
MON-MRY022-MY	Citywide Street Reconstruction (Phases 1 and 2)	Street reconstruction (Phases 1 and 2).	$10,000
MON-MRY023-MY	Citywide Street Panel Replacement (Phases 1 and 2)	Street panel replacement (Phases 1 and 2).	$10,000
MON-MRY024-MY	North Freemont Storm Drain Improvements	Storm drain improvements.	$2,500
MON-MRY033-MY	Munras/Eldorado Roundabout	Construct Roundabout with bike improvements.	$5,000
MON-MRY034-MY	Citywide Adaptive Signal System	Install adaptive signal control on all arterial streets.	$2,000
MON-MRY036-MY	Citywide Traffic Signal Safety and Operations	Citywide traffic signal safety and operations.	$30,000
MON-MYC043-UM	Jolon Rd Overlay Safety Improvements	Shoulder widening, & Geometric Improvements, and installation of 39.2 miles of Class II bikeway.	$58,000
MON-MYC133-UM	Blackie Road Safety Improvements - Phase I	Roadway safety improvements.	$1,321
MON-MYC134-UM	Blackie Road Safety Improvements - Phase II	Roadway safety improvements.	$1,455
MON-MYC136-UM	Bridge Barrier Rail Replacement	Replace and rehabilitation of various bridges countywide.	$500
MON-MYC147-UM	Castroville Improvements/Blackie Road	Construct new road from Castroville Boulevard to Blackie Road.	$18,000
MON-MYC154-UM	Crazy Horse Canyon Road Improvements	Add passing lanes and construct Class II bike lanes from San Juan Grade Rd to US 101.	$27,900
MON-MYC156-UM	CVMP - Laureles Grade Paved Turnouts and Signs	Paved turnouts and signs.	$1,538
MON-MYC157-UM	CVMP - Carmel Valley Road between Laureles Grade and Ford Shoulder Widening	Shoulder widening.	$2,308
MON-MYC159-UM	CVMP - Carmel Valley Road Passing Lanes (Front of September Ranch)	Passing lanes in front of September Ranch.	$5,734
MON-MYC161-UM	CVMP - Grade Separation at Laurels Grade/Carmel Valley Road	Grade separation.	$13,538
MON-MYC162-UM	CVMP - Laureles Grade at Carmel Valley Road Roundabout, Signalization, or Widening	Install signal or widen (prior to grade separation).	$7,890
MON-MYC163-UM	CVMP - Laureles Grade Climbing Lane	Climbing lanes.	$3,077
MON-MYC164-UM	CVMP - Laureles Grade Shoulder Addition	Shoulder improvements.	$5,105
MON-MYC165-UM	CVMP - Left-Turn Channelization - W of Ford Drive	Left turn channelization.	$2,000
MON-MYC166-UM	CVMP - Minor Interchanges	Minor interchanges.	$5,332
MON-MYC167-UM	CVMP - Sight Distance Improvements at Dorris	Sight distance improvements.	$2,377
MON-MYC168-UM	Davis Road	Install Class II bikeway.	$3,193

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-MYC181-UM	G12 San Miguel Canyon	Operational and capacity improvements, including road widening, turning lanes, signalization and intersection improvements, and bicycle and pedestrian facilities.	$55,000
MON-MYC188-UM	Gonzales River Road Bridge Superstructure Replace	Bridge superstructure replacement.	$7,584
MON-MYC191-UM	Harris Road Overlay	Overlay roadway.	$3,000
MON-MYC200-UM	Johnson Canyon Land - Phase I	Overlay existing roadways: Gloria, Iverson and Johnson Canyon Roads.	$3,000
MON-MYC202-UM	Johnson Road Bridge	Bridge replacement.	$1,520
MON-MYC217-UM	Nacimiento Lake Drive Bridge No. 449	Replace current structure with two-lane approx. 300' long by approx. 28' wide bridge with associated retaining walls, approach road and right-of-way.	$5,047
MON-MYC225-UM	Peach Tree Road Bridge #412 Replacement	Replace current structure with two-lane approx. 75' long by approx. 16' wide bridge with associated approach work and right-of-way.	$2,595
MON-MYC227-UM	Pine Canyon Road Improvements	Add turn lanes and Class II bike lanes on Pine Canyon Road from Pine Meadow Drive to Jolon Road (County Road G14). Construct traffic signal and perform intersection improvements on Pine Canyon Road at Jolon Road.	$11,000
MON-MYC232-UM	Reservation Road Slip Out	Backfilling slopes (keyed in/stepped), drainage systems, pavement reconstruct, guardrail, and erosion control/planting.	$620
MON-MYC234-UM	Robinson Canyon Road Slip Out	Backfilling slopes (keyed in/stepped), drainage systems, pavement reconstruct, and erosion control/planting.	$815
MON-MYC235-UM	Rogge Road Improvements	Construct traffic signal at the intersection of Rogge Road and San Juan Grade Road.	$900
MON-MYC238-UM	Salinas Road Improvements	Widen to four Lanes between future Hwy 1 and Salinas Road interchange and existing four-lane section. Widen existing three-lane section of Salinas Road from Werner Road to Elkhorn Road to four lanes. Add Class II bike lanes on Salinas Road from SR 1 to Elkhorn Road. Install traffic signal and construct Intersection Improvements at Salinas Road/Werner Road. Construct traffic signal on Elkhorn Road at Salinas Road. Re-align Salinas Road and Werner Road to intersect Elkhorn Road at a single location with a traffic signal.	$15,200
MON-MYC247-UM	San Miguel Canyon Road at Castroville Boulevard	Signalization of the intersection, roadway widening, and striping improvements.	$2,652
MON-MYC260-UM	Scenic Road Protection	Protect Scenic Road from erosion due to wind & surf, and Carmel River.	$92
MON-MYC266-UM	Street Rehabilitation/Overlay	Overlay roadways.	$54,689
MON-MYC289-UM	Countywide Local Street and Road Maintenance	Unspecified countywide local street and road costs for operations and maintenance.	$0
MON-MYC290-UM	Countywide Local Bridge Repair and Maintenance	Unspecified countywide local bridge repair and maintenance costs.	$44,520
MON-PGV001-PG	Congress - Sunset Roundabout	Construct a roundabout at Congress and Sunset including ROW, landscaping, curb, and paving; make accomodations for bicyclists and pedestrians.	$2,500
MON-PGV005-PG	Lighthouse Avenue Resurfacing	Resurface Street, drainage improvements.	$700
MON-PGV012-PG	Ocean View Boulevard Resurfacing	Repair and resurface street.	$3,840
MON-PGV013-PG	Pine Avenue Resurfacing	Repair and resurface street.	$5,900
MON-PGV014-PG	Miscellaneous Street Improvements - Various Streets	Pavement repair, cross gutter, curb and gutter, sidewalks, traffic striping and signs.	$400
MON-PGV015-PG	Miscellaneous Drainage Improvements - Various Streets	Storm drain repair/improvements, catch basins, manholes and cross gutters.	$400
MON-SCY003-SA	California - Playa Signal	Install new traffic signal with bike and ped accommodations.	$225
MON-SCY005-SA	Sand City Rehab in Old Town Area	Install street lighting, reconstruct streets in Old Town area; design shared streets (Woonerfs).	$3,500

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-SCY013-SA	California Avenue Pavement Overlay	Overlay street; install class II/class III markings.	$156
MON-SCY014-SA	Contra Costra Realignment	Realign Contra Costa to at Del Monte.	$500
MON-SEA005-SE	Fremont - Broadway	Roadway improvements, utility relocation, ADA ramps, landscaping and signal upgrade.	$387
MON-SEA022-SE	2nd Avenue/Seaside Development Parcel	New signal and channelization.	$200
MON-SEA023-SE	2nd Avenue/1st Street Improvements	New signal and channelization.	$200
MON-SEA026-SE	Del Monte Boulevard Improvements	Implement channelization improvements at specific intersections and Del Monte rehab.	$5,000
MON-SEA027-SE	Fremont Boulevard Signal Installation	Install signal interconnect conduit.	$500
MON-SEA028-SE	West Broadway Avenue Corridor Improvements	Corridor rehabilitation including intersection improvements, bikeways and road rehab.	$12,400
MON-SEA030-SE	Update and Implement Pavement Management System - Street Maintenance	Roadway improvements to include total reconstruction and overlay.	$9,000
MON-SEA035-SE	Lightfighter & General Jim Moore Intersection Improvements	Install roundabout.	$2,500
MON-SNS006-SL	US 101 - Alvin Drive Overpass/Underpass and Bypass	Construct overpass/underpass and 4 lane street structure.	$12,325
MON-SNS008-SL	Bernal Drive East Improvements	Widen road, construct sidewalk and retaining wall on north side of road; between N. Main and Roasarita Drive.	$1,647
MON-SNS022-SL	East Salinas	Reconstruct various streets in East Salinas.	$5,740
MON-SNS024-SL	Elvee Drive	Construct 44' wide culvert and extend two lanes between Work to Elvee.	$3,600
MON-SNS033-SL	Laurel Drive Intersection Improvements	Intersection Improvements.	$583
MON-SNS040-SL	Martella and Preston Streets	Reconstruction of deteriorated streets.	$650
MON-SNS041-SL	Maryal Drive Reconstruction	Widen roadway behind Rodeo Grounds (from 36' to 40').	$1,260
MON-SNS042-SL	Natividad - Laurel Intersection	Widen intersection to add one right turn lane; leave space for through bike lane to left of right turn lane.	$575
MON-SNS058-SL	Williams Road Median Island	Construct median from E. Alisal to Bardin.	$982
MON-SNS106-SL	Alisal Street Improvements	Add left turn channelizations at major intersections.	$33
MON-SNS107-SL	John Street Improvements	Add left turn channelization and eliminate on street parking.	$766
MON-SNS109-SL	San Juan Grade - Russell Road Intersection Improvements	Install signal.	$371
MON-SNS111-SL	Boronda Rd - Natividad Rd intersection improvements	Install signal.	$542
MON-SNS112-SL	Boronda Road - East Constitution Intersection Improvements	Install signal.	$546
MON-SNS113-SL	Boronda Road - Sanborn Road Intersection Improvements	Install signal.	$501
MON-SNS114-SL	Boronda Road - Williams Road Intersection Improvements	Install signal.	$490
MON-SNS115-SL	Natividad Road - Russell Road Intersection Improvements	Install signal.	$440
MON-SNS116-SL	Sanborn Road - Alisal Street Intersection Improvements	Install signal.	$218
MON-SNS117-SL	Independence Boulevard - Boronda Road Intersection Improvements	Install signal.	$534
MON-SNS125-SL	Bardin/Schonberg Roundabout	Roundabout at Bardin Road/Schonberg Parkway.	$500
MON-SNS128-SL	Front Street/Sherwood/Rossi Traffic Signal Coordination	Signal coordination on Front Street/Sherwood Drive.	$450
MON-SNS142-SL	North Main Street Intersection Improvements	Traffic signal/intersection control.	$586
MON-SNS143-SL	Laurel Drive/Street Edwards Intersection Improvements	Traffic signal installation, lighting and sidewalks.	$600

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-SNS144-SL	Boronda Road Roundabouts	Roundabouts at 4 intersections	$10,000
MON-SNS145-SL	W Alisal Complete Streets	Circulation, bike lanes, ped and transit.	$2,959
MON-SNS146-SL	Lincoln Avenue Complete Streets	Circulation, bike lanes and bus facilities.	$1,570
MON-SNS147-SL	Sherwood Dr/Sherwood Place Intersection	Traffic signal installation.	$400
MON-SNS148-SL	Market Street/Merced	Traffic signal installation.	$400
MON-SNS149-SL	Sanborn Road - Mayfair Intersection	Traffic signal installation.	$400
MON-SNS150-SL	Alisal Street - Capitol Intersection Improvements	Traffic signal installation.	$400
MON-SNS151-SL	Alvin Drrive - Linwood Intersection Improvements	Traffic signal installation.	$400
MON-SNS152-SL	Blanco Rd/Padre Drive Intersection Improvements	Traffic signal installation.	$400
MON-SNS153-SL	Williams/Garner Intersection Improvements	Traffic signal installation.	$400
MON-SNS154-SL	Boronda/Sanborn Intersection Improvements	Traffic signal installation.	$400
MON-SNS155-SL	Constitution Blvd/Las Casitas Intersection Improvements	Traffic signal installation.	$400
MON-SNS156-SL	Blanco Rd/San Vincente Intersection Improvements	Traffic signal installation.	$400
MON-SNS157-SL	Davis Road/Chevron Station Intersection Improvements	Traffic signal installation.	$400
MON-SNS158-SL	Market/Towt Intersection Improvements	Traffic signal installation.	$400
MON-SNS159-SL	Market/Eucalyptus Intersection Improvements	Traffic signal installation, lighting and sidewalks.	$400
MON-SNS160-SL	Traffic Calming Projects	Local traffic calming projects.	$2,500
MON-SNS161-SL	Natividad/Gabilan Creek Trail	Bike/Ped trail repairs.	$1,100
MON-SNS165-SL	Work Street	Street repairs.	$1,000
MON-SNS166-SL	Wiren Street	Street repairs.	$750
MON-SNS167-SL	W Rossi Street	Overlay between N Main and Davis Road.	$1,250
MON-SNS168-SL	W Laurel Drive	Overlay between N Main and Adams Street.	$1,000
MON-SNS169-SL	W Lake Street	Overlay between Rico Street to N Main Street.	$500
MON-SNS170-SL	Homestead Avenue	Overlay between Alisal and Wilson.	$500
MON-SNS173-SL	Anderson Avenue	Reconstruction (Mercer Way to Skyview Blvd).	$250
MON-SNS174-SL	Archer Street	Overlay between Riker to Capitol.	$750
MON-SNS175-SL	Ashbury Way	Overlay between Adobe Drive to Victor Street.	$400
MON-SNS176-SL	Bardin Circle	Overlay (Bardin Way to Bardin Way).	$300
MON-SNS177-SL	Bardin Road	Overlay (Williams Road to Sconberg Parkway).	$1,000
MON-SNS178-SL	Bardin Way	Overlay (Williams Road to Bardin Circle).	$500
MON-SNS179-SL	Beacon Hill Drive	Overlay (between Constitution Boulevard to Constituion Boulevard).	$1,500
MON-SNS180-SL	Beech Street	Overlay (Acosta Boulevard to Garner Avenue).	$750
MON-SNS181-SL	Bellehaven Street	Overlay (Towt Street to Williams Road).	$750
MON-SNS182-SL	Block Avenue	Overlay (Kip Drive to Parsons Avenue).	$900
MON-SNS183-SL	Bridge Street	Reconstruction (N Main to Rossi Street).	$500
MON-SNS184-SL	Brutus St (N Bulb)	Overlay.	$200
MON-SNS185-SL	Burke Street	Overlay (bertween Del Monte Avenue to end).	$500
MON-SNS186-SL	Burton Avenue	Reconstruct (From Harkins Road to end).	$1,000
MON-SNS187-SL	California Alley	Reconstruct (From W Alisal to end).	$1,000
MON-SNS188-SL	Central Avenue	Overlay (from Davis Road to Salinas Street).	$1,500
MON-SNS189-SL	Chaparral Street	Overlay (from N Main to Natividad).	$400
MON-SNS190-SL	Cherokee Drive	Overlay (From Alvin Drive to end).	$400
MON-SNS191-SL	Chinatown Streets	Reconstruction.	$2,000
MON-SNS192-SL	Circle Drive	Overlay (N Madeira to Oregon Street).	$600
MON-SNS193-SL	Colusa Place	Overlay (Mendocino Drive to Mendocino Drive).	$900
MON-SNS194-SL	Constitution Boulevard	Overlay (E Laurel to Independence).	$1,800
MON-SNS195-SL	Dallas Avenue	Overlay (Garner to Del Monte).	$500
MON-SNS196-SL	Dayton Street	Reconstruct (Harkins to end).	$1,000

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-SNS197-SL	Del Monte Avenue	Street repairs.	$500
MON-SNS199-SL	Division Street	Street repairs.	$500
MON-SNS200-SL	E Alisal Street	Street repairs.	$3,000
MON-SNS201-SL	E Alvin Drive	Street repairs.	$2,000
MON-SNS202-SL	E Bolivar Street	Street repairs.	$500
MON-SNS203-SL	E Boronda Road	Street repairs.	$15,000
MON-SNS204-SL	E Lake Street	Street repairs.	$1,500
MON-SNS205-SL	Lamar Street	Street repairs.	$500
MON-SNS206-SL	E Laurel Drive	Street repairs.	$2,500
MON-SNS207-SL	E Laurel Drive	Street repairs.	$2,000
MON-SNS208-SL	E Romie Lane	Street repairs.	$3,000
MON-SNS209-SL	E Rossi Street	Street repairs.	$100
MON-SNS210-SL	El Dorado Drive	Street repairs.	$500
MON-SNS211-SL	Elkington Avenue	Street repairs.	$500
MON-SNS212-SL	Emerald Way	Street repairs.	$300
MON-SNS213-SL	Garfield Circle	Street repairs.	$150
MON-SNS214-SL	Garner Avenue	Street repairs.	$2,600
MON-SNS215-SL	Happ Place	Street repairs.	$250
MON-SNS216-SL	Harkins Road	Street repairs.	$3,000
MON-SNS217-SL	Haven Alley	Street repairs.	$1,000
MON-SNS218-SL	Hebbron Alley	Street repairs.	$1,000
MON-SNS219-SL	Homestead Avenue	Street repairs.	$500
MON-SNS220-SL	Independence Boulevard	Street repairs.	$1,500
MON-SNS221-SL	Jeffrey Avenue	Street repairs.	$500
MON-SNS222-SL	Kip Drive	Street repairs.	$500
MON-SNS223-SL	Larkin Street	Street repairs.	$500
MON-SNS224-SL	Linwood Drive	Street repairs.	$500
MON-SNS225-SL	Main Street	Street repairs.	$300
MON-SNS226-SL	Marigold Way	Street repairs.	$300
MON-SNS227-SL	Mariposa Court	Street repairs.	$400
MON-SNS228-SL	Maryal Drive	Street repairs.	$300
MON-SNS229-SL	Mae Avenue	Street repairs.	$300
MON-SNS230-SL	McGowan Circle	Street repairs.	$300
MON-SNS231-SL	Miami Street	Street repairs.	$200
MON-SNS232-SL	Navajo Drive	Street repairs.	$500
MON-SNS233-SL	N Davis Road	Street repairs.	$3,000
MON-SNS234-SL	N Main Street	Street repairs.	$2,400
MON-SNS235-SL	N Sanborn Road	Street repairs.	$1,700
MON-SNS236-SL	Natividad Road	Street repairs.	$2,000
MON-SNS237-SL	New Street	Reconstruct (W Market to end).	$500
MON-SNS238-SL	Pajaro Street	Overlay (Market Street to San Miguel).	$2,000
MON-SNS239-SL	Palma Drive	Overlay (University Avenue to Iverson).	$500
MON-SNS240-SL	Pearl Alley	Reconstruct (S Pearl to S Hebbron).	$500
MON-SNS241-SL	Post Drive	Overlay (N Davis to Calle de Adobe).	$1,000
MON-SNS242-SL	Prince Place	Overlay (S Hebbron Avenue to S Hebbron)	$500
MON-SNS243-SL	Rider Avenue	Overlay (Gee Street to Williams Road)	$3,000
MON-SNS244-SL	Riker Street	Overlay (W Blanco Road to Alisal Street).	$1,500
MON-SNS245-SL	Ramona Avenue	Overlay (E Laurel Drive to Glacier Drive).	$500
MON-SNS246-SL	S Felice Street	Overlay (E Alisal Street to John).	$500
MON-SNS247-SL	S Hebbron Avenue	Overlay (E Alisal to Prince Place).	$300
MON-SNS248-SL	S Sanborn Road	Overlay (John Street to E Alisal Street).	$1,700
MON-SNS249-SL	San Benito Street	Overlay (S Madeira to end).	$400
MON-SNS250-SL	San Miguel Avenue	Overlay (S Main Street to San Mateo Drive).	$1,500
MON-SNS251-SL	Skyway Boulevard	Overlay (E Alisal to Airport Boulevard)/	$2,000
MON-SNS252-SL	Sucre Court	Overlay (E Lamar to E Lamar).	$300
MON-SNS253-SL	Terven Avenue	Overlay (S Sanborn Road to Airport Boulevard).	$1,500
MON-SNS254-SL	Towt Street	Overlay (E Market Street to Mae Street/Morena Way).	$2,000
MON-SNS255-SL	Trinity Way	Overlay (E Alvin Drive to end).	$600
MON-SNS256-SL	Tyler Street	Overlay (Rochex to W Curtis).	$250
MON-SNS257-SL	Vale Street	Reconstruct (West Market Street to end).	$250
MON-SNS258-SL	Van Buren Avenue	Overlay (Russel to San Juan Grade).	$500

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-SNS259-SL	W Blanco Road	Slurry (Luther Way to Padre Drive).	$500
MON-SOL007-SO	Street Resurfacing & Sidewalk Repair	Apply seal coats and resurface various local streets. Construct missing sidewalk and handicap ramps. Replace broken sidewalk and ramps. Mark bike facilities.	$3,150
MON-SOL030-SO	Intersection Improvements	Install signal.	$800
MON-SOL031-SO	Intersection Improvements	Construct intersection and install signal.	$2,548
MON-SOL032-SO	Intersection Improvements	Construct intersection and install signal.	$1,721
MON-SOL033-SO	Intersection Improvements	Construct intersection and install signal/roundabout.	$2,883
MON-SOL034-SO	Intersection Improvements	Construct intersection and install signal.	$2,120
MON-SOL035-SO	Intersection Improvements	Construct intersection and install signal.	$2,878
MON-SOL036-SO	Intersection Improvements	Construct intersection and install signal.	$2,503
MON-SOL037-SO	Intersection Improvements	Construct intersection and install signal.	$2,119
MON-SOL038-SO	Intersection Improvements	Construct intersection and install signal.	$2,262
MON-SOL039-SO	Intersection Improvements	Construct intersection and install signal.	$2,879
MON-SOL040-SO	Intersection Improvements	Construct intersection and install signal.	$2,583
MON-SOL042-SO	Intersection Improvements	Construct intersection and install signal.	$324

Table C-1f: Monterey County Other Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-MAA002-MAA	Airport Land Use Plan	Update Airport Land Use Plan.	$150
MON-MAA020-MAA	Taxiway A, B, C, D Lighting and Signage Improvements	Construct Taxiway A, B, C, D Lighting and Signage Improvements.	$814
MON-MAA021-MAA	Taxiway A, B, D, D Overlay and Markings	Install Taxiway A, B, D, D overlay and markings.	$680
MON-MAR160-MA	ADA Transition Program	Citywide sidewalk, ramp, intersection and bus-stop improvements.	$1,621
MON-MDR002-MDR	East Apron Drainage System	Install east apron drainage system.	$175
MON-MDR003-MDR	East Apron Overlay	Overlay east apron.	$200
MON-MDR005-MDR	Overlay Runway	Overlay runway.	$500
MON-MDR006-MDR	Pave Tie Down Apron Area	Pave tie down apron area.	$250
MON-MDR008-MDR	Airport lighting and fencing replacement	Replace airport lighting and fencing.	$400
MON-MPA061-MRA	Terminal Complex - Construction (Terminal Building)	Construct terminal building.	$64,000
MON-MPA062-MRA	Terminal Complex - Construction (Roads & Surface Parking)	Construct roads and surface parking.	$28,231
MON-TAMC009-TAMC	Habitat Preservation/Advance Mitigation	Countywide habitat preservation/advance mitigation for projects.	$5,000

Table C-1g: Monterey County Traffic Demand Management Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-TAMC005-TAMC	Monterey County 511 Traveler Information and Rideshare/Commute Alternatives	Adminster 511 Traveler Information program and rideshare/communte alternative programs for Monterey County.	$5,250

Table C-1h: Monterey County ADA Para-transit Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-MST014-MST	Mobility Management		$92,000
MON-MST015-MST	RIDES Bus Replacement		$16,000
MON-MST017-MST	RIDES Operations		$106,000
MON-TAMC012-TAMC	Senior & Disabled Transportation	Countywide support for senior & disabled transportation.	$15,000

Table C-1i: Monterey County Transit Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-FRA020-MST	Fort Ord Intermodal Centers	Project includes 3 elements: 1. Intermodal Transportation Center at 1st Avenue South of 8th Street 2. Park and Ride Facility at 12th Street and Imjin and 3. Park and Ride Facility at 8th Street and Giggling (FORA CIP T22).	$4,615
MON-KCY035-CK	Multi Modal Transportation Center	UPRR Station with bus, bike, pedestrian and military bus/parking- to/from Ft Hunter Ligget.	$3,600
MON-MST008-MST	Salinas - Marina Multimodal Corridor	Construct multimodal Bus Rapid Transit Improvements between Salinas and Marina, including a multimodal transit corridor through the former Fort Ord in Marina.	$60,000
MON-MST011-MST	Salinas Bus Rapid Transit	Construct Bus Rapid Transit improvements along E. Alisal Street.	$20,000
MON-MST016-MST	Transit Capacity for SR 1/Bus on Shoulder	Construct improvements to accommodate regional MST bus service along SR 1 during peak travel periods.	$32,000
MON-MST019-MST	Highway 68 Corridor Transit Improvements		$15,000
MON-MST020-MST	Salinas Bus Rapid Transit	Construct Bus Rapid Transit improvements along North Main Street.	$20,000
MON-TAMC003-TAMC	Rail Extension to Monterey County	Extends existing rail service from San Jose to Salinas and constructs station improvements in Gilroy, Pajaro, Castroville and Salinas.	$135,710
MON-TAMC004-TAMC	Amtrak Coast Daylight Rail Service	Establishes once daily Amtrak intercity rail service between downtown San Francisco and downtown Los Angeles with stops in Salinas, Soledad and King City.	$500

Table C-1j: Monterey County Transit Operations

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-MST002-MST	Bus Operations		$552,481
MON-TAMC013-TAMC	Commuter Bus, Salinas Valley Transit Center(s) & Vanpools	Commuter Bus, Salinas Valley Transit Center(s) & Vanpools.	$25,000

Table C-1k: Monterey County Transit Maintenace and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-MST001-MST	Bus Rolling Stock		$25,000
MON-MST003-MST	Bus Station/Stops		$42,000
MON-MST004-MST	Bus Support Equipment and Facilities/Intelligent Transportation		$20,000
MON-MST005-MST	Communication/Radio Equipment		$30,000
MON-MST006-MST	Preventative Maintenance		$21,000
MON-MST007-MST	Safety and Security		$2,000
MON-MST009-MST	Operations & Maintenance Facilities		$100,000
MON-MST010-MST	Bus Replacement		$64,000
MON-MST012-MST	Bus Rehab/Renovate		$28,400
MON-MST013-MST	Bus Electrification		$119,600
MON-MST018-MST	South Monterey County Regional Transit Improvements	Increases the frequency of MST Line 23 service between King City and Salinas and constructs improvements along Abbott Street between US 101 and Romie Way in Salinas. Stops in King City, Greenfield, Soledad, Gonzales, Chualar and Salinas.	$27,500
MON-SNS120-SL	Salinas ITC Station Improvements	Upgrades to passenger terminal and freight buildings.	$2,300

Table C-1l: Monterey County Transportation System Management Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MON-MRY010-MY	Multimodal WAVE ITS	Install advanced traveler info kiosks and related equipment in four buses.	$670
MON-MRY015-MY	Downtown signal ITS	Install new signal boxes and opticom signal detectors.	$500
MON-SEA020-SE	1st Avenue/Lightfighter Drive Improvements	Modify signal and intersection improvements.	$500

Table C-2a: San Benito County Active Transportation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-COG-A57	Safe Routes to Schools Implementation Program	Infrastructure improvements to achieve safer routes to schools for walking and bicycling at R.O. Hardin & Calaveras Elementary Schools.	$1,126
SB-COH-A20	Sunnyslope Road Bike Lane	Construct Class II bike lane from Cerra Vista to Memorial Drive.	$21
SB-COH-A23	Ladd Lane Bike Lane	Construct II bike lane from Tres Pinos Road to existing Class II on Ladd Lane.	$5
SB-COH-A25	Central Ave. Bike Lane	Construct Class II bike lane from Bridge Road to East Street.	$50
SB-COH-A30	Meridian Street Bike Lane	Construct Class II bike lane from Memorial Drive to McCray Street.	$32
SB-COH-A60	Complete Streets Project for Nash/Tress Pines/Sunnyslope Roads and McCray Street	Complete street segments include: sidewalks, bike lanes, curb extensions, median islands, narrower travel lanes, roundabouts, etc.	$6,760
SB-COH-A66	McCray Street Bike Lane	Class II, .61 miles, Hillcrest to Santa Ana Road, Tier No. 2.	$18
SB-COH-A67	Cerra Vista Bike Lane	Class III, .73 miles, Union Road to Sunnyslope Road.	$10
SB-COH-A70	Steinbeck Drive Bike Lane	Class III, .10 miles, Line Street to Westside Boulevard, Tier No. 3.	$1
SB-COH-A71	Meridian Road Bike Lane	Class III, .47 miles, End of Meridian to Memorial Drive, Tier No. 3.	$6
SB-COH-A72	Bridgevale Road Bike Lane	Class III, .26 miles, from Fourth Street (Previously San Juan Road) to Central Avenue, Tier No. 3.	$3
SB-COH-A73	Beverly Drive Bike Lane	Class III, .53 miles, Sunnyslope Road to Hillcrest Road, Tier No. 3.	$7
SB-COH-A79	Westside Boulevard Bike Lane	Class II, .28 miles, between South Street and Jan Avenue, Tier No. 1.	$5
SB-SBC-A22	Airline Highway Bike Lane	Construct Class I bike lane from Sunset Dr. to existing Class I on Airline Highway (Tres Pinos Town).	$42
SB-SBC-A34	Santa Ana Road/Buena Vista Road/North Street Bike Lane	Construct Class II Bike Lane, 3.97 miles, partially located in the City of Hollister.	$118
SB-SBC-A63	Union Road Bike Lane	Class III, 3.83 miles, Highway 156 to Cienega Road, Tier No. 3.	$51
SB-SBC-A65	San Benito River Recreational Trail Phase 1	Construct a portion of recreational bicycle/pedestrian/equestrian trail along the San Benito River.	$5,627
SB-SJB-A06	Pedestrian Crosswalk at Intersection of The Alameda & Hwy 156	Install meters, screens and stripe on east side of The Alameda & Highway 156.	$50
SB-SJB-A11	Third Street Bike Lane	Striping a bike lane on Third Street.	$10
SB-SJB-A12	First Street Bike Lane	Striping a Bike Lane on First Street.	$10
SB-SJB-A13	Fourth Street Bike Lane	Striping a Bike Lane on Fourth Street	$10
SB-SJB-A17	Franklin Street Bike Lane	Class III, .17 miles, 4th Street to South side of San Juan Bautista Historic Park, Tier No. 2.	$2
SB-SJB-A18	4th Street- San Jose Bike Lane	Class III, .16 miles, 4th Street to North side of San Juan Bautista Historic Park, Tier No. 3.	$2
SB-SJB-A19	San Jose Street - The Alameda Bike Lane	Class III, .54 miles, The Alameda to Monterey Street, Tier No. 3.	$7
SB-SJB-A20	Second Street Bike Lane	Class III, .14 miles, San Jose Street to Monterey Street, Tier No. 3.	$2
SB-SJB-A23	1st Street Bike Lane	Class III, .10 miles, Monterey Street to existing Class II on 1st Street, Tier No. 3.	$1

Table C-2b: San Benito County Highway Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-COG-A54	State Route 25 Corridor Improvements Project	To enhance safety, improve traffic operations, and provide additional capacity to reduce congestion for all transportation modes on Highway 25 between San Felipe Road and the San Benito/Santa Clara County line.	$135,000
SB-CT-A01	SR 156 Widening - San Juan Bautista to Union Road	Construct a four-lane expressway south of the existing State Route 156 and use the existing SR 156 as the northern frontage road.	$62,849
SB-CT-A17	Airline Highway Widening/SR 25 Widening: Sunset Drive to Fairview Road	Widen to 4-lane expressway with bicycle lanes.	$28,214
SB-CT-A44	Highway 25 4-Lane Widening, Phase 1	Widen to 4-lane expressway, San Felipe Road to Hudner Lane.	$62,000
SB-VTA-A01	Highway 101/25 Interchange	New interchange at Highway 101 and Highway 25 in Santa Clara County.	$185,000
SB-VTA-A02	New State Route 152 Alignment: Environmental Study	Construct new alignment of State Route 152 from State Route 156 to U.S. 101.	$30,000

Table C-2c: San Benito County Highway Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-CT-A02	Highway 156/Fairview Road Intersection Improvements	Construct new turn lanes at the intersection.	$6,824
SB-CT-A43	SHOPP Group Lump Sum Project Listing	Varies, grouped project listing, 2018-2040.	$132,153

Table C-2d: San Benito County Local Streets and Road Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-COH-A11	Union Road (formerly Crestview Drive) Construction	Construct new 2-lane road.	$11,000
SB-COH-A16	Memorial Drive Extension: Meridian St. to Santa Ana Road	Construct 4-lane road extension with bicycle lanes.	$3,355
SB-COH-A18	Westside Boulevard Extension	Construct 2-lane road; Nash Road to Southside Road/San Benito Street intersection with bicycle lanes.	$13,360
SB-COH-A19	North Street (Buena Vista) between College Street and San Benito Street	Construct 2-lane road with bicycle lanes.	$4,207
SB-COH-A55	Memorial Drive North Extension: Santa Ana Road to Flynn Road/Shelton Intersection	Construct new 4-lane road and extension with bicycle lanes.	$13,842
SB-COH-A57	Pacific Way (New Road): San Felipe Rd. to Memorial Dr.	New 2-lane road from San Felipe Road to future Memorial Drive north extension with bicycle lanes.	$7,412
SB-SBC-A04	Union Road Widening (East): San Benito Street to Highway 25	Widen to 4-lane arterial with bicycle lanes.	$5,463
SB-SBC-A05	Union Road Widening (West) San Benito Street to Highway 156	Widen to 4-lane arterial with bicycle lanes.	$15,448
SB-SBC-A09	Fairview Road Widening: McCloskey to SR 25	Widen to 4-lane arterial; construct new bridge south of Santa Ana Valley Road with bicycle lanes.	$20,790
SB-SBC-A14	San Benito Regional Park Access Road	Construct new 2-lane roadway from Nash Road to San Benito Street.	$565
SB-SBC-A50	Hospital Road Bridge	Hospital Road over San Benito River, between South Side Road and Cienega Road. Replace lane low water crossing with 2 lane bridge. Bridge No. 00L0026.	$15,200
SB-SBC-A67	Shore Road Extension	4-Lane Arterial with Class II bike lanes.	$20,350
SB-SBC-A79	Enterprise Road Extension	Extend Enterprise Road westerly from Southside Road toward Union Road.	$3,000
SB-SBC-A81	Meridian Street Extension: 185 feet east of Clearview Rd. to Fairview Rd.	Construct 4-lane road. Located in the City of Hollister and County with bicycle lanes.	$9,445
SB-SBC-A82	Flynn Road Extension	San Felipe Road to Memorial Drive north extension. New roadway construction south of McCloskey Road with bicycle lanes.	$7,709
SB-SJB-A07	Third Street Extension	Constructing Third Street to connect to First Street.	$400
SB-SJB-A08	Lavanigno Drive Construction	Construction of Lavanigno Drive, split lanes with island in the middle; total 4 lanes.	$500
SB-SJB-A09	Connect Lang Street to Lang Street to the Alameda	Construct and connect Lang Street; 2 lanes.	$750
SB-SJB-A14	Reconstruction of Muckelemi Street to Monterey Street	Reconstruction of Muckelemi Street to Monterey adding planting strip median.	$160

Table C-2e: San Benito County Local Streets and Road Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-COH-A13	West Gateway Improvement Project	Streetscape and intersection improvements.	$4,237
SB-COH-A58	Westside Boulevard & Nash Road Westside Boulevard Extension (Intersection)	New signalization of 2-lane collector south leg (Westside Extension), existing 4-lane north leg with existing 2-lane local; 4 approaches, turning lanes will be added.	$575
SB-COH-A59	Westside Boulevard Extension (Intersection)	New signalization of new 2-lane collector (Westside Extension) with 2-lane arterial; 4 approaches, turning lanes will be constructed at Westside Boulevard & San Benito Street.	$500
SB-COH-A61	City of Hollister Local Street & Roadway Maintenance: 2019-2030	System preservation and maintenance.	$56,930
SB-COH-A62	City of Hollister Local Street & Roadway Maintenance: 2031-2040	System preservation and maintenance.	$8,449
SB-COH-A63	South Street & Westside Boulevard Intersection	New signalization of 4-lane collector with 2-lane collector; 4 approaches, retain current lane configuration.	$550
SB-COH-A64	Fourth Street (San Juan Road) & West Street or Monterey Street Intersection	New signalization of 2-lane collector with 2-lane local; 4 approaches, retain current lane configuration with bicycle lanes.	$400
SB-COH-A65	Memorial Drive & Hillcrest Road Intersection	New signalization of 4-lane arterial with 4-lane arterial, 4 approaches. Existing lane configuration to remain with bicycle lanes.	$700
SB-COH-A74	Flynn Road & San Felipe Road Intersection	New signalization of 4-lane arterial with 4-lane arterial.	$800
SB-COH-A75	Memorial Drive & Santa Ana Road Memorial Drive South Extension (Intersection)	New signalization of future 4-lane arterial (Memorial) with non-TIMF widening to 4-lane arterial: 4 approaches, turning lanes will be constructed.	$800
SB-COH-A76	Memorial Drive South Extension: Meridian Street to Memorial Drive (Intersection)	New signalization of future 4-lane arterial (memorial) with 4-lane arterial; 4 approaches, turning lanes will be constructed.	$800
SB-COH-A77	Gateway Drive & San Felipe Road Intersection	New signalization of new 2-lane collector with 4-lane arterial; 3 approaches, LTO's exist.	$525
SB-COH-A78	Rancho Drive & East Nash (Tres Pinos Road) Intersection	New roundabout.	$700
SB-COH-A80	SB1 RMRA: City of Hollister (2018-2040)	System preservation and maintenance.	$18,370
SB-SBC-A51	Y Road Bridge	Y Road over San Benito River replace 2-lane Low-Water Crossing with 2-lane bridge. Bridge No. 00L0069.	$15,200
SB-SBC-A52	Union Road Bridge	Union Road over San Benito River, East Cienega Road. Replace bridge, no added capacity. Bridge No. 43C0002.	$24,450
SB-SBC-A53	Panoche Road Bridge (Bridge No. 43C0016)	Panoche Road over Tres Pinos Creek, 6 Mi. E of SH 25. Scour Countermeasure. Bridge No. 43C0016.	$3,700
SB-SBC-A54	Panoche Road Bridge (Bridge No. 43C0027)	Panoche Road , over Tres Pinos Creek, 12 miles west Little Panoche Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0027.	$4,825
SB-SBC-A55	Shore Road Bridge	Shore Road, over Tequisquita Slough Overflow and bridge No. 43C0051, San Felipe Road, over branch of Santa Ana Creek. Replace bridge railings. Bridge No. 43C0012 and 43C0051.	$329
SB-SBC-A56	Rosa Morada Bridge	Rosa Morada Road over Arroyo Dos Picachos, 0.6 Mi E Fairview Road. Replace bridge (no added lane capacity) Bridge No. 43C0041.	$3,300
SB-SBC-A57	Limekiln Road Bridge	Limekiln Rd over Pescadero Creek, 0.1 Mi S Cienega Rd. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0054.	$2,800

Table C-2e: San Benito County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-SBC-A58	Rocks Road Bridge	Rock Road over Pinacate Rock Creek, East Little Merril Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0053.	$2,540
SB-SBC-A59	Anzar Road Bridge	Anzar Road over San Juan Creek, 0.35 Miles with San Juan Hwy Road. Replace 2-lane with 2-lane bridge (no added capacity) Bridge No. 43C0039.	$2,870
SB-SBC-A69	Fairview Road & Hillcrest Road Intersection	New signalization of future widening to 4-lane arterial (north&south legs) with future non-TIMF widening to 4-lane arterial (west leg only); 3 approaches. Turning lanes existing on all approaches, SB & NB through lanes will be constructed with Fairview Road, widening, TIF.	$600
SB-SBC-A70	Union Road & Fairview Road Intersection	New signalization of future widening to 4-lane arterial (north & south legs) with future new 4-lane arterial (west leg only); 3 approaches. Turning lanes on Fairview Rd. added with Project No. 8; turning lanes on Union Rd.	$655
SB-SBC-A71	Enterprise Road & Airline Highway (SR 25) Intersection	New signalization of future widening to 4-lane arterial (north & south legs) with 2-lane arterial; 4 approaches, EB & WB through lanes will be constructed with Airline Hwy Project No. 5, with bicycle lanes.	$700
SB-SBC-A73	McCloskey Road & Fairview Road Intersection	New signalization of 4-lane arterial with 2-lane local, 3 approaches. LTO on lanes 3 approaches, RTO on 2 approaches.	$734
SB-SBC-A74	Meridian Street & Fairview Road Meridian Street Extension (Intersection)	New signalization of 4-lane arterial with 4-lane arterial: 3 approaches, turning lanes exist, through lane on Fairview will be constructed.	$600
SB-SBC-A75	Fairview Road & Fallon Road Intersection	New signalization of 4 lane arterial with 2-lane collector, 4 approaches. LTO & RTO on all approaches.	$944
SB-SBC-A77	San Benito County Local Street & Roadway Maintenance: 2019-2030	System preservation and maintenance.	$124,380
SB-SBC-A78	San Benito County Local Street & Roadway Maintenance: 2031-2040	System preservation and maintenance.	$5,632
SB-SBC-A83	Fairview Road & Airline Highway/SR 25 Intersection	New signalization of 4-lane arterial (east & west legs) with 4-lane arterial (north leg) & 2-lane (south leg). LTO & RTO existing on all approaches, EB & WB through lanes constructed.	$850
SB-SBC-A84	SR 156 & Buena Vista Road Intersection	New signalization of new 2-lane collector with 4-lane arterial, LTO on 4 approaches.	$765
SB-SBC-A86	John Smith Realignment at Fairview Intersection	This project will realign John Smith Road to intersect Fairview Road at St. Benedict Way and add left and right turn lanes into John Smith Road.	$2,200
SB-SBC-A87	SB1 RMRA: San Benito County (2018- 2040)	System preservation and maintenance.	$48,400
SB-SJB-A01	Roundabout at The Alameda & Fourth Street	Construct a roundabout.	$300
SB-SJB-A02	Roundabout at Muckelemi Street & Monterey Street	Construct a roundabout.	$300
SB-SJB-A03	Roundabout at First Street, Old San Juan Hwy & Lavanigno Rd	Slight widening/re-paving and construction of roundabout.	$350
SB-SJB-A04	Roundabout at San Juan- Hollister Rd & San Juan Canyon Road	Constructing a roundabout and repaving.	$200
SB-SJB-A05	Roundabout at Third Street & Donner Street	Striping a roundabout; widening Third Street.	$100
SB-SJB-A15	City of San Juan Bautista Local Street & Roadway Maintenance: 2019-2030	System preservation and maintenance.	$677

Table C-2e: San Benito County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-SJB-A16	City of San Juan Bautista Local Street & Roadway Maintenance: 2031-2040	System preservation and maintenance.	$573
SB-SJB-A24	SB1 RMRA: City of San Juan Bautista (2018- 2040)	System preservation and maintenance.	$946

Table C-2f: San Benito County Other Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-COG-A58	COG Planning and Administration	COG and LTA short and long range transportation planning studies. Transportation Development Act (TDA) for COG administration, transit, bicycle & pedestrian facilities.	$35,200
SB-COH-A40	Hollister Airport Operations & Maintenance	Continued operations and maintenance of the airport.	$15,632
SB-COH-A41	Hollister Airport Capital Improvements	Capital improvements grouped project list from the Airport Capital Improvement Program.	$3,476

Table C-2g: San Benito County Transportation Demaned Management Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-COG-A08	Rideshare Program	Promote the use of alternative modes of transportation.	$110
SB-COG-A53	Vanpool Program	Provide vehicle lease program, planning and coordination.	$364

Table C-2h: San Benito County Transit Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-LTA-A38	Express Bus Service to Gilroy - Gavilan	Express bus service from the City of Hollister to Gavilan College.	$5,020
SB-LTA-A39	Express Bus Service to Gilroy - Caltrain Station	Express bus service from the City of Hollister to Gilroy Caltrain Station.	$1,674
SB-LTA-A46	Regional Transit Connection to Salinas	Transit connection from City of Hollister to City of Salinas	$3,113
SB-LTA-A47	Regional Transit Connection to Watsonville	Transit connection from City of Hollister to City of Watsonville.	$3,124
SB-LTA-A53	Commuter Rail to Santa Clara County	Commuter rail from Hollister to Gilroy.	$10,000

Table C-2i: San Benito County Transit Operations Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-LTA-A37	General Transit Service Operations	Ongoing operation of fixed route, other transit service, and expansion	$27,558
SB-LTA-A42	Regional Transit Planning	Planning transit infrastructure, new service, and operational improvements.	$1,084
SB-LTA-A52	Transit Technology & Infrastructure Improvements	Improve transit infrastructure to accommodate operations.	$1,000

Table C-2j: San Benito County Transit Maintenance and Rehabilitaion Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-LTA-A48	Transit Vehicle Replacements	Replace transit vehicles.	$851
SB-LTA-A51	Bus Stop Improvement Program	Transit Facilities to accommodate regional transit connections to Gilroy, Watsonville and Salinas.	$2,750

Table C-2k: San Benito County Local Streets and Road Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SB-COG-A44	Motorist Aid System (SAFE)	Emergency call box program	$1,144
SB-COG-A55	Wayfinding Sign Program	Signs that provide direction of vehicles and pedestrians to specific destinations within predefined areas	$1,200

Table C-3a: Santa Cruz County Active Transportation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
CAP 15SC	Park Avenue Sidewalks	Installation of sidewalks, plus crosswalks at Cabrillo and Washburn to improve access to transit stops. Links Cliffwood Heights neighborhood to Capitola Village. Currently only 4 short segments of sidewalk exist.	$650
CAP 17SC	Upper Pacific Cove Parking Lot Pedestrian Trail and Depot Park Metro Development	Construct 4 foot wide pedestrian pathway along City owned Upper Pacific Cove Parking lot, adjacent to rail line (680'). Includes new signal for ped crossing over Monterey Avenue. Includes a new metro shelter located and landscaped setting along the rail corridor/Park Ave. Part of MBSST.	$310
SC-CAP-P03-CAP	Upper Capitola Avenue Improvements	Installation of bike lanes and sidewalks on Capitola Avevenue. (Bay Avenue to SR 1) and sidewalks on Hill Street from Bay Avenue to Capitola Avenue.	$1,340
SC-CAP-P04b-CAP	Capitola Village Multimodal Enhancements - Phase 2/3	Multimodal enhancements in Capitola Village along Stockton Avenue, Esplanade, San Jose Avenue, & Monterey Avenue. Includes sidewalks, bike lanes, bike lockers, landscaping, improve transit facilities, parking, pavement rehab and drainage.	$3,100
SC-CAP-P12-CAP	Monterey Avenue Multimodal Improvements	Installation of sidewalks and bike lanes in area near school and parks.	$360
SC-CAP-P16-CAP	Clares Street Pedestrian Crossing west of 40th Ave	Construct signalized ped crossing 0.20 miles west of 40th Avenue.	$250
SC-CAP-P42-CAP	Clares St Bike Lanes/Sharrows (Capitola Rd to 41st Ave)	Add bike lanes/sharrows to Clares.	$100
SC-CAP-P43-CAP	Clares St/41st Ave Bicycle Intersection Improvement	Bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) at Clares across 41st.	$10
SC-CAP-P44-CAP	Gross/41st Ave Bicycle Intersection Improvement	Bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) from Gross E/B to 41st N/B.	$20
SC-CAP-P46-CAP	40th Ave (at Deanes Ln)Bike/Ped connection	40th Avenue N/S bike/pedestrian connection at Deanes Lane.	$10
SC-CAP-P47-CAP	41st Ave (Soquel to Portola) Crosswalks	Evaluate and if found necessary, increase number of crosswalks on 41st to closer to every 300 ft.	$20
SC-CAP-P48-CAP	Capitola Mall (Capitola Rd to Clares) Bike Path	Separated bicycle facility through Capitola Mall parking lot to connect 38th Avenue bike lanes and 40th Avenue.	$50
SC-CAP-P51-CAP	Citywide Sidewalk Program	Install sidewalks to fill gaps.	$520
SC-CAP-P52-CAP	Citywide Bike Projects	Bike projects based on needs identified through the Bicycle Plan. These projects are in addition to projects listed	$400
CO 42bSC	Green Valley Rd Pedestrian Safety Project	Build 6-foot wide sidewalk with some curb and gutter on NW side of Green Valley Road from Airport Boulevard to Amesti Road (1800 ft).	$390
SC-CO-P38-USC	Pajaro River Bike Path System	Construction of a Class 1 bike path along the levees and a Class 2 bikeway on Thurwatcher Road and Beach Road.	$2,500
SC-CO-P41-USC	Countywide Sidewalks	Install sidewalks.	$7,000
SC-CO-P46a-USC	San Lorenzo Valley Trail: Hwy 9 - Downtown Felton Bike Lanes & Sidewalks	Install sidewalks and bicycle lanes on Hwy 9 through downtown Felton.	$2,270
SC-CO-P46b-USC	San Lorenzo Valley Trail: Hwy 9 - North Felton Bike Lanes & Sidewalks	Install sidewalk/pedestrian path on west side, shoulder widening to 5' for bicycle lanes from Felton-Empire/Graham Hill Rd to Glen Arbor Road, Ben Lomond, including frontage of SLV elementary, middle and high schools. Includes new and replacement bike/ped bridges	$7,640
SC-CO-P50-USC	East Cliff Dr Pedestrian Pathway (7th-12th Ave)	Construct pedestrian pathway on East Cliff.	$1,760
SC-EA-02-USC	Ecology Action Countywide SRTS Youth Pedestrian and Bicycle Safety Education	Pedestrian and bicycle safety education at local schools.	$260

Table C-3a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-RTC-16-RTC	Bike Parking Subsidy Program	Subsidies for bicycle racks and lockers for businesses, schools, government agencies, and non-profit organizations are all eligible.	$210
SC-RTC 27a-RTC	Monterey Bay Sanctuary Scenic Trail Network - Design, Environmental Clearance, and Construction	Design, environmental clearance and construction of the 32-mile rail component of the 50+ mile network of bicycle and pedestrian facilities on or near the coast, with the rail trail as the spine and additional spur trails to connect to key destinations.	$41,500
SC-RTC 27b-RTC	Monterey Bay Sanctuary Scenic Trail Network (Coastal Rail Trail) - Maintenance	Maintenance of the rail trail component of the Monterey Bay Sanctuary Scenic Trail Network.	$4,800
SC-RTC 27c-RTC	Monterey Bay Sanctuary Scenic Trail Network (Coastal Rail Trail) - Trail Management Program	Coordinate trail implementation as it traverses multiple jurisdictions to ensure uniformity; serve as Project Manager for construction of some segments; handle environmental clearance; coordinate use in respect to other requirements (closures for ag spraying, etc); solicit ongoing funding and distribute funds to implementing entities through MOUs; coordinate with community initiatives; etc.	$1,030
RTC 30SC	Hwy 1 Bicycle/Ped Overcrossing at Mar Vista	Construct a bicycle/pedestrian overcrossing of Hwy 1 in vicinity of Mar Vista Drive, providing improved access to Seacliff and Aptos neighborhoods and schools.	$7,800
RTC 32SC	Bicycle Route Signage Countywide	Define routes, develop and install signs directing bicyclists to preferred routes to various destinations countywide.	$600
SC-RTC-P26-VAR	Countywide Pedestrian Signal Upgrades	Grant program to fund installation of accessible pedestrian equipment with locator tones including rapid flashing beacons and count down times etc. to facilitate roadway crossings by visually and mobility impaired persons.	$1,035
SC-RTC-P50-RTC	County-wide Bicycle, Pedestrian and Vehicle Occupancy Counts	Conduct counts to assess mode split over time and assess impact of new facilities.	$212
SC-SC-23-SCR	West Cliff Path Minor Widening (David Way Lighthouse to Swanton)	Improve existing path.	$520
SC 46SC	Branciforte Creek Bike/Ped Crossing	Install a multiuse bicycle/pedestrian bridge over Branciforte Creek and connecting paths to the existing levee paths near San Lorenzo Park and Soquel Avenue.	$2,830
SC-SC-P09-SCR	Sidewalk Program	Install and maintain sidewalks and access ramps.	$5,500
SC-SC-P105-SCR	Market Street Sidewalks and Bike Lanes	Completion of sidewalks and bicycle lanes. Includes retaining walls, right-of-way, tree removals and a bridge modification.	$1,030
SC-SC-P119-SCR	Soquel/Water (Branciforte to Morrissey) Crosswalks	Evaluate and if found necessary implement additional crosswalks on Soquel/Water with consideration for safety, and update crosswalks to more visible pattern (block).	$150
SC-SC-P123-SCR	Soquel/Branciforte/Water (San Lorenzo River to Branciforte) Bike Lane Treatments	Consider bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) to address speed inconsistency and parking conflicts between bicyclists and vehicles.	$410
SC-SC-P125-SCR	Citywide Safe Routes to School Projects - ATP	Projects to improve pedestrian and bicycle safety near schools.	$1,404
SC-SC-P126-SCR	Almar Ave Sidewalks	Fill gaps in sidewalks and access ramps to improve pedestrian safety.	$200

Table C-3a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-SC-P127-SCR	Pacific Avenue Sidewalk (Front-Wharf)	Construct new sidewalk and crossing on Pacific Avenue between Second and Front Streets, including installation of a new accessible crossing at Front and Pacific.	$318
SC-SC-P22-SCR	Chestnut St. Pathway	Install a Class 1 bicycle/pedestrian facility to connect the east side of Neary Lagoon Park with the Depot Park path.	$570
SC-SC-P23-SCR	Delaware Avenue Complete Streets	Fill gaps in bicycle lanes, sidewalks and sidewalk access ramps.	$150
SC-SC-P29-SCR	Morrissey Boulevard Bike Path over Hwy 1	Install a Class 1 bicycle and pedestrian facility on freeway overpass.	$300
SC-SC-P30-SCR	Murray St to Harbor Path Connection	Install a Class 1 bicycle/pedestrian facility.	$210
SC-SC-P35-SCR	San Lorenzo River Levee Path Connection	Install a multi-use bicycle/pedestrian facility connecting the end of the San Lorenzo River Levee path on the eastern side of the river, up East Cliff Drive near Buena Vista Avenue.	$2,070
SC-SC-P47-SCR	Chestnut Street Bike Lanes	Install Class 2 bike lanes to provide connection from existing bike lanes on Laurel Street and upper Chestnut Street to proposed Class 1 bike path connections to Bay Street and Pacific Avenue/Beach Street.	$100
SC-SC-P59-SCR	King Street Bike Facility (entire length)	Install Class 2 bike lanes on residential collector street which includes some parking and landscape strip removals, and some drainage inlet modifications.	$2,070
SC-SC-P69-SCR	Seabright Avenue Bike Lanes (Pine-Soquel)	Install Class 2 bike lanes on arterial street to complete the Seabright Avenue bike lane corridor and connect to bike lane corridor on Soquel Avenue and Murray. Includes removal of some parking and some landscape strips	$2,070
SC-SV-P05-SCV	Citywide Sidewalk Program	Install sidewalks to fill gaps.	$2,600
SC-SV-P21-SCV	Lockwood Ln Pedestrian Signal Near Golf Course	Construct a pedestrian signal at unprotected ped crossing on Lockwood Lane.	$50
SC-SV-P30A-SCV	Mt Hermon Road Sidewalk Connections	Add sidewalks to fill gaps in business district.	$520
SC-SV-P32-SCV	Bluebonnet Lane Bike Lanes	Add bike lanes on Bluebonnet (Bean Creek, through Skypark to Mt Hermon/Lockewood).	$150
SC-SV-P35-SCV	Bean Creek Rd Sidewalks (SVMS to Blue Bonnet)	Fill gaps in sidewalks on Bean Creek Road.	$410
SC-SV-P39-SCV	Glenwood Dr Bike Lanes	Widen road to accommodate bike lanes from Scotts Valley High School to City limits.	$520
SC-SV-P40-SCV	Lockwoode Lane Sidewalk and Bike Lanes	Construct bike lanes and add sidewalk on the west side from Mt Hermon to the City limit.	$520
SC-SV-P45-SCV	Scotts Valley Town Center Bicycle/Pedestrian Facilities	Bicycle and pedestrian facilities and circulation elements within planned development.	$4,130
SC-SV-P49-SCV	Mt Hermon Road and Scotts Valley Drive - Crosswalks	Increase number of crosswalks on Mt Hermon/Scotts Valley Dr, update crosswalks to block pattern, add pedestrian treatments where necessary at intersections to decrease distance across using refuge islands. Add crosswalks to all sides of intersections.	$515
SC-SV-P50-SCV	Mt Hermon/Scotts Valley - Intersection Improvements for Bicycle	Add bicycle treatments at Mt Hermon/Scotts Valley Dr intersection.	$10
SC-SV-P53-SCV	Mt Hermon Road to El Rancho Drive Bike/Ped Connection	New bike/ped connection between Mt Hermon Road and El Rancho Drive.	$1,030
SC-SV-P54-SCV	Mt Hermon Road/ Spring Hill Road Pedestrian Intersection Improvements	Improve pedestrian crossing at Spring Hills Drive and Mt. Hermon Road.	$50
TRL 07SC	MBSST (Coastal Rail Trail): Segment 7 (Natural Bridges to Pacific Avenue)	2.1 miles of Monterey Bay Sanctuary Scenic Trail Network (MBSST) Segment 7 along rail line (excluding Moore Creek rail trestle bridge and trail to Natural Bridges Drive).	$7,400

Table C-3a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
TRL 18L	MBSST (Coastal Rail Trail): Lee Road, 4000 feet east to City Slough Trail Connection	Construction of 4000-foot long pathway parallel to the railroad tracks: twelve-foot width asphalt (hma). A 500 ft long retaining wall up to 3 ft tall with fence near Lee Road. A drainage structure east of Ohlone Parkway to be modified. Connection to Lee Road shall require installation of pathway or sidewalk to link to the existing sidewalk. At grade crossing at Ohlone Parkway and at a spur line located between Lee Road and Highway 1	$1,340
TRL 18W	MBSST Rail Trail: Walker Street to City Slough Trail connection	Construction of 2400 ft pedestrian and bicycle path parallel to the existing railroad tracks and within the rail right-of-way. Also includes public outreach and training to improve bicycle and pedestrian safety.	$862
TRL 05SC	MBSST - North Coast Rail Trail	Monterey Bay Sanctuary Scenic Trail Network (MBSST) sections ph. 1 Wilder Ranch-Coast Dairies (5.1 mi); ph. 2-Yellow Bank Beach/Panther Beach-Davenport (2.1 mi).	$20,000
TRL 8-9a	MBSST (Coastal Rail Trail_ - Segment 8 and 9)	Rail Trail design, environmental clearance and construction along the rail corridor between Pacific Avenue in the City of Santa Cruz to 17th Avenue in Santa Cruz County.	$32,934
TRL 8a	San Lorenzo River Bike/Ped Path at RR Bridge	Install a multi-use bicycle/pedestrian facility to connect the east end of the Beach Street Pathway with East Cliff Drive at the location of the current railroad bridge over the San Lorenzo River and to connect the east and west banks of the San Lorenzo River Pathway.	$1,550
SC-UC-P33-UC	UCSC Bicycle Parking Improvements	Install bicycle parking facilities to serve bicycle commuters to the University.	$520
SC-UC-P38-UC	Pedestrian Directional Map/Wayfinding System	Develop and install signs throughout campus.	$520
SC-UC-P57-UC	Kresge/Core West Pedestrian Bridge: ADA Upgrades	Modify bridge to enhance ADA access.	$3,100
SC-UC-P72-UC	Kerr/Porter Rd Pedestrian Bridge ADA Upgrades	Modify bridge to improve access.	$3,100
SC-VAR-P03-VAR	Bicycle Sharrows	Install sharrows (shared roadway marking) designating areas where bicyclists should ride on streets, especially when bicycle lanes are not available.	$520
SC-VAR-P05-VAR	Bike-Activated Traffic Signal Program	Provide traffic signal equipment to ensure that the traffic signals will detect bicycles just as cars are detected and ensure that the appropriate traffic signal phase is activated by the bicycles.	$1,030
SC-VAR-P08-VAR	Safe Paths of Travel	Regional program to construct and/or repair pedestrian facilities adjacent to high frequency use origins and destinations, particularly near transit stops.	$3,100
SC-VAR-P16-VAR	Bike Share	Establish and maintain an urban centered bike share program allowing county residents to access loaner bikes at key locations.	$5,170
SC-VAR-P27-VAR	Complete Streets Implementation	Additional projects for complete streets implementation that would fall under the Complete Streets Guidelines.	$10,330
SC-VAR-P29-VAR	Public/Private Partnership Bicycle and Pedestrian Connection Plan	Develop model for assisting local jurisdictions in working with private property owners to allow bicycle and pedestrian access through private property in areas identified for more intensified development in Sustainable Communities Strategy.	$150

Table C-3a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-VAR-P31-VAR	Uncontrolled Pedestrian Crossing Improvements	Implement improvements to uncontrolled pedestrian crossing such as painted and/or raised crosswalks, flashing beacons and pedestrian islands.	$2,570
SC-VAR-P32-VAR	Bicycle Treatments for intersection improvements (ADD)	Add painted bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike detection and signals), at major intersections.	$4,130
SC-VAR-P35-VAR	School Complete Streets Projects	Implement ped/bike programs and facilities near schools.	$10,330
SC-VAR-P39-VAR	Active Transportation Plan	Prepare Active Transportation Plans that address bicycle, pedestrian, safe routes to schools and complete streets facilities within the jurisdictions of Santa Cruz County as well as the Santa Cruz Harbor Port District.	$2,380
SC-VAR-P44-VAR	Electric Bicycle Commuter Incentive Program	Financial incentives, promotion and/or education to encourage residents to use electric bikes instead of commuting by car.	$1,000
WAT 41	Sidewalk Infill Harkins Slough Road and Main Street	Harkins Slough: 6 ft wide x 180 ft long sidewalks on south side of Harkins Slough Road and east of Ohlone Pkwy; Main Street: 6 ft wide x 450 ft long sidewalks on north side of Main Street from Pennsylvania Drive - Pacifica Boulevard.	$210
SC-WAT-P36-WAT	Alley Improvements	Repair and reconstruct some alleys.	$50
SC-WAT-P42-WAT	Pajaro Valley High School Connector Trail	Install bicycle/pedestrian trail (this trail connects Pajaro Valley High School to Airport Boulevard).	$620
SC-WAT-P43-WAT	Upper Watsonville Slough Trail	Install bicycle/pedestrian trail.	$670
SC-WAT-P46-WAT	Lower Watsonville Slough Trail	Install bicycle/pedestrian trail	$670
SC-WAT-P49-WAT	2nd/Maple Avenue (Lincoln to Walker) Traffic Calming and Greenway	Evaluate and if found necessary, add traffic calming/bicycle traffic priority with wayfinding signage to provide access to MBSST and create low stress grid around downtown.	$20
SC-WAT-P50-WAT	5th St (Lincoln to Walker) - Traffic Calming and Greenway	Evaluate and if found necessary, add traffic calming/bicycle traffic priority with wayfinding signage to provide access to MBSST and create low stress grid around downtown.	$20
SC-WAT-P51-WAT	Rodriguez St (Main St to Riverside)- Buffered Bike Lane	Evaluate and if found necessary, improve bike lane striping, add buffered lanes on Rodriguez Street to delineate bike lane from vehicle parking and traffic.	$10
SC-WAT-P52-WAT	Union/Brennan (Freedom to Riverside) - Sharrows	Evaluate and if found necessary, add sharrows to Union/Brennan.	$10
SC-WAT-P53-WAT	Kearney/Rodriguez - Ped Crossing	Evaluate and if found necessary, add pedestrian crossing at Kearney and Rodriguez with traffic calming for access to Radcliffe Elementary.	$30
SC-WAT-P54-WAT	Main Street - 3 HAWK Signals	Evaluate and if found necessary, add Hawk signals in 3 locations on Main Street.	$770
SC-WAT-P55-WAT	Main/Rodriguez/Union/Brennan (Freedom to Riverside) - Crosswalks	Evaluate and if found necessary, increase the number of crosswalks on Main Street, Rodriguez, and Union/Brennan to aim for 300 ft distance between crossings. Update pattern of crosswalks to block pattern.	$100
SC-WAT-P57-WAT	East Lake/Madison - Ped Crossing	Evaluate and if feasible, add pedestrian crossing (HAWK signal if ped volume warrants) at E Lake & Madison for better access to Hall Middle School.	$260

Table C-3a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-WAT-P58-WAT	Main Street (Freedom to Riverside) Ped/Bike Enhancements	Evaluate and if feasible improve ped facilities and bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) and bike boxes and bicycle priority at intersections on Main Street intersections.	$770
SC-WAT-P59-WAT	Downtown Watsonville Universal Streets	Evaluate and if feasible, implement universal streets, which are designed for pedestrians and restrict vehicular access, which facilitate new ped access.	$520
SC-WAT-P61-WAT	Freedom Blvd (Green Valley Rd to Davis) Bicycle and Pedestrian Improvements	Evaluate and if feasible, install bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) to address speed inconsistency between bicyclists and vehicles. Complete sidewalks, including pedestrian buffer and pedestrian islands at crossings.	$260
SC-WAT-P62-WAT	Freedom Blvd Pedestrian Crossings (Airport to Lincoln)	Evaluate and if feasible, install new and improve existing uncontrolled pedestrian crossings at Roach Road, Davis Avenue, Clifford Lane, Mariposa Avenue, Alta Vista Street, Crestview Drive, Martinelli Street and Marin Street).	$520
SC-WAT-P65-WAT	Upper Struve Slough Trail	Construction of 450 foot long pedestrian/bicycle path along upper Struve Slough from Green Valley Road to Pennsylvania Drive. The trail shall consist of a twelve-foot wide by one foot deep aggregate base section with the center eight feet covered with a chip seal. Additional improvements include installing a 130-length of modular concrete block retaining wall, reinforcing a 160-foot length of slough embankment with rock slope protection and installing a 175-foot long by eight foot wide boardwalk.	$460
SC-WAT-P73-WAT	Main Street Modifications (East Lake Avenue to Freedom Boulevard)	Provide complete streets improvements including but not limited to pedestrian crossings, bicycle facilities, bus stops, parking, sidewalks and traffic management	$1,000

Table C-3b: Santa Cruz County Highway Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-RTC-24e-RTC	3 - Hwy 1: Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street	Construct auxiliary lanes and reconstruct Capitola Avenue overcrossing.	$33,060
SC-RTC 24f-RTC	2 - Hwy 1: Auxiliary Lanes from 41st Avenue to Soquel Avenue and Chanticleer Bike/Ped Bridge	Construct auxiliary lanes and a bicycle/pedestrian overcrossing of Hwy 1 at Chanticleer Ave.	$29,960
SC-RTC-24g-RTC	4 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue	Construct auxiliary lanes.	$42,350
SC-RTC 24r-RTC	94 - Hwy 1: Northbound Auxiliary Lane from San Andreas Road/Larkin Valley Road to Freedom Boulevard	Construct northbound auxiliary lane.	$8,800

Table C-3c: Santa Cruz County Highway Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-CT-P45-CT	State Highway Preservation (bridge, roadway, roadside)	Various SHOPP projects that address bridge preservation, roadway & roadside preservation and limited mobility improvements.	$467,163
SC-CT-P46-CT	Collision Reduction & Emergency Projects	Various SHOPP projects that address collision reduction, mandates (including stormwater mandates) and emergency projects.	$219,714
SC-CT-P47-CT	Minors	Various small SHOPP projects (less than $1 million) that reduce/enhance maintenance efforts by providing minor operational, pavement rehab, drainage, intersection, electrical upgrades, landscape and barrier improvements.	$2,580
SC 25SC	Hwy 1/9 Intersection Modifications	Intersection modifications including new turn lanes, bike lanes, shoulders, lighting, sidewalks and access ramps. Includes	$7,850
SC-SC-38-SCR	Hwy 1/San Lorenzo Bridge Replacement	Replace the Highway 1 bridge over San Lorenzo River to increase capacity, improve safety and improve seismic stability, from Highway 17 to the Junction of Hwys 1/9. Reduce flooding potential and improve fish passage. Caltrans Project ID 05-0P460	$16,320
SC-SC-P81-SCR	Hwy 1/Mission Street at Chestnut/King/Union Intersection Modification	Modify design of existing intersections to add lanes and upgrade the traffic signal operations to add capacity, reduce delay and improve safety. Provide access ramps and bike lanes on King and Mission. Includes traffic signal coordination.	$4,650

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
CAP 11SC	Clares Street Traffic Calming	Implementation of traffic calming measures: chicanes, center island median, new bus stop and road edge landscape treatments to slow traffic. Construct new safe, accessible ped crossing at 42nd and 46th Avenue.	$750
CAP 16SC	Bay Avenue/Capitola Avenue Intersection	Multimodal improvements to intersection; roundabout.	$1,000
SC-CAP-P05-CAP	Cliff Drive Improvements	Installation of sidewalks, pedestrian crossing and slope stabilization of embankment including seawall.	$1,550
SC-CAP-P06-CAP	Citywide General Maintenance and Operations	Ongoing maintenance, repair and operation of road/street system within the City limits.	$40,666
SC-CAP-P07-CAP	Bay Avenue/Hill Street Intersection	Intersection improvements to improve traffic flow; roundabout.	$210
SC-CAP-P07p-CAP	Stockton Ave Bridge Rehab	Replace bridge with wider facility that includes standard bike lanes and sidewalks.	$1,500
SC-CAP-P09-CAP	Park Avenue/Kennedy Drive Improvements	Construct intersection improvements, especially for bikes/peds. May include traffic signal.	$360
SC-CAP-P17-CAP	Citywide Traffic Calming	Install traffic calming/neighborhood livability improvements.	$1,450
SC-CAP-P27-CAP	Wheelchair Access Ramps	Install wheelchair access/curb cut ramps on sidewalks citywide.	$200
SC-CAP-P28-CAP	Monterey Avenue at Depot Hill	Improve vehicle ingress and egress to Depot Hill along Escalona Ave and improve pedestrian facilities.	$260
SC-CAP-P29-CAP	Bay Avenue Traffic Calming and Bike/Ped Enhancements	Traffic calming features along Bay Avenue from Highway 1 to Monterey Avenue, including left turn pocket, buffered	$210
SC-CAP-P30-CAP	47th Avenue Traffic Calming and Greenway	Traffic calming and traffic dispersion improvements along 47th Avenue from Capitola Road to Portola Drive and implementation of greenway.	$100
SC-CAP-P32-CAP	Bay Avenue/Monterey Avenue Intersection Modification	Multimodal improvements to the intersection. Include signalization or roundabout along with pedestrian, bicycle treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) and transit access.	$310
SC-CAP-P34-CAP	Capitola Village Enhancements: Capitola Ave	Multimodal enhancements along Capitola Avenue.	$1,030
SC-CAP-P37-CAP	41st Avenue/Capitola Road Intersection Improvements	Widen intersection and reconfigure signal phasing.	$520
SC-CAP-P38-CAP	40th Avenue/Clares Street Intersection Improvements	Widen intersection and signalize.	$1,050
SC-CAP-P40-CAP	46th/47th Avenue (Clares to Cliff Drive) Bike Lanes/Traffic Calming	46th/47th from Clares to Portola/Cliff - Add traffic calming and wayfinding signage to connect to Brommer and MBSST.	$20
SC-CAP-P41-CAP	Brommer/Jade/Topaz Street Bike Lanes/Traffic Calming (Western City	Add buffered bike lanes, traffic calming and wayfinding signage and bike/ped priority crossing at 41st Avenue.	$20
SC-CAP-P53-CAP	Capitola Road & 45th Avenue I/S Improvements	Signalization or other LOS improvements.	$250
SC-CAP-P54-CAP	Wharf Road and Stockton Avenue I/S Improvements	Signalization or other LOS improvements.	$350
SC-CAP-P55-CA	Porter Street and Highway 1 I/S Improvements	Add additional dedicated right turn lane on Porter Street to northbound on ramp.	$250
SC-CAP-P56-CAP	Monterey Avenue and Park Avenue I/S Improvements	Signalization or other LOS improvements.	$400
SC-CAP-P57-CAP	Stockton Avenue and Capitola Avenue I/S Improvements	Signalization or other LOS improvements.	$200
CO 36SC	State Park Drive/Seacliff Village Improvements	Construct sidewalks, bike lanes, bus turnouts, central plaza, street lighting, EV charging station, parking, landscaping, drainage and roadway overlay in Seacliff core area.	$2,375

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
CO 64SC	Aptos Village Plan Improvements	Modifications for ped, bike, bus and auto traffic. Add pedestrian facilities and drainage infrastructure on both sides of Soquel Drive; improve bike lanes; new bike parking; new bus pullout and shelter on north side. Trout Gulch: Replace sidewalks with standard sidewalks on east side, ADA upgrades to west side sidewalks. Install traffic signals at Soquel Dr/Aptos Creek Rd & Soquel/Trout Gulch. Left turn lanes on Soquel at new street - Parade Street and at Aptos Creek Road. RR crossing modifications - new crossing arms, concrete panels for vehicle and pedestrian crossings. New RR xing at Parade St. Phase 1: Trout Gulch Rd improvements w/traffic signal and upgraded RR crossing at Soquel Drive. Pavement overlay of Soquel Dr (Spreckels to Trout Gulch) and a portion of Aptos	$4,100
CO 66SC	East Cliff Drive Cape Seal (12th-17th)	Pavement maintenance and asphalt replacement.	$230
CO 67SC	Empire Grade 2-Layer Seal (SC city limits to 130' N of Heller Drive)	Pavement maintenance and asphalt replacement.	$340
CO 67BSC	Empire Grade 2-layer Seal (130' north of Heller Dr to 0.79 mi north of Heller)	Pavement maintenance and asphalt replacement.	$220
CO 68SC	Green Valley Road 3-Layer Seal: Devon Lane to Melody Lane (0.58 mi)	Pavement maintenance and asphalt replacement.	$270
CO 69SC	Mt. Hermon Road Pavement Preservation: Graham Hill to 1000' N of Locatelli Lane	Pavement maintenance and asphalt replacement.	$890
CO 71SC	Bear Creek Road Surface Seal (PM 4.75-PM 7.0)	3-layer slurry seal and restriping to rehabilitate the roadway surface.	$860
CO 72SC	Capitola Road Slurry Seal (30th-17th Avenue)	Double fiberized slurry seal and restriping to rehabilitate the roadway surface.	$340
CO 73SC	Casserly Road Bridge Replacement	Replace existing bridge over a tributary of Green Valley Creek near Smith Rd intersection	$930
CO 74SC	Freedom Boulevard Pavement Preservation (Hwy 1 to Pleasant	Rehabilitate the roadway surface.	$1,430
CO 76SC	Portola Drive Cape Seal (E. Cliff to 24th Avenue)	Double fiberized slurry seal and restriping to rehabilitate the roadway surface.	$240
CO 78SC	Summit Road Chip Seal (Soquel-San Jose Road-Old SC Highway)	Asphalt digout, chip seal and restriping to rehabilitate the roadway surface.	$530
CO 79 SC	Branciforte Drive Chip Seal (Granite Ck Road-north)	Asphalt digouts, chip seal and restriping of 0.62 miles of Branciforte Drive from Granite Creek to PM 2.4	$197
CO 80 SC	Glen Arbor Road Recycle, Overlay & Chip Seal (SR 9 - Quail Hallow)	Pavement recycling, asphalt overlay, chip seal and restriping 0.52 miles of Glen Arbor Road from Hwy 9 at bridge to Quail Hollow Road.	$467
CO 81 SC	Granite Creek Road Recycle & Overlay	Pavement recycling, asphalt overlay, and restriping of 1.85 miles of Granite Creek Road from Scotts Valley city limits to PM 0.56.	$1,038
SC-CO-P02-USC	Airport Boulevard Improvements (City limits to Green Valley Road)	Major rehab, addition of bike lanes, transit facilities, merge lanes, intersection improvements, sidewalks, drainage and	$1,240
SC-CO-P03-USC	Amesti Road Multimodal Improvements (Green Valley to Brown Valley Road)	Roadway rehab and reconstruction, left turn pockets at Green Valley Road, Pioneer Road/Varni Road. Add bike lanes, transit turnouts, sidewalks, merge lanes, landscaping and intersection improvements.	$600

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-CO-P04-USC	Bear Creek Road Improvements (Hwy 9 to Hwy 35)	Major rehab, add bike lanes, turnouts, merge lanes and intersection improvements. Also some landscaping and drainage improvements.	$250
SC-CO-P08-USC	Corralitos Road Rehab and Improvements (Freedom Boulevard to Hames Road)	Major rehab, transit, bike and ped facilities. May also include drainage, merge lanes, landscaping and intersection improvements.	$620
SC-CO-P09-USC	East Cliff Drive Improvements (32nd Avenue to Harbor)	Roadway rehab, add left turn pockets at 26th and 30th Avenues, fill gaps in bikeways and sidewalks, add transit turnouts, intersection improvements. Some landscaping and drainage improvements.	$1,500
SC-CO-P10-USC	Empire Grade Improvements	Road rehab and maintenance, left turn pocket at Felton Empire Road, add bike lanes, transit facilities, some sidewalks, landscaping. Drainage improvements, merge lanes and intersection improvements may also be needed.	$1,190
SC-CO-P11-USC	Freedom Boulevard Multimodal Improvements (Bonita Drive to City of	Add bike lanes, sidewalks on some segments, transit turnouts, signalization. Left turn pockets at Bowker, Day Valley, White	$775
SC-CO-P12-USC	Graham Hill Road Multimodal Improvements (City of SC to Hwy 9)	Bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes, traffic signals. Major rehabilitation and maintenance.	$1,755
SC-CO-P13-USC	Green Valley Road Improvements	Add two-way left turn lanes from Mesa Verde to Pinto Lake on Green Valley Rd. Also includes some road rehab and	$1,030
SC-CO-P14-USC	La Madrona Drive Improvements (El Rancho Drive to City of Scotts Valley)	Bike lanes, sidewalks, transit turnouts, left turn pockets at Sims Road, Highway 17, and El Rancho Road), merge lanes, and intersection improvements. Also includes major rehabilitation, drainage and maintenance	$905
SC-CO-P17-USC	Sims Road Improvements (Graham Hill Road to La Madrona Drive)	Road rehab and maintenance, drainage, intersection improvements, landscaping, add bike, ped and transit facilities.	$440
SC-CO-P18-USC	Soquel Avenue Improvements (City of SC to Gross Road)	Transit turnouts, two way left turn lanes from Chanticleer to Mattison, merge lanes, signalization and intersection improvements. Signals at Chanticleer and Gross Road. Roadwork: major rehabilitation and maintenance, perhaps drainage improvements. Roadside: sidewalks, landscaping and new transit facilities.	$3,310
SC-CO-P19-USC	Soquel Drive Improvements (Soquel Avenue to Freedom Boulevard)	Major rehab, merge lanes, intersections improvements, signal coordination, transit turnouts, fill sidewalk and bike facility gaps, some landscaping.	$1,885
SC-CO-P20-USC	State Park Drive Improvements Phase 2	Transit turnouts, two way left turn, merge lanes, intersection improvements and fill gaps in bike and ped facilities including pedestrian crossing improvements, bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals). Plus, major rehabilitation and maintenance, drainage improvements, landscaping.	$335
SC-CO-P22-USC	Paul Sweet Road Improvements (Soquel Drive to end)	Major road rehab and maintenance. Also adds bike lanes, sidewalks, landscaping. Drainage improvements, merge lanes, and intersection improvements and new transit facilities may also be needed	$310
SC-CO-P24-USC	Lockwood Lane Improvements (Graham Hill Road to Scotts Valley limits)	Major road rehab, add bicycle lanes, sidewalks, some transit facilities, landscaping, and intersection improvements.	$243
SC-CO-P26a-USC	41st Avenue Improvements Phase 2 (Hwy 1 Interchange to Soquel Drive)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$340

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-CO-P26b-USC	Beach Road Improvements (City limits to Pajaro Dunes)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$340
SC-CO-P26d-USC	Brown Valley Road Improvements (Corralitos Rd to Redwood Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$340
SC-CO-P26e-USC	Buena Vista Road Improvements (San Andreas to Freedom Boulevard)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$825
SC-CO-P26g-USC	Casserly Road Improvements (Hwy 152 to Green Valley Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$208
SC-CO-P26h-USC	Center Avenue/Seacliff Drive Improvements (Broadway to Aptos Beach Drive)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$340
SC-CO-P26i-USC	Chanticleer Avenue Improvements (Hwy 1 to Soquel Drive)	Roadway and roadside improvements including bike lanes, sidewalks, drainage and intersection improvements.	$340
SC-CO-P26j-USC	East Zayante Road Improvements (Lompico Road to just before Summit Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$485
SC-CO-P26k-USC	El Rancho Drive Improvements (Mt. Hermon/Hwy 17 to SC city limits)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$655
SC-CO-P26l-USC	Eureka Canyon Rd Improvements (Hames Road to Buzzard Lagoon Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$655
SC-CO-P26m-USC	Glen Canyon Rd Improvements (Branciforte Dr to City of Scotts Valley)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$1,640
SC-CO-P26n-USC	Glenwood Drive Improvements (Scotts Valley City Limits to State Hwy 17)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$825
SC-CO-P26p-USC	Mattison Lane Improvements (Chanticleer Avenue to Soquel Avenue)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$400
SC-CO-P26q-USC	Mt. Hermon Rd. Improvements (Lockhart Gulch to Graham Hill Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$825
SC-CO-P26r-USC	Porter St Improvements (Soquel Dr to Paper Mill Rd)	Roadway and roadside improvements including buffered sidewalks and bicycle treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) to address speed	$340
SC-CO-P26s-USC	Seascape Blvd Improvements (Sumner Ave to San Andreas Rd)	Roadway improvements and pavement rehabilitation.	$170
SC-CO-P26u-USC	Summit Rd Improvements	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$1,530

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-CO-P27a-USC	37th/38th Ave (Brommer to Eastcliff) Multimodal Circulation Improvements and Greenway	Evaluate and if feasible improve vehicle and transit access on 38th Avenue from East Cliff to Brommer and develop greenway on 37th Avenue from East Cliff to Portola. Roadway improvements may include roadway and roadside improvements including sidewalks, bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals), transit turnouts, left turn pockets, and intersection improvement.	$570
SC-CO-P27c-USC	Corcoran Ave Improvements (Alice St to Felt St)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	$150
SC-CO-P27e-USC	Main St Improvements (Porter St to Cherryvale Ave)	Roadway and roadside improvements on Major Collector including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	$1,760
SC-CO-P27f-USC	Mill St Improvements (entire length)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	$360
SC-CO-P27h-USC	Paulsen Rd Improvements (Green Valley Rd to Whiting Rd)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	$240
SC-CO-P27i-USC	Pinehurst Dr Improvements (entire length)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	$180
SC-CO-P27k-USC	Spreckels Dr Improvements (Soquel Dr to Aptos Beach Dr)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	$340
SC-CO-P27l-USC	Winkle Ave Improvements (entire length from Soquel Dr)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	$655
SC-CO-P28a-USC	Bean Creek Rd Improvements (Scotts Valley City Limits to Glenwood Dr)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	$485
SC-CO-P28c-USC	Commercial Way Improvements (Mission Dr. to Soquel Dr.)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	$170
SC-CO-P28d-USC	Felton Empire Road Improvements (entire length to State Hwy 9)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	$655
SC-CO-P28f-USC	Pine Flat Rd Improvements (Bonny Doon Rd to Empire Grade Rd)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	$655
SC-CO-P28g-USC	Soquel-Wharf Road Improvements (Robertson Street to Porter Street)	Roadway and roadside improvements on various Minor Arterials including addition of bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals), transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	$515

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-CO-P28h-USC	Thurber Lane Improvements (entire length)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	$485
CO-P28i	Varni Rd Improvements (Corralitos Road to Amesti Road)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	$340
SC-CO-P29e-USC	Maciel Ave Improvements (Capitola Rd to Mattison Ln)	Improvements of roadways and roadsides on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	$400
SC-CO-P29f-USC	Paul Minnie Ave. Improvements (Rodriguez St to Soquel Ave)	Improvements of roadways and roadsides on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	$340
SC-CO-P30d-USC	Cabrillo College Dr Improvements (Park Ave to Twin Lakes Church)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	$240
SC-CO-P30n-USC	Rio Del Mar Blvd Improvements (Esplanade to Soquel Dr)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	$725
SC-CO-P31g-USC	Opal Cliff Dr Improvements (41st Av to Capitola City Limits)	Roadway, roadside and intersection improvements including sidewalks, bike treatments (such as buffered and/or painted bike lanes), designed to accommodate the number of users and link to East Cliff Drive.	$290
SC-CO-P33d-USC	Harper St Improvements (entire length-El Dorado Ave to ECM)	Roadway and roadside improvements on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	$310
SC-CO-P35-USC	Countywide General Road Maintenance and Operations	Ongoing maintenance, repair, and operation of road/street system within the unincorporated areas of the county.	$446,857
SC-CO-P36-USC	Soquel-San Jose Rd Improvements (Paper Mill Rd to Summit Rd)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	$580
SC-CO-P37-USC	Countywide ADA Access Ramps	Construction of handicapped access ramps countywide.	$620
SC-CO-P62-USC	Soquel Dr Road Improvements (Robertson St to Daubenbiss)	Roadway and roadside improvements including curb, gutter, sidewalk, bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals), left turn lanes, intersection improvements and roadway rehabilitation.	$410
SC-CO-P83-USC	San Lorenzo Way Bridge Replacement Project	The project will consist of completely replacing the existing one lane structure and roadway approaches with a two lane clear span bridge and standard bridge approaches.	$3,190

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-CO-P85-USC	Green Valley Rd Bridge Replacement Project	The project will consist of completely replacing the existing two lane structure and roadway approaches with a two lane clear span concrete slab bridge and standard bridge approaches.	$2,110
SC-CO-P88-USC	Either Way Ln Bridge Replacement Project	The project will consist of completely replacing the existing narrow one lane structure and roadway approaches with a two lane clear span precast voided concrete slab bridge and standard bridge approaches.	$2,180
SC-CO-P89-USC	Redwood Rd Bridge Replacement Project	The project will consist of completely replacing the existing steel army tread way bridge crossing a tributary of Brown's Creek on Redwood Road with a reinforced concrete slab bridge and standard bridge approaches.	$1,310
SC-CO-P90-USC	Fern Dr @ San Lorenzo River Bridge Replacement Project	The project will consist of completely replacing the existing three span single lane structure and roadway approaches with a new two lane clear span reinforced concrete box girder bridge and standard bridge approaches.	$2,830
SC-CO-P91-USC	Larkspur Bridge @San Lorenzo River	The project will consist of completely replacing the existing narrow one lane structure and roadway approaches with a two lane bridge and standard bridge approaches.	$3,930
SC-CO-P97-USC	County wide guardrail	Install guardrail on County roads.	$15,000
SC-SC-37-SCR	Murray St Bridge Retrofit	Seismic retrofit of existing Murray St. bridge (36C0108) over Woods Lagoon at harbor and associated approach roadway improvements and replacement of barrier rail. Includes wider bike lanes and sidewalk on ocean side. Include access paths to harbor if eligible.	$11,440
SC 42SC	Soquel Ave at Frederick St Intersection Modifications	Widen to improve eastbound through-lane transition on Soquel Avenue and lengthen right-turn pocket and bicycle lane on Frederick Street Upgrade access ramps.	$310
SC-SC-48-SCR	Ocean St Pavement Rehabilitation	Pavement rehabilitation using cold-in-place recycling process; includes new curb ramps, restriping of bicycle lanes and crosswalks.	$1,030
SC-SC-49-SCR	Water Street Pavement Rehabilitation(N. Branciforte Ave-Ocean St)	Pavement rehabilitation of Water Street between North Branciforte Avenue and Ocean Street. Grant Condition: Add bicycle and pedestrian treatments at intersections, especially at Branciforte to reduce conflicts between motorized and non-motorized users.	$1,453
SC-SC-P07-SCR	Citywide Operations and Maintenance	Ongoing maintenance, repair and operation of street system within the City limits.	$86,249
SC-SC-P100-SCR	Seabright/Murray Traffic Signal Modifications	Remove split phasing on Seabright and add right-turn lane northbound.	$1,030
SC-SC-P101-SCR	Swift/Delaware Intersection Roundabout or Traffic Signal	Install Traffic Signal or Roundabout at Intersection to improve capacity and safety.	$500
SC-SC-P104-SCR	Measure H Road Projects	Road rehabilitation and reconstruction projects citywide to address backlog of needs using Measure H sales tax revenues.	$41,800
SC-SC-P109-SCR	Bay/High Intersection Modification	Install a roundabout or modify the traffic signal to include protected left-turns and new turn lanes. Revise sidewalks, access ramps and bike lanes as appropriate.	$3,500
SC-SC-P128-SCR	Citywide Street Sweeping	Ongoing street sweeping, funded from City Refuse Enterprise Fund.	$19,800
SC-SC-P13-SCR	Riverside Ave/Second St Intersection Modification	Modify intersection to reduce congestion and improve pedestrian crossing.	$175

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-SC-P77-SCR	Bay Street Corridor Modifications	Intersection modifications on Bay Street Corridor from Mission St to Escalona Drive, including widening at the Mission Street northeast corner and widening on Bay. Improve bike lanes and add sidewalks to west side of Bay	$970
SC-SC-P83-SCR	West Cliff/Bay Street Modifications	Signalization at all-way stop controlled intersections.	$500
SC-SC-P86-SCR	Ocean St Streetscape and Intersection, Plymouth to Water	Implement this phase of the Ocean Street plan and modify Plymouth St to provide separate turn lanes and through lanes, widen sidewalks, pedestrian islands/bulbouts, transit improvements, street trees, street lighting and medians landscaping improvements. This includes pedestrian and bicycle crossing improvements and detection and connectivity to the pedestrian and bicycle path on the San Lorenzo River and adjacent neighborhoods. Include Gateway treatment.	$2,000
SC-SC-P90-SCR	High St/Moore St Intersection Modification	Add a protected left turn to existing signalized intersection along High St at city arterial. Project is located in high pedestrian and bicycle use activity area.	$100
SC-SC-P91-SCR	Shaffer Road Widening and Railroad Crossing	Construction of a new crossing of the Railroad line at Shaffer Rd. and widening at the southern leg of Shaffer in conjunction with development. Complete sidewalks and bike lanes.	$1,000
SC-SC-P93-SCR	Beach/Cliff Intersection Signalization	Signalize intersection for pedestrian and train safety.	$210
SC-SV-27-SCV	Mt Hermon Road/Scotts Valley Drive/Whispering Pines Drive Intersection Operations Improvement Project	Modify intersection: Extend length of left turn lane from northbound Mt. Hermon Road to eastbound Whispering Pines Drive and evaluate adding a third through lane, construct curb, gutter, sidewalk and curb ramps, modify striping and pavement markings, improve bicycle facilities (green lanes and bike box), resynchronize intersection timing, and repave intersection area.	$450
SC-SV-28-SCV	Glen Canyon Road/Green Hills Road/S. Navarra Drive Bike Corridor and Roadway Preservation	Repave two roads, add bike lanes and signage. Includes road markings like sharrows and green lane treatments to assist commuters, students, and recreational bikers; and bike/walk education and outreach programs	$1,265
SC-SV-P06-SCV	Citywide Access Ramps	Place handicap ramps at various locations.	$210
SC-SV-P27-SCV	Citywide General Maintenance and Operations	Ongoing maintenance, repairs and operation of road/street system within the City limits.	$13,459
SC-SV-P28-SCV	Neighborhood Traffic Calming	Citywide traffic calming devices.	$770
SC-SV-P47-SCV	Mt Hermon/Scotts Valley - Transit Queue Jump	Evaluate and if found to be beneficial, remove right turn islands at Mt Hermon Road/Scotts Valley Road to add transit	$620
SC-SV-P51-SCV	Mt. Hermon Road/Town Center Entrance Traffic Signal	Install new traffic signal at the intersection of the future Town Center road that will accommodate increased pedestrian travel. Add a right-turn lane on the westbound approach.	$130
SC-SV-P52-SCV	Kings Village Road/Town Center Entrance Traffic Signal	Install new traffic signal at the intersection of Kings Village Rd and new Town Center entrance (near transit center) with protected pedestrian crossings and transit signal priority.	$105
SC-UC-P01-UC	UCSC Main Entrance Improvements	Realign roadway, transit pullout/shelter, relocate bike parking, construct pedestrian path, historic resource analysis.	$2,070
SC-UC-P59-UC	UCSC Lump Sum Roadway Maintenance	Repaving and rehabilitation of roadways on UCSC campus to maintain existing network.	$3,100

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-UC-P66-UC	Transportation-Related Stormwater Management Projects	Retrofitting existing transportation facilities and developing new facilities with new stormwater management techniques.	$1,030
SC-UC-P68-UC	Parking Management Technology Improvements	Updating existing parking management technologies to allow for more effective management, additional parking management at Coastal Marine Campus and 2300 Delaware site.	$410
SC-VAR-P13-VAR	Lump Sum Emergency Response Local Roads	Lump sum for repair of local roads damaged in emergency.	$23,370
SC-VAR-P14-VAR	Lump Sum Bridge Preservation	Painting, barrier rail replacement, low water crossing, rehab and replacement bridges for SHOPP and Highway Bridge Program (HBP).	$54,500
SC-WAT-O1A-WAT	Hwy 1/Harkins Slough Road Interchange: Bicycle/Pedestrian Bridge	Construction of Pedestrian/Bicycle Bridge over Highway 1. Caltrans Project ID 05-1G490	$9,300
SC-WAT 27a-WAT	Main Street (Hwy 152)/Freedom Blvd Roundabout	Installation of a roundabout to replace the currently signalized intersection with safety considerations for bike/ped. Caltrans Project ID - 05-0T150.	$1,290
WAT 38SC	Airport Boulevard Improvements (Freedom Boulevard to City Limits)	Road widening to accommodate extension of bicycle lane and portion of travel lane, installation of bus pull out, new sidewalks and curb ramps, refuge island, rectangular flashing beacon, striping and roadway rehab.	$1,330
WAT 40SC	Airport Boulevard Improvements: Westgate/Larkin to Hanger Way	Reconstruct roadway, install new sidewalk, upgrade curb ramps and driveway crossings, install median islands, modify traffic signals to include add'l ped crossing and install rectangular rapid flashing beacon at crosswalk.	$1,550
WAT 42SC	Green Valley Road Reconstruction (Struve Slough-Freedom Blvd)	Reconstruct existing roadway and bike lanes, replace asphalt ped path with curb, gutter sidewalk and ADA compliant curb ramps; upgrade signage and loop detectors.	$1,198
WAT 43SC	Freedom Boulevard Plan Line	Preparation of a plan line for Freedom Boulevard between Green Valley Road and Buena Vista Drive that delineates multimodal modifications supported by the community.	$160
SC-WAT-P04-WAT	Neighborhood Traffic Plan	Plan to identify and address concerns regarding speeding, bicycle and pedestrian access and safety, and other neighborhood traffic issues.	$100
SC-WAT-P06-WAT	Citywide General Maintenance and Operations	Ongoing maintenance, repair, and operation of road/street system, including bicycle and pedestrian facilities.	$51,643
SC-WAT-P13-WAT	Neighborhood Traffic Plan Implementation	Address concerns about traffic complaints through education, enforcement and engineering solutions. Install traffic calming devices that do not impede bicyclist access.	$410
SC-WAT-P31-WAT	Ohlone Parkway Improvements - Phase 2 (UPRR to West Beach)	Roadway, pedestrian and bicycle facilities.	$520
SC-WAT-P35-WAT	Bridge Maintenance	Maintenance of bridges.	$100
SC-WAT-P38-WAT	Freedom Boulevard Undergrounding	Underground existing overhead utilities.	$1,270
SC-WAT-P40-WAT	Main Street Modifications (500 Block: Fifth Street to East Lake Avenue)	Repair, replace and install curb, gutter, and curb ramps; replace and upgrade signage and striping. Evaluate and if feasible, provide bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) and buffered sidewalk.	$620

Table C-3e: Santa Cruz County Other Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-AIR-P01-WAT	Lump Sum Watsonville Municipal Airport Capital Projects	Projects from the Watsonville Airport Capital Improvement Program. Includes new hangers, reconstruction of aviation apron, security features and runway extensions.	$21,700
SC-AIR-P02-WAT	Watsonville Municipal Airport Operations	Ongoing operations/maintenance.	$44,000
SC-CO-P96-USC	Capital improvement projects consistent with the Sustainable Santa Cruz County Plan	Construct associated multimodal infrastructure improvements associated with the Sustainable Santa Cruz County Plan.	$11,000
SC-CT-P09e-CT	Measure D Hwy 9 Corridor Projects	Corridor study is underway to identify need for shoulder widening, turnouts for buses, bicycle and pedestrian improvements, and turn lanes at spot locations in San Lorenzo Valley.	$7,349
SC-CT-P48-CT	Hwy 17 Wildlife Habitat Connectivity	Wildlife crossing.	$9,198
SC-RTC 03a-RTC	Santa Cruz Branch Rail Line Improvements	Infrastructure preservation for current uses and future transportation purposes.	$570
RTC 04SC	Planning, Programming & Monitoring (PPM) - SB45	Development and amendments to state and federally mandated planning and programming documents, monitoring	$1,870
SC-RTC-P02a-RTC	Environmental Assessment, Economic and Other Analyses of Options for Rail Corridor	Environmental assessment, economic and other analyses of a possible future public transit system and other transportation options on the rail corridor right-of-way.	$8,000
SC-RTC-P07-RTC	SCCRTC Administration (TDA)	SCCRTC as Regional Transportation Planning Agency for Santa Cruz County distributes Transportation Development Act Local Transportation Funds and State Assistance Funds for planning, transit, bicycle facilities and programs, pedestrian facilities and programs and specialized transportation in accordance with state law and the unmet transit needs process.	$14,300
SC-RTC-P08-RTC	SCCRTC Planning	SCCRTC Planning Tasks. Includes public outreach, long and short range planning, interagency coordination.	$13,750
SC-RTC-P25-VAR	Transit Oriented Development Grant Program	Smart growth grant program to fund TODs that encourage land use and transportation system coordination. May include joint child care/PNR/transit centers.	$2,570
SC-RTC-P59-RTC	Measure D Administration and Implementation	SCCRTC administration, implementation and oversight of Measure D and the revenues generated from the 2016 Santa Cruz County Transportation Sales Tax - Measure D.	$16,500
SC-UC-P65-UC	Electric Vehicle Charging Stations	Add additional electrical infrastructure and install electric vehicle charging stations around campus.	$310
SC-UC-P73-UC	UCSC Parking Operations & Maintenance	Operate and administer the parking operations for UCSC including planning, TDM, marketing and debt service.	$70,450
SC-VAR-P07-VAR	Transportation System Electrification	Partnership with local gov't agencies, electric vehicle manufactures, businesses, and Ecology Action to establish electric vehicle charging stations for EV's, plug-in hybrids, NEV's, as well as ebikes and escooters.	$51,650
SC-VAR-P10-VAR	Safe Routes to Schools Studies	Studies to assess pedestrian and bicycle safety near schools.	$210
SC-VAR-P22-VAR	Monterey Bay Electric Vehicle Alliance (MBEVA)	Help facilitate this broad collaboration of PEV advocates, businesses, union labor, manufacturers and public agencies to assist the adoption of PEV's in the Monterey Bay region.	$300
SC-VAR-P25-VAR	Planning for Transit Oriented Development for Seniors	Evaluate opportunities for Transit Oriented Development serving seniors including access to medical facilities.	$80

Table C-3e: Santa Cruz County Other Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-VAR-P30-VAR	Public/Private Partnership Transit Stops and Pull Outs Plan	Develop model for assisting local jurisdictions in working with businesses to install transit pullouts and shelters on property in areas identified as high quality transit corridors in Sustainable Communities Strategy.	$150
SC-VAR-P36-VAR	Safety Plan	Develop a safety plan that addresses traffic related injuries and fatalities for all modes of transportation.	$310
SC-VAR-P38-VAR	Environmental Mitigation Program	Allocate funds to protect, preserve, and restore native habitat that construction of transportation projects listed in SCCRTC's RTP could potentially impact.	$5,680

Table C-3f: Santa Cruz County Transportation Demand Management Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-CO 50-USC	Santa Cruz County Health Service Agency - Traffic Safety Education	Ongoing education program to decrease the risk and severity of collisions.	$2,200
SC-RTC 02a-RTC	Cruz511 TDM and Traveler Information	Transportation demand management including centralized traveler information system and ride matching services.	$2,640
SC-RTC-15-RTC	Vanpool Incentive Program	Assist in start up and retention of vanpools.	$100
RTC 17SC	Ecology Action Transportation Employer Membership Program	Community organization that promotes alternative commute choices. Work with employers, incentives for travelers to get out of SOVs including: emergency ride home, interest-free bike loans, discounted bus passes.	$1,135
SC-RTC-26-OTH	Bike To Work/School Program	Countywide education, promotion, and incentive program to actively encourage bicycle commuting and biking to school.	$1,620
SC-RTC-33-VAR	Cabrillo College TDM Programs	Provide students and employees at all four Cabrillo College campuses with education, promotion, and incentives that support the use of sustainable transportation modes.	$780
SC-RTC-P48-VAR	Climate Action Transportation Programs	Projects that reduce greenhouse gas emissions through reducing vehicle trips and vehicle miles traveled, increasing fuel efficiency and expanding use of alternatively fueled vehicles. Includes comprehensive outreach and education campaigns, a countywide emergency ride home for those using alternatives and TDM incentive programs.	$2,330
SC-RTC-P49-RTC	RTC Bikeway Map	Update, print and distribute free SC County Bikeway Map and update GIS files as needed.	$320
SC-RTC-P53-VAR	TDM Individualized Employer/Multi-unit Housing Program	Implement individualized employer and multiunit housing TDM programs with incentives for existing development.	$2,325
SC-RTC-P54-RTC	School-Based Mobility/TDM Programs	Student transportation programs aimed at improving health and well being, transportation safety and sustainability and that facilitate mode shift from driving alone in a motor vehicle to active and group transportation.	$1,100
SC-RTC-P57-RTC	Shared Parking Program	Develop tools to allow adjacent property owners to develop and share parking facilities.	$50
SC-UC-P61-UC	Traveler Safety Education/Information Programs	Bike/pedestrian safety programs; light and helmet giveaways, safety classes, distracted driver programs, bus etiquette program.	$100
SC-UC-P63-UC	UCSC Vanpool Program	Maintain, operate and expand upon UCSC vanpool program.	$8,680
SC-UC-P69-UC	UCSC Commute Counseling Program	Staffing program development to individually market to UCSC affiliates on more sustainable means of travel to campus.	$3,100
SC-UC-P70-UC	UCSC Commuter Incentive Programs	Provide ongoing support and development of new programs to encourage travel to campus via sustainable modes of travel.	$1,550
SC-VAR-P06-VAR	Carsharing Program	Program to assist people in sharing a vehicle for occasional use.	$1,290
SC-VAR-P17-VAR	Eco-Tourism - Sustainable Transportation	Provide sustainable transportation information, incentives and promotions to the estimated one million visitors to Santa Cruz County.	$515
SC-VAR-P18-VAR	Mission St/Hwy 1 Bike/Truck Safety Campaign	Partnership with road safety shareholders including Caltrans, UCSC, City of Santa Cruz, Ecology Action, trucking companies and others to improve bike/truck safety along the Mission Street corridor.	$520

Table C-3f: Santa Cruz County Transportation Demand Management Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-VAR-P19-VAR	School Safety Programs	Bicycle and walking safety education and encouragement programs targeting K-12 schools in Santa Cruz County including Ecology Action's Safe Routes to School and Bike Smart programs.	$1,910
SC-VAR-P20-VAR	Public Transit Marketing	Initiatives that increase public transit ridership including discount passes, free fare days, commuter clubs and promotional and marketing campaigns.	$775
SC-VAR-P24-VAR	Countywide Senior Driving Training	Coordinate and enhance current programs that help maturing drivers maintain their driving skills and provides transitional info about driving alternatives.	$80
SC-VAR-P26-VAR	Park and Ride Lot Development	Upgrade and maintain existing park and ride lots for commuters countywide. Secure additional park and ride lot spaces for motorized vehicles and bicycles.	$2,260
SC-VAR-P37-VAR	Transportation Demand Management Plan	Collaborate with other organizations to develop a coordinated plan for transportation demand management program implementation for Santa Cruz County.	$310
VAR 01SC	Santa Cruz County Open Streets	Community events promoting alternatives to driving alone as part of a sustainable, healthy, and active life-style.	$100

Table C-3g: Santa Cruz County ADA Para-transit Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-CTSA-P01-OTH	Countywide Specialized Transportation	Non-ADA mandated paratransit and other specialized transportation service for seniors and people with disabilities.	$46,000
SC-MTD-02-MTD	ADA Paratransit Vehicle Replacements	Replace buses/vans for ADA paratransit fleet (including Accessible Taxi program).	$6,000
SC-MTD-P10C-MTD	ADA Paratransit Service - Continuation of Existing Service	Operation & maintenance cost of existing Paratransit service.	$121,000
SC-MTD-P11-MTD	ADA Service Expansion	Add capacity to meet increased trip demand thru 2040.	$1,054
SC-MTD-P30-MTD	ParaCruz Mobile Data Terminals; Radios	Replace mobile data terminals in vehicles.	$400
SC-MTD-P51-MTD	ADA Access Improvements	Add or improve ADA accessibility to all bus stops and METRO facilities.	$350
SC-RTC-P43-OTH	Senior Employment Ride Reimbursement	Reimburse low income seniors for transit expenses to/from employer sites.	$1,600
SC-UC-P75-UC	Disability Van Service	Operate disability van service.	$5,450

Table C-3h: Santa Cruz County Transit Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-MTD-P12-MTD	Hwy 17 Express Service Restoration and Expansion	Restore Hwy 17 Express service to FY16 levels, then expand service 2% annually.	$4,234
SC-MTD-P14-MTD	Local Transit Service Restoration and Expansion	Restore local service to FY16 levels, then expand service 2% annually.	$71,861
SC-RTC-P60-RTC	Regional State Transit Assistance Projects	State Transit Assistance (STA) eligible transit projects.	$33,220
SC-VAR-P45-VAR	West Side Transit Hub	Transfer node near rail corridor at Natural Bridges Drive - may include transit, rideshare, bicycle, bikeshare, pedestrian to provide regional connections to/from other parts of the county and the university.	$580
SC-VAR-P46-VAR	Live Oak Transit Hub	Transfer node near rail corridor at 17th Avenue - may include transit, rideshare, bicycle, bikeshare, pedestrian to provide regional connections to/from other parts of the county.	$530
SC-VAR-P47-VAR	Watsonville Transit Hub	Expand transportation mode options at transfer node near rail corridor and current transit center to increase use of transit, rideshare, bicycle, bikeshare, pedestrian to provide regional connections to/from other parts of the county.	$585

Table C-3i: Santa Cruz County Transit Operations Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-MTD-P10-MTD	Local Transit - Continuation of Baseline Service Levels 2019-2040	Operation & maintenance cost of existing local fixed route bus service.	$741,400
SC-MTD-P10B-MTD	Hwy 17 Express Service - Continuation of Baseline Service	Operation & maintenance cost of existing bus service.	$83,600
SC-MTD-P50-MTD	Automatic Vehicle Locator and Automatic Passenger Counter Systems	Automatic Vehicle Locator and Automatic Passenger Counter systems on all METRO buses. Real time bus arrival/departure displays at select stops. Necessary IT upgrades.	$3,200
SC-RTC 36-RTC	Railroad Infrastructure Maintenance and Rehabilitation	Protect, maintain and rehabilitate the railroad infrastructure on the Santa Cruz Branch Rail Line including bridges, track, drainage, culverts, signals, etc.	$22,410
SC-RTC-P03-RTC	Rail and Trail Corridor Management and Maintenance	Operating expenses for rail line oversight.	$3,850
SC-RTC-P58-RTC	Real-Time Transit Info	Develop and maintain distribution channel for disseminating real time transit arrival and departure information to Santa Cruz Metro users.	$220
SC-UC-P23-UC	Transit Vehicles	Ongoing capital acquisition of transit vehicles for on-campus transit and University shuttles.	$5,170
SC-UC-P62-UC	Bus Tracking and AVL Transit Programs	GPS bus tracking and Automatic Vehicle Locator programs inform travelling population of transit locations so they can make informed mode choices.	$260
SC-UC-P74-UC	UCSC Transit Service	Operate the on campus shuttle service and Night Owl.	$68,410
SC-VC-P1-OTH	Volunteer Center Transportation Program	Program providing specialized transportation to seniors and people with disabilities.	$1,640

Table C-3j: Santa Cruz County Transit Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
MTD 18SC	Replacement Transit Fareboxes, Ticket Vending Machines and Fare System Enhancements	Upgrade GFI Farebox system to enable fare media loading, tracking, registration, interoperability via internet.	$1,000
SC-MTD-P04-MTD	Metro Bus Replacements	Replace fleet at the end of normal bus lifetime.	$94,495
SC-MTD-P31-MTD	Bus Rebuild and Maintenance	Rebuild engines; fleet maintenance equipment.	$5,174
SC-MTD-P32-MTD	Non-Revenue Vehicles	Replace support vehicles.	$1,200
SC-MTD-P35-MTD	Transit System Technology Improvements	Automated Data Processing software, telephones, portable computers, servers, Customer Information Kiosks, digital ID processing equipment. Maintain and upgrade office software and hardware, bandwidth, web site, phone network, to enhance productivity, customer service and maintain functionality.	$1,000
SC-MTD-P36-MTD	Metro facilities repair/upgrades	Maintain and upgrade facilities.	$4,300
SC-MTD-P52-MTD	Bus Stop and Station Improvements	Improve customer access and/or amenities at bus stops; add bus stop pads to preserve pavement.	$500
SC-UC-P64-UC	Alternative Fuel Fleet Vehicles	Purchase and upgrade fleet vehicles to alt. fueled vehicles (refuse trucks, street sweepers, fleet cars, etc.)	$500

Table C-3k: Santa Cruz County Transportation System Mangement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost ($ 000s)
SC-CAP-P50-CAP	Capitola-wide HOV priority	Evaluate HOV priority at signals and HOV queue bypass.	$40
SC-CHP-P01-CHP	Hwy 17 Safety Program	Continuation of Highway 17 Safety Program in Santa Cruz County.	$2,200
SC-MTD-P06-MTD	Transit Technological Improvements	IT software and hardware upgrades for scheduling, customer service, planning systems.	$2,500
RTC 01SC	Freeway Service Patrol (FSP) on Hwy 1 and Hwy 17	Maintain and expand tow truck patrols on Highways 1 and 17.	$6,080
SC-RTC-P01-RTC	SAFE: Call Box System Along Hwys	Motorist aid system of telephone call boxes along all highways plus maintenance and upgrades. Call boxes may be used to request assistance or report incidents.	$5,390
SC-RTC-P51-RTC	Performance Monitoring	Transportation data collection and compilation to monitor performance of transportation system to advance goals/targets.	$220
SC-SV-P42-SCV	Synchronize Traffic Signals along Mt. Hermon Road	Re-time to coordinate traffic signals along Mt Hermon Road.	$100
SC-SV-P46-SCV	Mt Hermon/King's Village Road - Transit Signal priority	Transit signal priority at Kings Village Road/Mt Hermon Road.	$80
SC-UC-P58-UC	UCSC Traffic Control	Non-traditional traffic control/crossing guard program at key intersections on UCSC campus to improve pedestrian and vehicle safety, reduce conflicts, improve travel times.	$2,580
SC-VAR-P34-VAR	Transit Priority	Install transit queues at major intersections.	$2,585
SC-WAT-P56-WAT	Watsonville-wide HOV priority	Evaluate HOV priority at signals and HOV queue bypass.	$50

D Public Participation

Introduction

Solutions to our region's transportation needs require a comprehensive planning effort that coordinates land use and transportation and develops an integrated, multimodal transportation system. The 2035 Metropolitan Transportation Plan (MTP) and its Sustainable Community Strategy (SCS) contain specific public policies and strategies, as well as projects and programs aimed at meeting the diverse mobility needs of our growing and changing Monterey Bay region.

A critical component in preparing the 2035 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 described below were structured to enable all participants the ability to express their genuine regional values and interests in the shaping and implementation of regional policies and decisions regarding the transportation system.

Development of the 2035 MTP/SCS has been a multi-year effort that began in 2012. 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 a public participation plan that included numerous community workshops and meetings, telephone and online surveys.

Following are highlights of public participation and consultation activities that occurred through the process:

- Eighteen community workshops held in cities throughout the greater Monterey Bay region in Santa Cruz, Monterey, and San Benito counties.
- Seven public hearings conducted to receive comments on the Draft 2035 MTP/SCS.
- A project website (www.MovingForwardMB.org) which served as the online portal to information about the project and access to surveys and mapping data.
- Design and implementation of a GIS-based mapping system called AMBAG LiveMaps which provides for the first time a regionwide spatial mapping system that includes land use, transportation, and environmental features, and is available to public organizations, stakeholders and the general public.
- Three interactive online surveys in English and Spanish that enabled the public to provide critical input and feedback on major milestones throughout the planning process.

- TAMC conducted a telephone survey to assess the community's current trends and priorities for transportation infrastructure needs and investment.
- Preparation of a five-minute video in English and Spanish to explain the planning process and the land use and mobility challenges facing the greater Monterey Bay region.
- Preparation of handout materials, flyers, information sheets, frequently asked questions (FAQs), etc., many of which were prepared both in English and Spanish.
- Twenty-nine public meetings with the AMBAG Board, also at key milestone events throughout the planning process.
- Ten meetings with the Planning Directors Forum (PDF), comprised of planning directors and their staff from the three Monterey Bay area counties and eighteen cities.
- Nine meetings with the Regional Advisory Committee (RAC), a group of key stakeholders made up of environmentalists, business leaders, community activists, and local planning commissioners.
- Two public meetings with boards of each of the Regional Transportation Planning Agencies (SCCRTC, TAMC, and SBtCOG) at key milestone events throughout the planning process.
- Twenty-five meetings with technical advisory committees (TACs) within the three Monterey Bay area counties.
- Focused one-on-one meetings with various stakeholders and interests groups to help educate and inform them about the planning process and answer questions they raised.

The following is a description of each component of the public participation and consultation process that was involved as part of the 2035 MTP/SCS planning process.

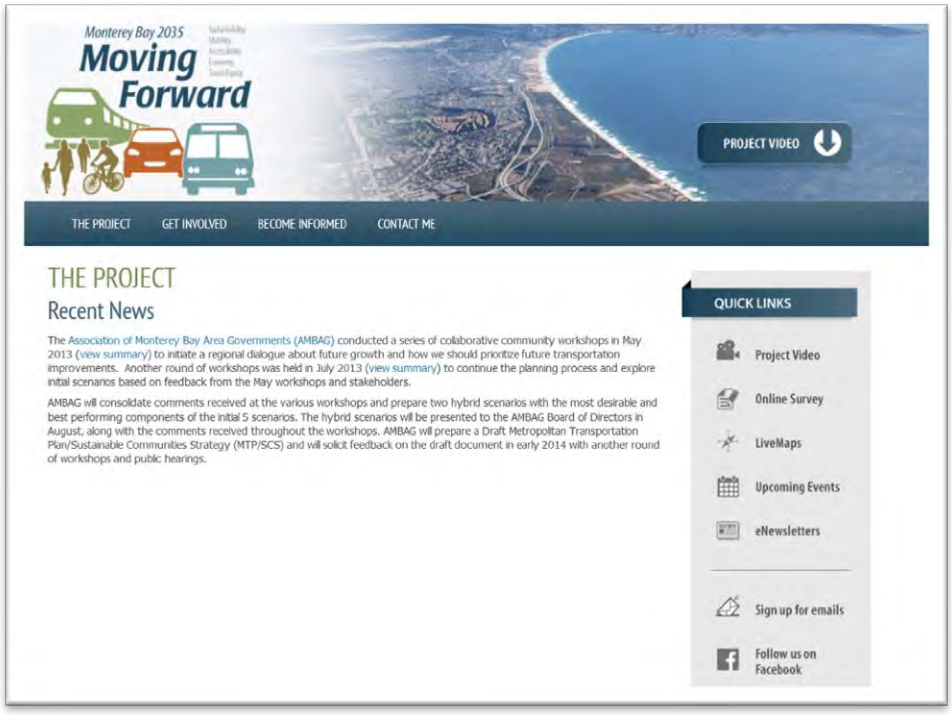
Tools and Resources

Project Website

The project website (www.MovingForwardMB.org) is the central portal for information about the project and upcoming events. 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 utilize "Quick Links" to the project video, online survey, LiveMaps, upcoming events, recent news, email sign-up, and the AMBAG Facebook page.

Tabs at the top linked to a variety of pages providing useful information on the history of the project, a glossary of terms and acronyms, frequently asked questions (FAQs), documents and maps, and pages provided within the Quick Links.



Screenshot of the Homepage

Project Video

A project video was created in both English and Spanish to introduce the issues, the process, and the outcome for the project. The video is prominently located on the website and is available on YouTube.

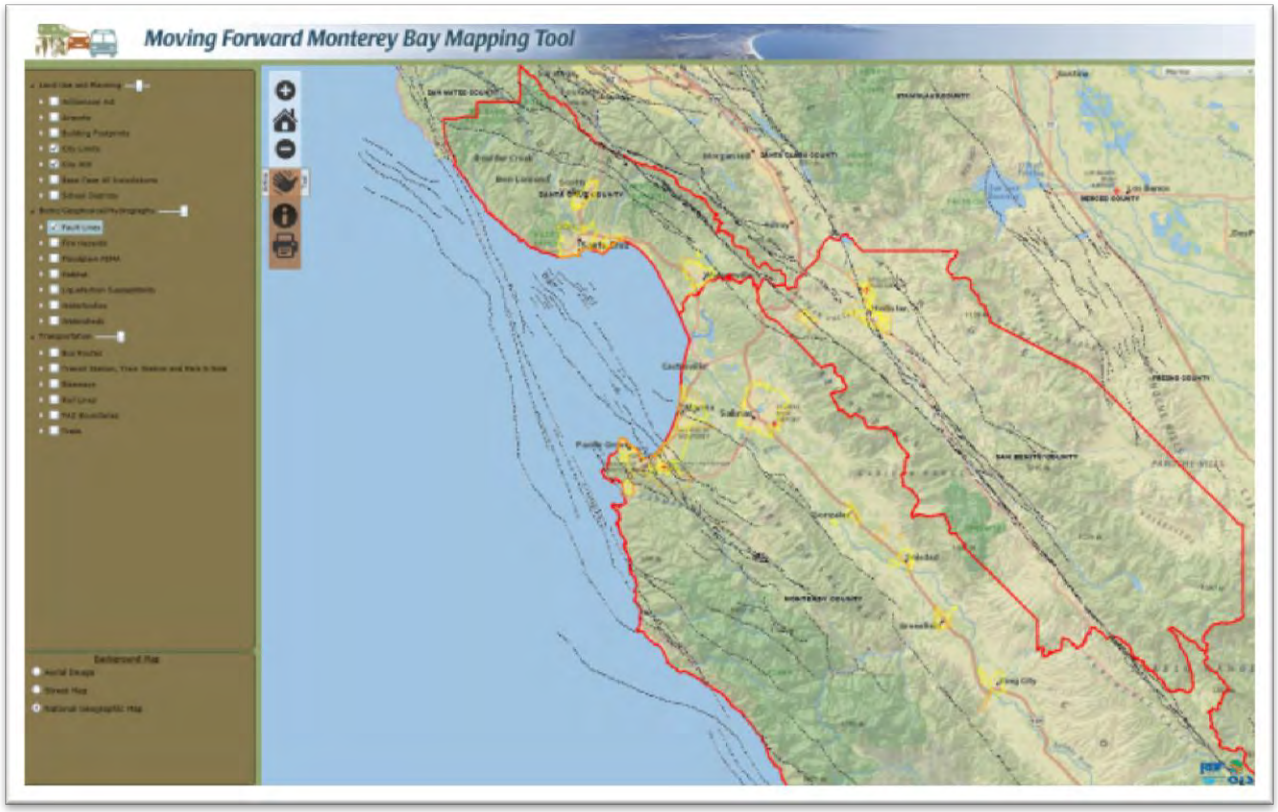
Screenshot of project video

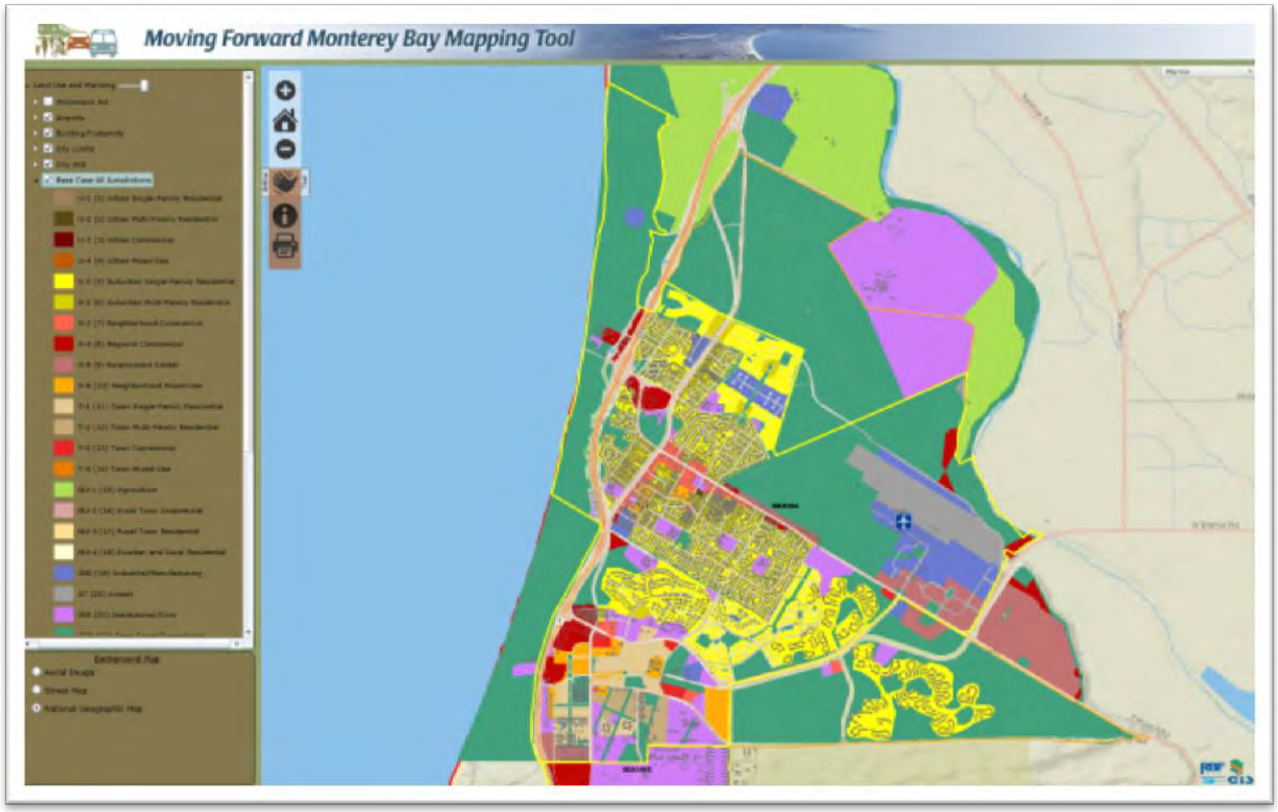
LiveMaps

AMBAG has collected geographic information system (GIS) data from the various jurisdictions over the years and has stored the data on an internal server. As part of this project and to better foster regional coordination, the data was organized into a central database and hosted on a public website and branded as *AMBAG LiveMaps*.

This interactive tool is available to anyone with an internet connection. It is the intent that the data will be regularly updated and new features will be added to enhance the user experience and address comments from jurisdiction staff and other users.

The *AMBAG LiveMaps* tool is organized by Land Use and Planning (city limits, airports, land use, etc.), Natural Features (fault lines, fire hazards, waterbodies, etc.), and Transportation (bus routes, bikeways, trails, etc.). These categories will be expanded and new data added as it is made available and organized.


Moving Forward Monterey Bay Mapping Tool


Moving Forward Monterey Bay Mapping Tool

Screenshots from AMBAG LiveMaps website.

Online Survey

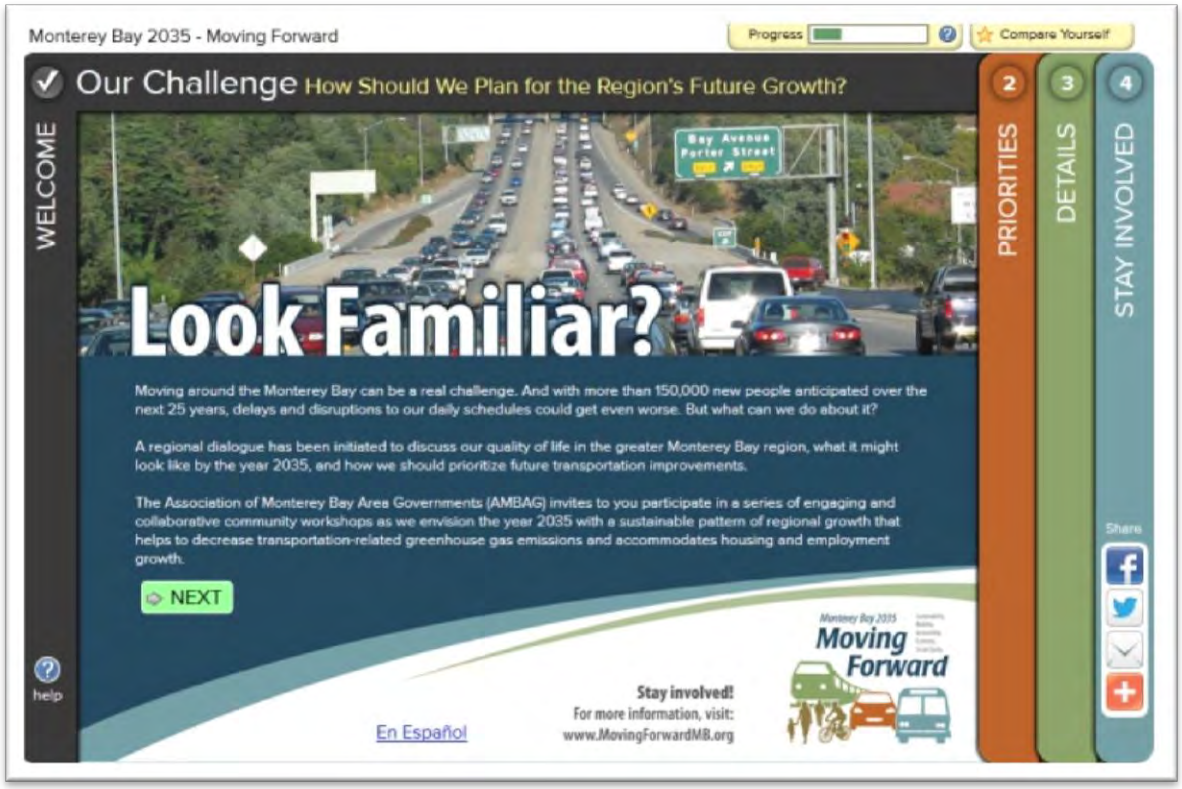
Public workshops are a great tool to solicit comments from the community; however, not everyone is able or willing to participate. To help increase awareness and to reach more people than conventional workshops, a series of online surveys were created at critical points throughout the project.

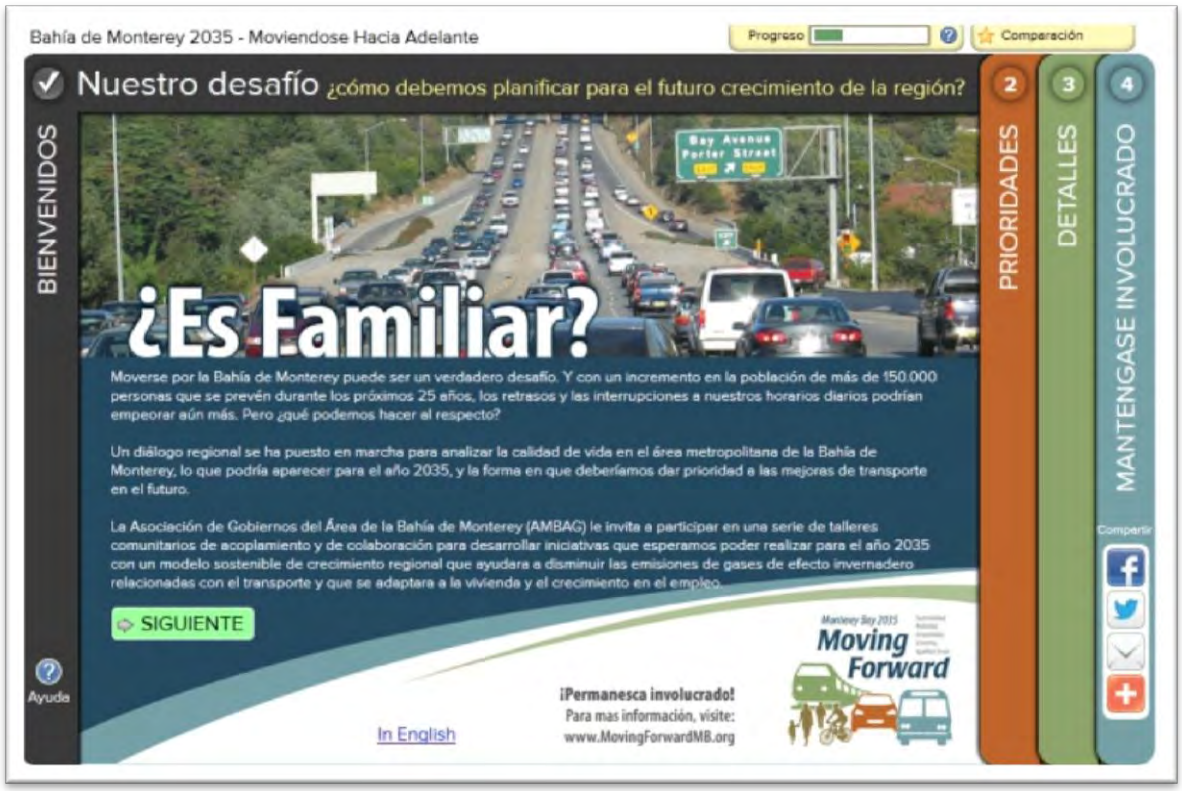
The tool utilized for online surveys was MetroQuest, one of the leading digital engagement tools for scenario building, transportation and land use projects. The interface is interactive, intuitive, and can be translated into multiple languages. All surveys were provided in both English and Spanish and were made available through the project website. The general format consisted of three to five panels which include multiple choice and open ended questions, rankings, map identification, and demographic questions.

The online surveys were active during and after the community workshops to maximize number of participants. Three online surveys have been conducted at key milestones of the planning process to (1) establish preferences and priorities, (2) provide feedback on initial scenarios, and (3) provide feedback on the draft MTP/SCS.

Survey 1: Preferences

The first online survey went live in May 2013 and was designed to identify preferences and current trends. Participants were asked to rank various priorities and then answer a series of questions related to their commute patterns, how they would like to see the region develop, their ideal neighborhood makeup, and transportation and development priorities. Lastly, participants were asked optional demographic questions and were given an opportunity to add additional comments and to sign up for email updates.


Monterey Bay 2035 - Moving Forward
Progress
Compare Yourself
Our Challenge How Should We Plan for the Region's Future Growth?
WELCOME
2 PRIORITIES
3 DETAILS
4 STAY INVOLVED
Look Familiar?
Moving around the Monterey Bay can be a real challenge. And with more than 150,000 new people anticipated over the next 25 years, delays and disruptions to our daily schedules could get even worse. But what can we do about it?
A regional dialogue has been initiated to discuss our quality of life in the greater Monterey Bay region, what it might look like by the year 2035, and how we should prioritize future transportation improvements.
The Association of Monterey Bay Area Governments (AMBAG) invites to you participate in a series of engaging and collaborative community workshops as we envision the year 2035 with a sustainable pattern of regional growth that helps to decrease transportation-related greenhouse gas emissions and accommodates housing and employment growth.
NEXT
Share
help
En Español
Stay involved!
For more information, visit:
www.MovingForwardMB.org
Moving Forward


Bahía de Monterey 2035 - Moviendose Hacia Adelante
Progreso
Comparación
Nuestro desafío ¿cómo debemos planificar para el futuro crecimiento de la región?
BIENVENIDOS
2 PRIORIDADES
3 DETALLES
4 MANTENGASE INVOLUCRADO
¿Es Familiar?
Moverse por la Bahía de Monterey puede ser un verdadero desafío. Y con un incremento en la población de más de 150.000 personas que se prevén durante los próximos 25 años, los retrasos y las interrupciones a nuestros horarios diarios podrían empeorar aún más. Pero ¿qué podemos hacer al respecto?
Un diálogo regional se ha puesto en marcha para analizar la calidad de vida en el área metropolitana de la Bahía de Monterey, lo que podría aparecer para el año 2035, y la forma en que deberíamos dar prioridad a las mejoras de transporte en el futuro.
La Asociación de Gobiernos del Área de la Bahía de Monterey (AMBAG) le invita a participar en una serie de talleres comunitarios de acoplamiento y de colaboración para desarrollar iniciativas que esperamos poder realizar para el año 2035 con un modelo sostenible de crecimiento regional que ayudara a disminuir las emisiones de gases de efecto invernadero relacionadas con el transporte y que se adaptara a la vivienda y el crecimiento en el empleo.
SIGUIENTE
Compartir
Ayuda
In English
¡Permanesca involucrado!
Para mas información, visite:
www.MovingForwardMB.org
Moving Forward

Screenshots of the first online survey in English (top) and Spanish (bottom)

Results

A total of 613 visits were made to this survey, of which 416 included responses.

Priorities

The top five ranked priorities are:

1. Additional employment opportunities
2. Improvements for walking and bicycling
3. Increased roadway capacity
4. Improved access to your daily needs
5. Open space and agricultural lands

Development Patterns

The responses for "Conceptually, how would you like to see the region develop?" are:

- Compact urban centers (34%)
- Existing cities (33%)
- Along transportation corridors (23%)
- Dispersed communities (9%)

The responses for "My ideal neighborhood looks most like?" are:

- Small House (52%)
- Large House (20%)
- Townhouse (17%)
- Compact House (6%)
- Apartment (5%)

Commute

Most people responded that they drive alone during their daily commute. The responses for daily commute times are:

- Less than 10 minutes (30%)
- 15-30 minutes (27%)
- 10-15 minutes (26%)
- 30-60 minutes (12%)
- Over an hour (5%)

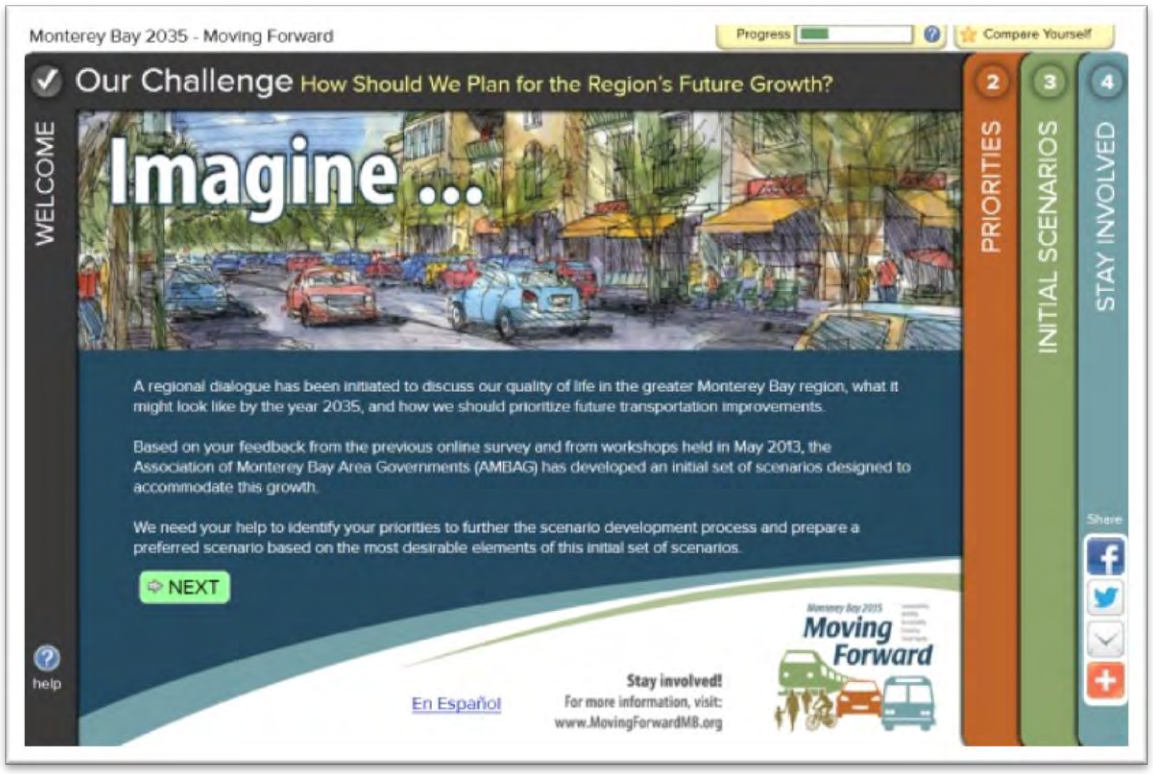
Transportation/Development

The top transportation priority is Variety of Travel Choices followed by Greater Accessibility.

The top development priority is Jobs Close to Home followed by Open Space/Ag Land Preservation.

Survey 2: Scenarios

The second online survey went live in July 2013 and was designed to solicit input on the five initial scenarios. Participants were asked to rank various priorities and then review maps and details on the initial scenarios, rank each scenario, and provide comments. Lastly, participants were asked optional demographic questions and were given an opportunity to add additional comments and to sign up for email updates.



Screenshots of the second online survey in English (top) and Spanish (bottom)

Results

A total of 642 visits were made to this survey, of which 441 included responses.

Priorities

The top five ranked priorities are:

1. Preservation of open space
2. Alternative travel modes
3. Conservation of farmland
4. Reduced congestion
5. Improved transit accessibility

Scenarios

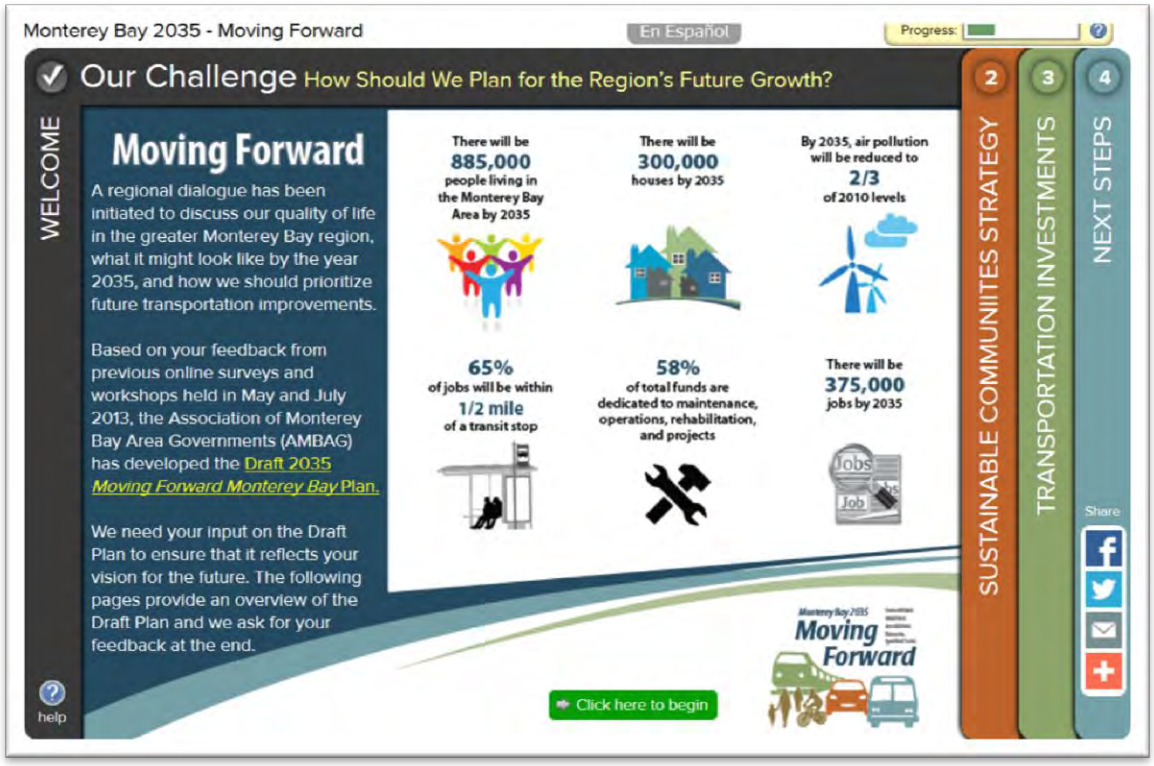
The scenarios are ranked in the following order (1 being the highest ranked and 5 being the lowest ranked):

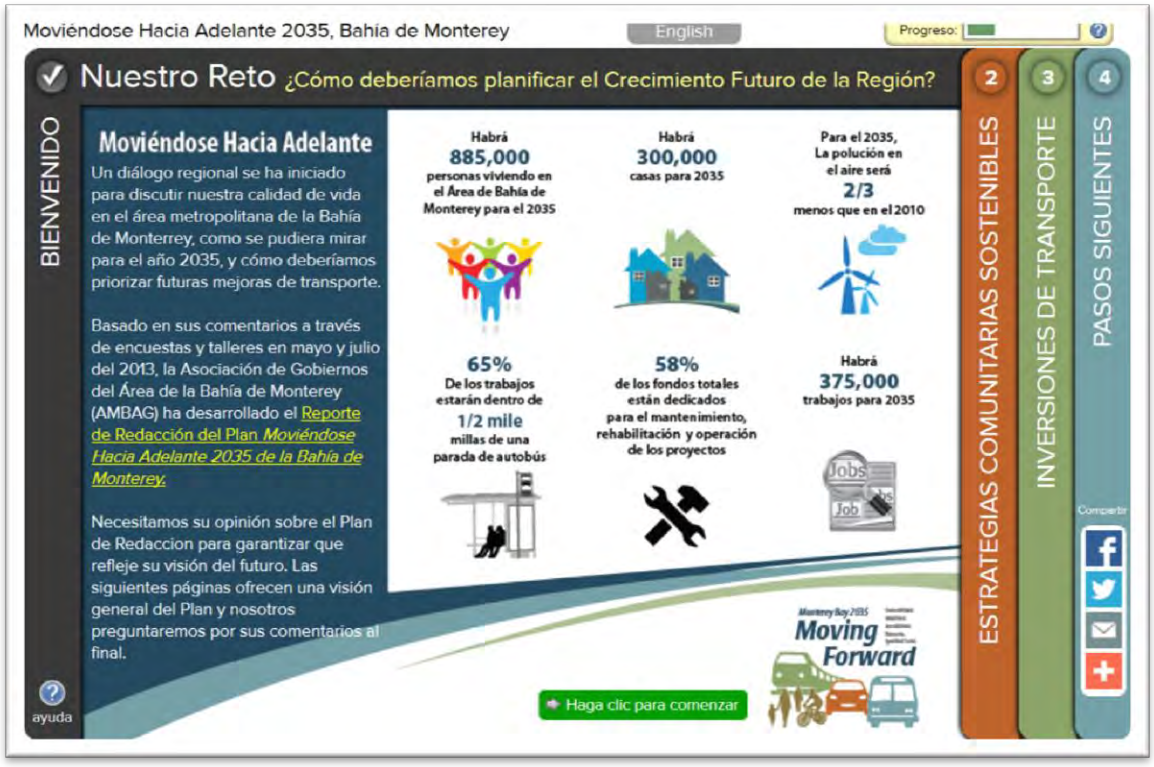
1. Scenario 2 (Expanded Community Centers / Livable Communities)
2. Scenario 1 (Regional Transit Corridors)
3. Scenario 5 (System Preservation)
4. Scenario 4 (Targeted Growth and Economic Diversity)

5. Scenario 5 (Dispersed Growth)

Survey 3: Draft Plan

The second online survey went live in March 2014 and was designed to provide an overview of and solicit feedback on the Draft Plan. Participants were presented with the various elements of the Draft Plan and provided an overview of big picture ideas, maps, and graphics. At the end, participants were asked to provide comments. Lastly, participants were given an opportunity to sign up for email updates.





Screenshots of the third online survey in English (top) and Spanish (bottom)

Results

A total of 61 visits were made to this survey, of which 9 included responses.

Comments

Participants were given an open ended comment opportunity and the comments have been compiled and responded to as part of Appendix I.

Telephone Survey

A telephone survey was conducted from May 28, 2013 to June 6, 2013 to assess the community's current trends and priorities for transportation infrastructure needs and investment. Questions were created with input from all three counties. Specifically, the survey focused on:

- Level of concern about community issues
- Use of the local transportation system
- Transportation infrastructure needs
- Proposed projects for transportation investment
- Themes or messages that may assist public information efforts

The survey reached 450 residents each from Monterey and Santa Cruz Counties and 301 from San Benito County. Questions and responses from the survey are included as an attachment to this appendix.

Workshops

Three series of six workshops each were held throughout the tri-county region at key milestones that corresponded with the online surveys previously discussed. The 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.

Materials were provided in both English and Spanish and translation services were available at most of the workshops.

Flyers and Press Releases

Flyers were prepared in English and Spanish for the first two workshop series. These flyers were distributed to local agencies and those who signed up for email updates on the website. Copies of the flyers are included as attachments at the end of this appendix. A press release was also sent to local television, radio, and newspaper media outlets.

Stakeholder Contact Lists

A master stakeholder contact list was maintained for distribution of press releases, flyers, and project updates. This list included members of the AMBAG Board, the Planning Directors Forum, Regional Advisory Committee, and other related groups. In addition, media outlets, local organizations, and workshop and survey participants who provided a valid email address were included. A complete list of stakeholder groups (not individuals who signed up as part of a workshop or the survey) is attached to this appendix. The following a summary of the major media outlets targeted for promotion of workshops and the online survey.

- Access Monterey Peninsula
- Aptos Times
- Capitola Times
- Carmel Pine Cone
- Gilroy Dispatch
- Gonzales Tribune
- Good Times Weekly
- Greenfield News
- Hollister Freelance

- Home Town Bulletin
- La Ganga
- King City Rustler
- KION
- KSBW
- Monterey County Herald
- Monterey County Weekly
- Pinnacle News
- Register Pajaronian
- Santa Cruz Sentinel
- Santa Cruz Weekly
- Scotts Valley Times
- Soledad Bee
- South County Newspapers
- The Californian
- Valley Press

Workshop Series 1: Preferences

The first workshop series was held in May 2013 and was set up 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 or scenarios.

Locations

The following is a listing of the workshop locations and dates:

- Salinas City Hall (May 13)
- Hollister Community Center (May 14)
- Gonzales City Hall (May 15)
- Seaside Community Room (May 16)
- Watsonville Community Room (May 20)
- Santa Cruz Police Department (May 23)

Stations

A series of workshop stations were provided to provide information and solicit feedback from participants. The follow is a brief overview of each station.

Welcome!

The first station was a welcome station with greeters who provided an overview of the workshop format. At this station were two pillars, one with key words representing the AMBAG Board adopted goals and performance metrics and the other with representative images of the region.

Station guides were provided to give an overview of the various stations. The project video was shown on a continuous loop near this station to provide an overview of the project.

Welcome station with pillars and station guides

Did you know…?

The second station included maps and documents that had been prepared as part of other regional reports. This station included an AMBAG staff member who could answer general and more technical questions regarding the region and the project.

Did you know…? station

Take a survey!

This station included iPads that were connected to the MetroQuest online survey. A representative was present to help guide people who had questions.

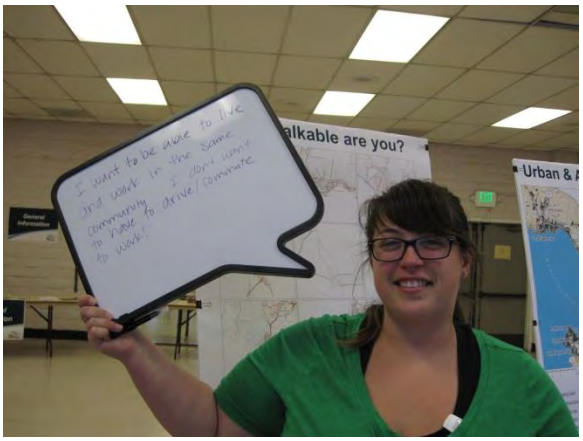
Participants taking the online survey

How should we grow?

This station included two maps for participants to mark up. The first map asked participants to mark their daily commute with an origin dot and destination dot connected by a line. The intent of this map was to show general commute patterns at each workshop. The second map included two color dots for participants to identify where additional jobs and housing should be provided.

Participants mapping commute patterns

This station also included small marker boards shaped like quote balloons. Participants were asked to write down their vision and take a photo holding it.



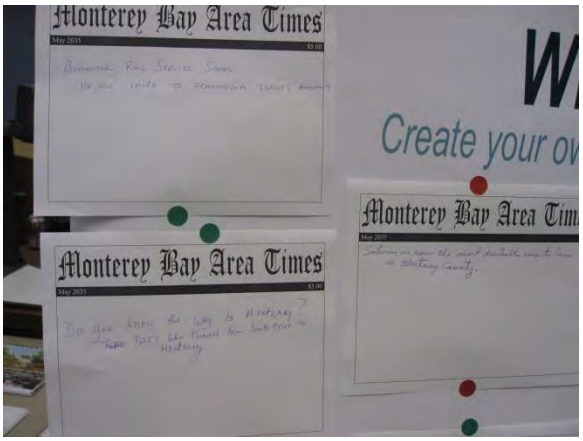
Participant showing her vision

What do you think?

This station included four large boards with questions regarding commute time, travel mode, additional uses, and priorities. Participants were given dots to mark their responses on the boards.

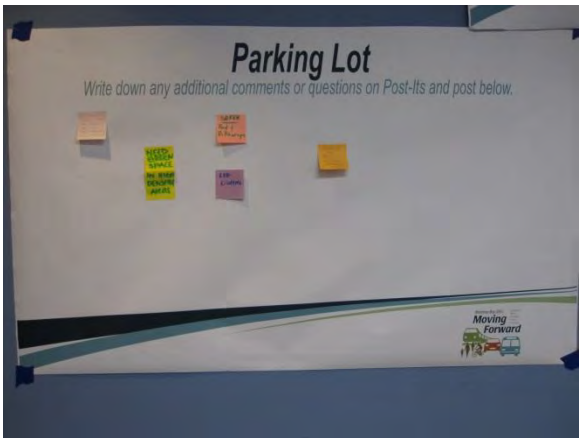
Participants indicating responses on boards

This station also included a newspaper headline exercise where participants could write down a headline for a newspaper in the year 2035.



Headlines from participants

Additionally, a parking lot banner was provided so participants could write down additional comments and questions on sticky notes.



Parking lot banner questions and comments

General Information

This station included a representative from the local transportation or transit agency (e.g., Transportation Agency for Monterey County or Santa Cruz County Regional Transportation Commission) to answer questions on funding, upcoming projects, and transit accessibility.

Participant at General Information station

Presentation and Comments

Following the open house portion, a brief presentation was provided to give an overview of the project and comments received at the various stations. A local elected official (often a local member of the AMBAG Board) spoke to local issues and concerns. Following the presentations, an open forum for questions and answers was initiated.

Workshop Series 2: Scenarios

The second workshop series was held in July 2013 and was set up to explain the purpose of this project and to solicit input on the initial scenarios, which would help shape the hybrid scenarios.

Locations

The following is a listing of the workshop locations and dates:

- Monterey Youth Center (July 15)
- Greenfield City Hall (July 16)
- Hollister Veterans' Memorial Hall (July 17)
- Watsonville Community Room (July 18)
- Santa Cruz Police Department (July 22)
- Salinas Agricultural Center (July 23)

Stations

A series of workshop stations were provided to provide information and solicit feedback from participants. The follow is a brief overview of each station.

Welcome!

The first station was a welcome station with greeters who provided an overview of the workshop format. At this station were two pillars, one with key words representing the AMBAG Board adopted goals and performance metrics and the other with representative images of the region.

What is Scenario Planning?

This station was similar in nature to the "Did you know…?" station in the previous workshop series, but this station focused on informing participants about scenario planning and how it would be applied to the region. This station included an AMBAG staff member who could answer general and more technical questions regarding the region and the project.

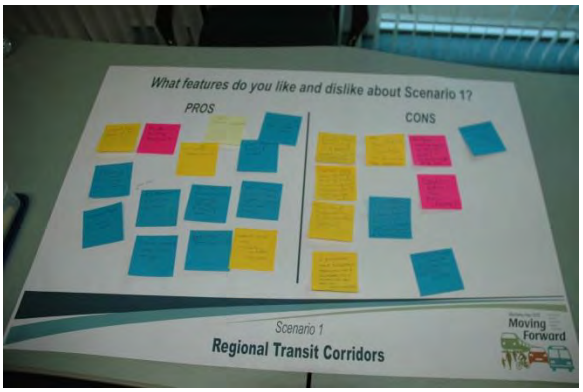
Scenarios 1 through 5

Each scenario had a separate station with two image boards, maps, and a comment banner. The image boards were placed on either side of a table. Each image board included four representative images for the scenario and some key features (in text) below. One board focused on land use and the other focused on transportation.

The maps on the tables represented high level land use and transportation improvements for each scenario. These maps and image boards were also provided on the MetroQuest online survey.

Participants were encouraged to start a dialog with the staff at each station and then write down comments on sticky notes. The comment banner was divided into Pros and Cons so participants could provide both positive and negative feedback for each scenario.

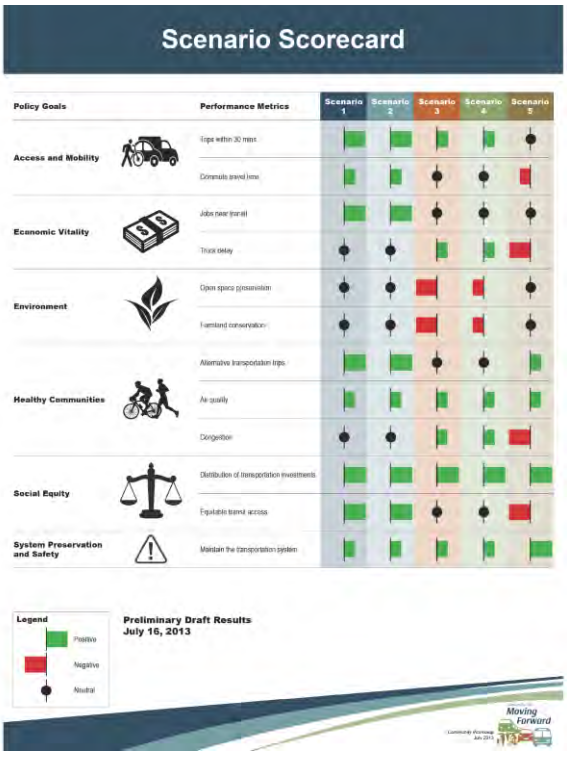
Participants commenting on a scenario



Pro and con comments for a scenario

Scenario Scorecard

This station provided a scorecard of the five scenarios, each ranked on performance measure approved by the AMBAG Board. A staff member was present to explain the results and why each scenario performed the way they did. The scoring was high level and intended to give relative levels between scenarios. Scores included very negative, negative, neutral, positive, and very positive for each of the performance measures and scenarios.



Scenario scorecard

Environmental Impact Report

This series of workshops also served as the scoping meetings for the environmental impact report (EIR). A station for the EIR was included along with a staff member from the EIR consulting team to answer technical questions about what goes into an EIR, timing, and the project in general. Participants were asked to provide feedback as to the scoping of the EIR and what topics to assess.

Environmental impact report station

Comment Forms

Comment forms were provided to capture additional comments. Participants were encouraged to give these forms to those who could not attend the workshops. Comment forms could be folded for easy mailing, or participants could send comments to info@movingforwardmb.org or through the project website.

Workshop Series 3: Draft Plan

The third workshop series was held in March 2014 and was set up to provide an overview of the Draft Plan and answer questions one-on-one and then a public hearing was opened to receive comments on the Draft Plan.

Locations

The following is a listing of the workshop locations and dates:

- Salinas Agricultural Center (March 3)
- Watsonville Community Room (March 4)
- Greenfield City Hall (March 5)
- Santa Cruz Police Department (March 6)
- Marina Library Community Room (March 10)
- Hollister Veterans' Memorial Hall (March 11)

Stations

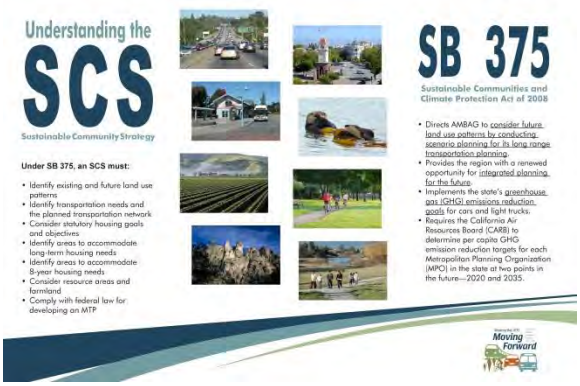
A series of workshop stations were provided to provide information and solicit feedback from participants. The follow is a brief overview of each station.

Welcome!

The first station was a welcome station with greeters who provided an overview of the workshop format. At this station were two pillars, one with key words representing the AMBAG Board adopted goals and performance metrics and the other with representative images of the region.

Sustainable Communities Strategies

This station presented highlights of what the Sustainable Communities Strategy is and what Senate Bill 375 requires. In addition, this station included large maps showing the land use assumptions for 2035, as presented in the Draft Plan. At this station was a copy of Chapter 4 (Sustainable Communities Strategy) and various figures for reference. This station included staff who could answer general and more technical questions regarding the Sustainable Communities Strategy, Senate Bill 375, and land use assumptions.



Understanding the SCS and SB 375 Informational Board

Transportation Investment

This station presented major investments in transportation, including large maps of the 2035 highway, bicycle, and transit networks. At this station was a copy of Chapter 2 (Transportation Investments), Chapter 3 (Financial Plan), and various figures for reference. This station included staff who could answer general and more technical questions regarding the transportation investment assumptions.

Major Transportation Investment Informational Board

Participants discussing transportation investments

Performance & Implementation

This station identified performance measures for the Draft Plan. At this station was a copy of Chapter 5 (Performance Measures) and various figures for reference. A staff member was present to explain the performance measures and assumptions behind the performance measures.

Performance Measures Informational Board

Environmental Impact Report

This series of workshops also served as a forum for receiving public comment on the draft environmental impact report (EIR) since the workshops were held during the public comment period. A station for the EIR was included along with a staff member from the EIR consulting team to answer technical questions and receive public comment. A copy of the Draft EIR was available for reference.

Public Hearing

Following the open house portion, a public hearing was conducted receive comments on the Draft Plan. A local elected official (often a local member of the AMBAG Board) opened and led the public hearing.

Public hearing commenter

Comment Forms

Comment forms were provided to capture additional comments. Participants were encouraged to give these forms to those who could not attend the workshops. Comment forms could be folded for easy mailing, or participants could send comments to info@movingforwardmb.org or through the project website.

Public Hearing (at AMBAG Board Meeting)

Following the third workshop series, a public hearing was held for comments on the Draft Plan at the AMBAG Board of Directors Meeting on Wednesday, March 11, 2014 at the Marina Library Community Room. The public hearing was advertised in local newspapers, on flyers, with a press release, and email announcements. Along with the six previous public hearings included with the workshop series, this was the seventh public hearing for comments on the Draft Plan.

Consultation

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.

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 29 times throughout the planning process to receive project updates, provide policy direction, determine hybrid and preferred scenarios, and ultimately to adopt the MTP/SCS.

Planning Directors Forums

The Planning Directors Forum (PDF) consists of planning directors and staff from the 18 cities, three counties, three regional transportation planning agencies, and AMBAG. The PDF meets regularly to address regional land use and transportation planning issues. The PDF met 10 times throughout the planning process and at key milestones to identify priorities, help establish initial scenario development, review draft workshop materials, and to receive project updates including feedback from the community workshops and online surveys.

Regional Advisory Committee

The Regional Advisory Committee (RAC) consists of environmentalists, business leaders, community activists, and local planning commissioners. The RAC meets regularly to provide input on land use and transportation issues. The RAC met nine times throughout the planning process and at key milestones to identify priorities, provide guidance on initial scenario development, review draft workshop materials, and to receive project updates including feedback from the community workshops and online surveys.

Regional Transportation Planning Agencies

The Regional Transportation Planning Agencies (RTPAs) consist of agency staff and board members, including staff from local jurisdictions, elected officials, and appointed members.

The RTPA boards of directors set policy and provide a source of funding for transportation planning projects within each county. AMBAG staff met with the three RTPAs' Boards twice each at key milestones to present findings, provide project updates, and receive input on scenario development, project identification, and priorities.

Technical Advisory Committees

The Technical Advisory Committees (TACs) are made up of staff from local jurisdictions and agencies, including local transit service providers and the RTPAs. The TACs review and provide technical guidance and advice on transportation projects and programs within each county, and makes recommendations to the RTPA boards or directors. AMBAG staff met with the TACs 25 times at key milestones throughout the planning process to confirm transportation priorities, projects, and funding sources.

E

SCS Scenario Planning

Introduction

As part of the MTP process, AMBAG developed a series of land use and transportation alternative scenarios for evaluation and testing to demonstrate how the Monterey Bay region might achieve a set of performance targets for the environment, the economy and social equity. These alternative scenarios were analyzed and evaluated in context of the AMBAG MTP/SCS goals and performance measures.

Prior to creating the initial set of alternative scenarios, a series of workshops were held to understand and gauge the public's preference with respect to land use and transportation issues and priorities. A web-based survey tool (MetroQuest) and a phone survey were also used to allow broader participation and input.

Based on the results of these workshops and preference survey, five alternative scenarios were designed to explore and clearly convey the impacts of where and how the three-county region grows over the next 25 years. On the land use side the alternatives explored whether growth should be focused within existing cities/towns or dispersed as well as varied the shape and style of neighborhoods. On the transportation side the scenarios varied the types of transportation investments in a manner that was coordinated with the land use for that given scenario.

The initial five scenarios were built to be very discrete from one another in order to get a clear picture of the effects any given scenario would have on the performance measures. None of the initial scenarios were intended to be the final preferred scenario. Rather they were constructed to be starkly different in order to highlight how a particular style of growth could or could not meet the region's needs and preferences.

These five initial alternative scenarios were presented to the public at a series of workshops and presented to staff and elected officials at each respective jurisdiction. Based on feedback, these scenarios were then consolidated down to two hybrid scenarios. After vetting the hybrids through partner agencies and local jurisdictions a final preferred scenario was prepared and incorporated into the 2035 MTP/SCS.

AMBAG used relevant data and information gathered from local governments and the RTPAs to develop scenarios using a process that engaged the entire region in envisioning a more sustainable future. For each of these scenarios, 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. Additionally, the hybrid and final preferred scenario restricted the majority of growth to the Spheres of Influence of any given city. Some growth is accounted for in unincorporated Community Plan Areas (Monterey County), Urban Service

Areas (Santa Cruz County) or New Community Study Areas (San Benito County). All growth is consistent with General Plans and was based on direction from jurisdiction planning staff.

In addition, the 2035 RTP/SCS scenarios helped to refine the California Environmental Quality Act (CEQA) alternatives considered in the Program Environmental Impact Report (PEIR).

Below is a description of the initial and hybrid scenarios. Following this is a matrix demonstrating the 2035 MTP/SCS's compliance with the requirements of SB 375. Appendix D contains the supporting maps and graphic illustrations that were used as part of the public outreach.

Initial SCS Scenarios

The following future Alternative SCS Scenarios were developed to assess how future land use and transportation changes could affect the regional transportation system as well as travel demands or needs. These alternative scenarios combine the trends and variables identified in the 2035 MTP/SCS Policy Goals as adopted by the AMBAG Board.

These alternatives are used to communicate broad concepts for consideration by all stakeholders to weigh and consider transportation choices and priorities. They also provide a common framework for all parties to discuss the economic, social, and environmental costs and benefits of transportation decisions while taking future uncertainties into consideration.

For each of these scenarios, 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.

2035 SCS Scenario #1 –Regional Transit Corridors

Land Use

- Focus future development adjacent to existing and proposed rail and regional/intercity transit corridors and opportunity areas.
- Encourage higher density urban centers in existing cities.
- Locate higher density residential and mixed use development at transit stations along the transit corridors.
- Strong emphasis on farmland preservation and watershed restoration.

Transportation

- Major investment in regional transit and rail transportation infrastructure to create better connections from housing to regional job centers.
- Bus rapid transit (BRT) or regional express between major cities with dedicated lanes, where possible, or the use of bus on shoulders, to provide time savings.
- Transportation system management strategies that support regional BRT such as queue jumps.
- Investments in high occupancy toll (HOT) and high occupancy vehicle (HOV).
- Create transit linkages to/from the proposed High Speed Rail Stations (Gilroy and Diridon).
- Improve commuter rail access within the Monterey Bay region and to the San Francisco Bay Area.
- Provide shuttles from passenger rail stations to tourist attractions.

2035 SCS Scenario #2 – Expanded Community Centers/ Livable Communities

Land Use

- Focus additional growth within existing neighborhood communities in and adjacent to existing commercial corridors. (Focus on

localization vs. regional mobility.)

- Encourage/facilitate a better jobs/housing balance.
- Encourage mixed use development that supports walkability and convenient access to services within community centers.
- Encourage business incubators and green tech businesses. (Emphasis on small business and start-ups instead of large scale businesses as referenced in Scenario 4.)
- Support the housing and transportation needs of workers in the hospitality industry, particularly along the Monterey peninsula.
- Improve access to educational facilities, particularly for higher-learning.

Transportation

- Focus on creating more "Complete Streets" and encouraging "active" transportation such as walking and biking that are commonly associated with the first and last mile of travel.
- Close local transit gaps and invest in local bus transit services and facilities.
- Significantly improve traffic safety through traffic calming, streetscape landscaping, etc.
- Increase investment in local serving rapid or express bus services along high quality transit corridors.
- Facilitate and fund development of new dedicated bicycle and pedestrian facilities that connect key destinations.
- Encourage the development of roundabouts to improve safety and air quality.
- Encourage the development of pedestrian trails.
- Encourage/expand bikes on bus to help with first and last mile of trips.
- Improve access for pedestrians and bicyclists in areas identified for intensified use

2035 SCS Scenario #3 – Dispersed Growth

Land Use

- Encourage future growth in new "greenfield" development areas and expand growth in existing unincorporated communities.
- Focus on opportunities to expand and improve access to tourism.

Transportation

- Focus on roadway improvements that reduce congestion and travel time.
- Develop improved roadway and transit access that support tourism related jobs.
- Improve/expand highway access between cities particularly at "choke points" with transportation system management and transportation demand management strategies such as auxiliary lanes, ramp metering, interchanges, left turn lanes, park-and-ride lots and safety improvements for at-grade crossings.
- Construct safety enhancement projects on highways.

2035 SCS Scenario #4 – Targeted Growth and Economic Diversity

Land Use

- Concentrate growth and development for both housing and employment in cities that support low income and minority populations, inclusive of proposed annexations and sphere of influence amendments.
- Improve the jobs/housing balance in those areas that support low income and minority populations.
- Encourage sustainable, pedestrian oriented development that is responsive to the economic needs and social heritage of each respective community.

- Promote housing that supports local economic development, particularly workforce housing.
- Encourage economic development that diversifies the economy instead of promoting one particular industry such as tourism related services, processing and manufacturing, healthcare and medical services as well as general retail businesses.
- Promote access to workforce investment opportunities such as vocational training centers.
- Expand land use development around existing and proposed airport facilities to accommodate goods movement.

Transportation

- Focus transportation investments along highways in underserved areas. Examples include:
  - Commuter express services (e.g. express bus, vanpools, etc.)
  - Interchange improvements
  - Safety improvements at at-grade crossings
  - Focus transit/transportation services that cater to students as well as low income and minority populations. (Increase frequency of Line 23)
  - Develop a regional rail transfer facility to enable more efficient transport of goods, particularly produce.
  - Re-establish the Coast Daylight/Starlight Express.

2035 SCS Scenario #5 – System Preservation

Land Use

Allocate growth according to existing general plans designations for each respective jurisdiction assuming the AMBAG Regional Growth Forecast for population, housing, and employment. (No specific land use changes proposed for this scenario.)

Transportation

Focus transportation funding on safety, maintenance, and rehabilitation of existing roadway and transit facilities throughout the region.

Hybrid SCS Scenarios

Previously five future Alternative SCS Scenarios were developed to assess how future land use and transportation changes could affect the regional transportation system as well as travel demands or needs. These alternative scenarios combine the trends and variables identified in the 2035 MTP/SCS Policy Goals as adopted by the AMBAG Board. Those five initial scenarios were refined into two hybrid options as described below.

These alternatives were used to communicate broad concepts for consideration by all stakeholders to weigh and consider transportation choices and priorities. They also provide a common framework for all parties to discuss the economic, social, and environmental costs and benefits of transportation decisions while taking future uncertainties into consideration.

For each of these scenarios, 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.

2035 SCS Scenario #A

Land Use

- Focus additional growth within existing neighborhood communities in and adjacent to existing commercial corridors. (Focus on localization vs. regional mobility.)
- Encourage/facilitate a better jobs/housing balance.
- Encourage mixed use development within existing commercial corridors that have high quality transit service in order to supports walkability and convenient access to services

within community centers.

- Encourage business incubators and green tech businesses. (Emphasis on small business and start ups instead of large scale businesses as referenced in Scenario 4.)
- Support the housing and transportation needs of workers in the hospitality industry, particularly along the Monterey peninsula.
- Improve access to educational facilities, particularly for higher-learning.

Transportation

- Focus on creating more "Complete Streets" and encouraging "active" transportation such as walking and biking that are commonly associated with the first and last mile of travel.
- Close local transit gaps and invest in local bus transit services and facilities.
- Significantly improve traffic safety through traffic calming, streetscape landscaping, etc.
- Increase investment in local serving rapid or express bus services along high quality transit corridors.
- Facilitate and fund development of new dedicated bicycle and pedestrian facilities that connect key destinations.
- Encourage the development of roundabouts to improve safety and air quality.
- Encourage the development of pedestrian trails.
- Encourage/expand bikes on bus to help with first and last mile of trips.
- Improve access for pedestrians and bicyclists in areas identified for intensified use.

2035 SCS Scenario #B

Land Use

Allocate growth according to existing general plans designations for each respective jurisdiction assuming the AMBAG Regional Growth Forecast for population, housing, and employment. (No specific land use changes proposed for this scenario.)

Transportation

- Focus transportation funding on safety, maintenance, and rehabilitation of existing roadway and transit facilities throughout the region.
- Increased investment in new rail in Monterey and Santa Cruz Counties.

Preferred Scenario

The preferred scenario was selected based on a combination of the two hybrids. Projects from both the hybrids were included in a mix that provides for investment in safety, maintenance, operations, transit, complete streets, and active transportation. On the land use side the preferred scenario focuses on mixed use infill development in commercial corridors with high quality transit. See Chapter 4 of the 2035 MTP/SCS for a complete description of the preferred scenario and Sustainable Communities Strategy.

Required Elements of the SCS

There are many components to the SCS outlined in the legislation. Below is a table that outlines each of the requirements of SB 375 and provides an explanation of how those requirements are met by this MTP/SCS.

Table E-1: SB 375 Requirements Checklist

Required Element	Addressed
CGC Section 65080(b) (2).(B) Each metropolitan organization shall prepare a sustainable communities strategy, subject to the requirements of Part 450 of Title 23 of, and Part 93 of Title 40 of, the Code of Federal Regulations, including the requirement to utilize the most recent planning assumptions considering local General Plans and other factors.	The MTP/SCS complies with all requirements. Reference: 2035 MTP/SCS Chapter 4
CGC Section 65080(b) (2).(B) i. Identify the general location of uses, residential densities, and building intensities within the region.	The SCS identifies the future land use pattern of the AMBAG region in Figures 4-10 through 4-12. Residential densities and building intensities are determined by Development Types, which are made up of information relating to the characteristics of the landscape, including jobs and housing density, urban design, and mix of land uses. Reference: 2035 MTP/SCS Chapter 4 2035 MTP/SCS Appendix F
CGC Section 65080(b) (2).(B) ii. Identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation and employment growth.	The SCS identifies areas sufficient to house the entire population in the region in Table 4-2. Projected capacity for these areas utilized the Integrated Growth Forecast for population, jobs, and households as contained in Appendix A. Reference: 2035 MTP/SCS Chapter 4 2035 MTP/SCS Appendix A
CGC Section 65080(b) (2).(B) iii. Identify areas within the region sufficient to housing an eight-year projection of the regional housing need for the region pursuant to Section 65584.	The 2035 MTP/SCS identifies areas sufficient to house an eight-year projection of the regional housing need in Table 4-2. Reference: 2035 MTP/SCS Chapter 4
CGC Section 65080(b) (2).(B) iv. Identify a transportation network to service the transportation needs of the region.	The 2035 MTP/SCS identifies the regional transportation network in Figures 2-1 through 2-4. Detailed descriptions of AMBAG's transportation network are found in Chapter 2. Reference: 2035 MTP/SCS Chapter 2

Table E-1: SB 375 Requirements Checklist (Continued)

Required Element	Addressed
CGC Section 65080(b) (2).(B) v. Gather and consider the best practically available scientific information regarding resource areas and farmland in the region as defined in subdivisions (a) and (b) of Section 65080.0.1	The MTP/SCS lists sources for the best available scientific information regarding resource areas and farmland in the region and identifies these areas in Figures 4-16 through 4-18. Reference: 2035 MTP/SCS Chapter 4
CGC Section 65080(b) (2).(B) vi. Consider the state housing goals specified in Sections 65580 and 65581.	The MTP/SCS considers the state housing goals as specified in Sections 65580 and 65581. Reference: 2035 MTP/SCS Chapter 4
CGC Section 65080(b) (2).(B) vii. Set 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 board.	Figures 4-1 through 4-12 of the MTP/SCS identifies the forecasted development pattern for the region. Along with the identified transportation network in Figures 4-13 through 4-15, the identified land use pattern exceeds the GHG emission reduction targets of 0% in 2020 and 5% in 2035. Detailed analysis and performance results of the integrated land use pattern and transportation network and strategies are found in Chapter 5. Reference: 2035 MTP/SCS Chapters 4 and 5
CGC Section 65080(b) (2).(B) viii. Allow the regional transportation plan to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Sec. 7506).	The MTP/SCS complies with this requirement. Reference: 2035 MTP/SCS Chapter 4
CGC Section 65080(b) (2).(D) The metropolitan planning organization shall conduct at least two informational meetings in each county within the region for members of the board of supervisors and city councils on the sustainable communities strategy and alternative planning strategy.	AMBAG has adopted a public participation plan that includes at least two informational meetings in each county for members of city councils and boards of supervisors. Reference: 2035 MTP/SCS Chapter 6 2035 MTP/SCS Appendix D
CGC Section 65080(b) (2).(E) Each metropolitan planning organization shall adopt a public participation plan, for development of the sustainable communities strategy and an alternative planning strategy, if any.	AMBAG has adopted a public participation plan. Reference: 2035 MTP/SCS Chapter 6 2035 MTP/SCS Appendix D

Table E-1: SB 375 Requirements Checklist (Continued)

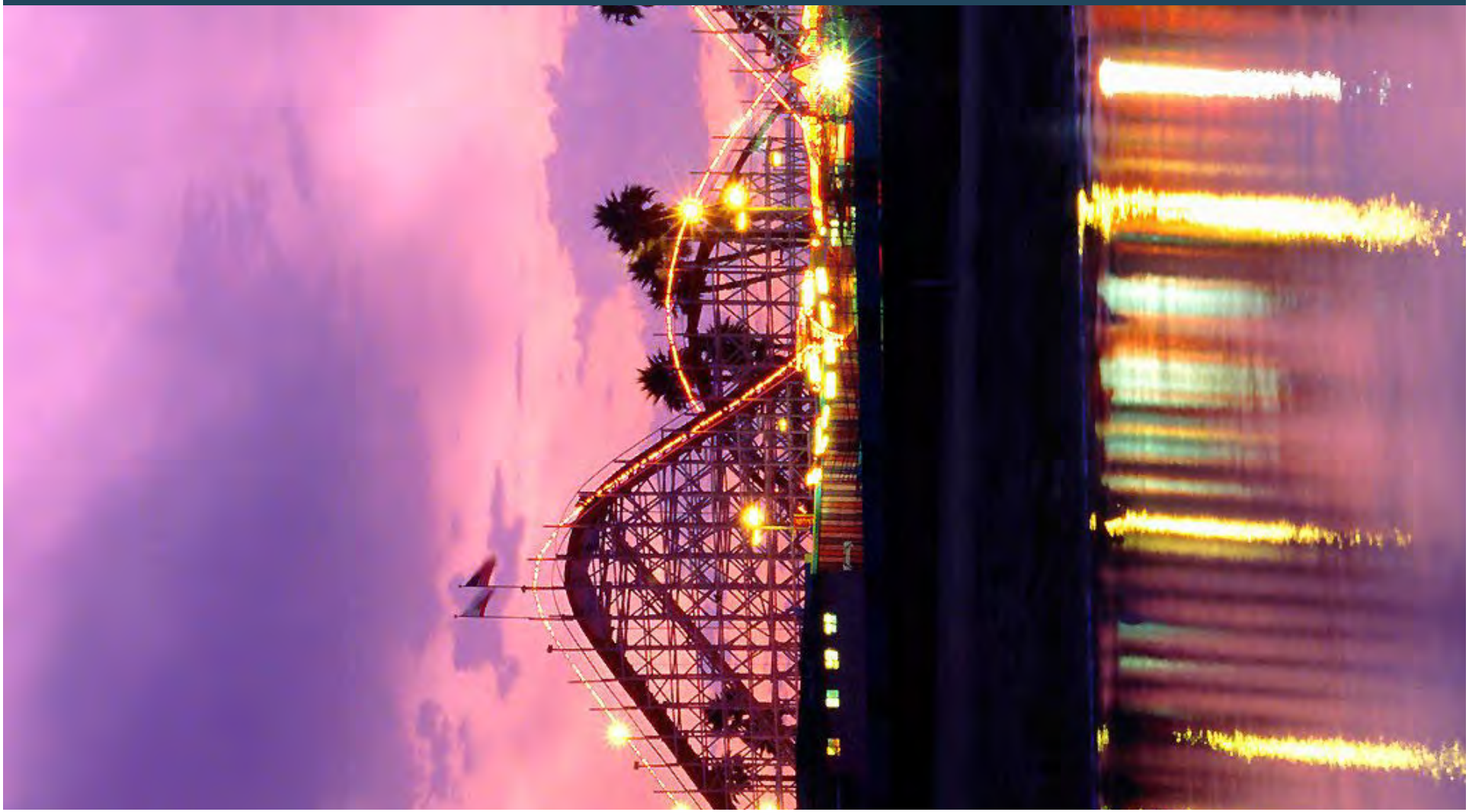
Required Element	Addressed
(i) Outreach efforts to encourage active participation of a broad range of stakeholder groups in the planning process, consistent with the agency's adopted Federal Public Participation Plan, including, but not limited to, affordable housing advocates, transportation advocates, neighborhood and community groups, environmental advocates, home builder representatives, broad-based business organizations, landowners, commercial property interest, and homeowner associations.	The public participation plan details planning efforts that comply with and exceed the requirements. AMBAG met extensively with partner agencies and non-profit, advocacy, neighborhood, and community groups beginning with target setting consultation and continuing through the workshop process. Reference: 2035 MTP/SCS Chapter 6 2035 MTP/SCS Appendix D
(ii) Consultation with congestion management agencies, transportation agencies, and transportation commissions.	The public participation plan includes consultation with these agencies. Reference: 2035 MTP/SCS Chapter 6 2035 MTP/SCS Appendix D
(iii) Workshops throughout the region to provide the public with the information and tools necessary to provide clear understanding of the issues and policy choices. At least one workshop shall be held in each county in the region. For counties with a population greater than 500,000, at least three workshops shall be held. Each workshop, to the extent practicable shall include urban simulation computer modeling to create visual representation of the sustainable communities strategy and the alternative planning strategy.	The public participation plan details planning efforts that comply with and exceed the requirements. AMBAG held 18 workshops throughout the region, in addition to numerous local agency planning sessions and coordination with a Technical Advisory Committee which included representatives of each RTPAs. Reference: 2035 MTP/SCS Chapter 6 2035 MTP/SCS Appendix D
(v) At least three public hearings on the draft sustainable communities strategy in the regional transportation plan and alternative planning strategy, if one is prepared. If themetropolitan transportation organization consists of a single county, at least two public hearings shall be held. To the maximum extent feasible, the hearings shall be in differentparts of the region to maximize the opportunity for participation by members of the public throughout the region.	The public participation plan includes at least three public hearings on the Draft 2035 MTP/SCS. Seven public hearings were held on the Draft 2035 MTP/SCS. Reference: 2035 MTP/SCS Chapter 6 2035 MTP/SCS Appendix D
(vi) A process for enabling members of the public to provide a single request to receive notices, information and updates.	The public participation plan includes a process for members of the public to provide a single request to receive notices, information, and updates on the 2035 MTP/SCS. Reference: 2035 MTP/SCS Chapter 6 2035 MTP/SCS Appendix D

Table E-1: SB 375 Requirements Checklist (Continued)

Required Element	Addressed
CGC Section 65080(b) (2).(F) In preparing a sustainable communities strategy, the metropolitan planning organization shall consider spheres of influence that have been adopted by the local agency formation commissions within its region.	AMBAG's Growth Forecast considers the spheres of influence adopted by the local agency formation commission. Reference: 2035 MTP/SCS Chapter 4 2035 MTP/SCS Appendix A
CGC Section 65080(b) (2).(G) Prior to adopting a sustainable communities strategy, the metropolitan planning organization shall quantify the reduction in greenhouse gas emissions projected to be achieved by the sustainable communities strategy and set forth the difference, if any, between the amount of that reduction and the target for the region established by the state board.	The MTP/SCS complies with this requirement. Reference: 2035 MTP/SCS Chapter 4 2035 MTP/SCS Appendix F
CGC Section 65080(b) (2).(J) Neither a sustainable communities strategy nor an alternative planning strategy regulates the use of land, nor, except as provided by subparagraph (I), shall either one be subject to any state approval. Nothing in a sustainable communities strategy shall be interpreted as superseding the exercise of the land use authority of cities and counties within the region.	The MTP/SCS complies with this requirement.
Nothing in this section requires a metropolitan planning organization to approve a sustainable communities strategy that would be consistent with Part 450 of Title 23 of, or Part 93 of Title 40 of, the Code of Federal Regulations and any administrative guidance under those regulations. Nothing in this section relieves a public or private entity or any person from compliance with any other local, state, or federal law.	The MTP/SCS complies with this requirement.

E Attachments

Regional Travel Demand Model and Land Use Model Documentation



Introduction

The Association of Monterey Bay Area Governments (AMBAG) is the federally designated Metropolitan Planning Organization (MPO) for the tri-county Monterey Bay Area. To carry out Metropolitan Transportation Planning activities, AMBAG works closely with the Santa Cruz County Regional Transportation Commission (SCCRTC), the Transportation Agency for Monterey County (TAMC), the Council of San Benito County Governments (SBtCOG), the Monterey Bay Unified Air Pollution Control District (MBUAPCD), Monterey-Salinas Transit (MST), the Santa Cruz Metropolitan Transit District (METRO), Caltrans, Federal Highway Administration (FHWA), Federal Transit Administration (FTA) and all local jurisdictions (18 cities and 3 counties) within the tri-county Monterey Bay Area.

The Monterey Bay Area constitutes California's North Central Coast Air Basin. Situated between the San Francisco Bay Area to the north and San Luis Obispo County to the south, it spans a total of 6,000 square miles. However, urbanized areas constitute less than 150 square miles.

Developing the 2035 Metropolitan Transportation Plan (MTP) and Sustainable Communities Strategy (SCS)

The Metropolitan Transportation Plan (MTP) has a horizon year of 2035 and is scheduled for adoption by the AMBAG Board of Directors in June 2014. One of the first steps in the development of the 2035 MTP/SCS was to evaluate and update the stated goals and objectives from the 2010 MTP. The AMBAG Board of Directors approved updated goals and policies as well as accepted updated performance measures at its January 2013 meeting. The performance measures were used to evaluate alternative transportation/land use scenarios and relate to each of the goal areas which are as follows:

- 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.

AMBAG, in coordination the Regional Transportation Planning Agencies (RTPAs), developed revenue projections and project costs.

The MTP is supplemented by the three county level Regional Transportation Plans (RTPs) prepared by SBtCOG, SCCRTC, and TAMC. Therefore, the updates to all four plans, including goals and objectives, transportation project evaluation criteria, revenue projections, etc. were prepared to be consistent with each other.

The Sustainable Communities Strategy (SCS) is a new element of the MTP, as required by Senate Bill 375 and shows how regional greenhouse gas (GHG) targets will be achieved through efficient development patterns, infrastructure investments, transportation measures, and policies that are determined to be feasible. The regional GHG targets are measured from a 2005 baseline and for the AMBAG region are a zero percent per capita increase by 2020 and a five percent per capita reduction by 2035. If the SCS had not met regional GHG targets, an Alternative Planning Strategy (APS) could have been developed to demonstrate what alternative scenario and additional measures would be needed in order for the region to meet its GHG target.

Development and Evaluation of Planning Scenarios and Draft MTP

In order to evaluate various combinations of transportation and land use strategies that could lead to achieving the GHG targets adopted by the California Air Resources Board (CARB) for the tri-county region, AMBAG worked with the three county RTPAs, local governments, transit agencies, and the public to develop and evaluate a set of SCS transportation and land use scenarios, using its upgraded transportation and land use modeling capabilities. These scenarios were evaluated based on how each performs in relation to the GHG targets and other performance measures. This comparison of scenarios allowed the AMBAG Board of Directors to select a preferred scenario that formed the basis for the draft Draft 2035 MTP/SCS. Please see Chapter 4 and Appendix E for more information on the SCS scenario planning process.

Public Participation Plan and Interagency Coordination

Another requirement of SB 375 is that each MPO adopt a public participation plan for development of the Sustainable Communities Strategy and Alternative Planning Strategy, if one is required. Some of the key requirements of SB 375 related to public participation are:

- Outreach efforts to encourage the active participation of a broad range of stakeholder groups in the planning process, consistent with the agency's adopted Federal Public Participation Plan, including, but not limited to, affordable housing advocates, transportation advocates, neighborhood and community groups, environmental advocates, home builder representatives, broad based business organizations, landowners, commercial property interests, and homeowner associations.
- Consultation with congestion management agencies, transportation agencies, and transportation commissions as applicable.
- Workshops throughout the region to provide the public with the information and tools necessary to provide a clear understanding of the issues and policy choices. Each workshop, to the extent practicable, shall include urban simulation computer modeling to create visual representations of the SCS and the APS, if one is prepared.
- Preparation and circulation of a draft SCS and APS, if one is prepared, not less than 55 days before adoption of the final

MTP.

- At least three public hearings on the draft SCS. To the maximum extent feasible, the hearings shall be in different parts of the region to maximize the opportunity for participation by members of the public throughout the region.
- A process for enabling members of the public to provide a single request to receive notices, information, and updates.

For more information on public participation and outreach refer to Appendix D.

Coordination of Modeling Activities with Partner Agencies

AMBAG, as a federally designated MPO, is required to develop and maintain a tri-county Regional Travel Demand Model (RTDM) to meet federal and state requirements. The GHG target set by CARB applies to the tri-county Monterey Bay region. In this context AMBAG and the RTPA staff have established two levels of working committees that regularly met and worked together to develop the region's MTP and RTPs as well as to conduct scenario planning and modeling analysis. While the RTPAs do not maintain or run the RTDM, they were engaged in the consideration of the results of scenario model runs and in the process of refining the alternative scenarios. As the MTP was being developed, AMBAG worked with all of its partners (RTPAs, transit operators, and local jurisdictions) as well as the appropriate federal and state agencies to ensure its MTP conforms to all applicable state and federal regulations.

2014 Regional Growth Forecast

In 2012, AMBAG began the process of developing a new forecast benchmarked to the 2010 Census with a horizon year of 2035. Staff contracted with Stephen Levy from the Center for Continuing Study of the California Economy for the development of the regional forecast figures. Stephen Levy's innovative approach places greater emphasis on employment growth as the primary driver of inter-regional migration, using employment to estimate long-term population change. The regional forecast is based on an analysis of forecasted state and national industry growth compared to the region's historical share of each industry. While there is some "catch up" employment forecasted for 2020, the state and national forecasts prepared by Stephen Levy have assumptions of slow recovery trends and therefore the regional forecast also reflects this slow recovery.

The disaggregation of the forecast uses shift-share methods for population and employment. These methods essentially calculate future years based on previous trends. The forecast disaggregation also takes into consideration local land use policies and was developed using a collaborative approach whereby AMBAG incorporated the input of local planners, elected officials, and the public. The final forecast is scheduled for adoption in June 2014 along with the 2035 MTP/SCS. The 2020 and 2035 scenarios for the SCS were developed using this population and employment forecast as a control total in consultation and collaboration with region's local and regional agencies. The technical documentation for the Regional Growth Forecast is included in Appendix A.

Other Key 2035 MTP/SCS Tasks

Other key major tasks include updates to the plan performance measures, environmental justice analysis, new revenue projections, revised cost estimates for projects, programs, and services, and integration of system and demand management measures into the scenarios. Additionally, the 2035 MTP/SCS incorporates recommendations from recently completed or underway transportation studies, such as the Commercial Flow Study, the Electric Vehicle Infrastructure for the Monterey Bay Area Study, the Regional Agricultural Vanpool Study, and the Monterey Truck to Rail Study. Other studies that are relevant to the development of the new AMBAG model include the Monterey Bay Origin and Destination Study, the Santa Cruz METRO On-Board Survey, and the California Household Travel Survey (CHTS).

Modeling Methodology

Development of the Regional Travel Demand Model

The primary transportation model that AMBAG employs is a trip-based, four-step RTDM run in TransCAD version 6.0 platform and includes Monterey, San Benito, and Santa Cruz Counties. AMBAG developed a very comprehensive Model Improvement Plan (MIP) which addressed recommended improvements provided by the peer review panel selected under the Federal Highway Administration sponsored Travel Model Improvement Program (TMIP). AMBAG hired a team of professional consultants led by Caliper Corporation that included Fehr & Peers and Parsons Brinckerhoff. The model includes detailed transportation and transit networks, as well as a geographically based Traffic Analysis Zone (TAZ) layer containing socioeconomic data for the base year 2010 and forecast years 2020 and 2035.

The AMBAG RTDM is an entirely new travel demand model estimated and calibrated using data from the 2011-12 California Household Travel Survey (CHTS). The model utilizes innovative techniques to capture travel behavior at a more individual-based level and incorporates disaggregate level data into some of the modeling stages. The primary reasons for introducing more disaggregate level data into the model was to assist in addressing elements of SB 375, and to pave the way for a possible transition to a tour-based or activity-based modeling approach in the future. This updated model is a traditional four-step trip based approach, and as such includes models for Trip Generation, Trip Distribution, Mode Choice, and Trip Assignment. Specific differences compared with traditional approaches, and described in more detail later in this document, include a population synthesis to drive the trip generation socioeconomic variables, calculation of D factors - household density, employment density, intersection density, and diversity - variables using GIS techniques to support inputs to various model stages, the use of person-based trip rates, destination choice model for the trip distribution, and a mode choice component designed and estimated entirely from the 2011-12 CHTS data. The model also employs a highly convergent traffic assignment algorithm. The model is calibrated to 2010 conditions, and utilizes the Census and employment data from that same year. The model is comprised of four primary time periods, an A.M. Peak Period defined as 6:00 AM to 9:00 A.M., a P.M. Peak Period from 4:00 PM to 7:00 P.M., a Mid-day period from 9:00 A.M. - 4:00 P.M. and an Night Time 7:00 P.M. to 6:00 A.M. The model is calibrated to both Average Annual Daily Traffic (AADT) and to the peak period count data. The AADT calibration is based on summing the assigned flows for the four periods and comparing them against the AADTs from Caltrans, PeMs, HPMS, and local jurisdictional count sources. The Percent Root Mean Square Error (%RMSE) for the 2010 base year is 29.17% system wide, which is within an acceptable range (<40%). As per the Federal Highway Administration (FHWA) guideline, the AMBAG's 2010 base year model calibration is appropriate and has taken care not to over fit the base year model to observed conditions while maintaining appropriate levels of sensitivity and forecasting ability. Further details on model calibration can be found in the AMBAG RTDM Technical Documentation Report.

Travel behavior in the AMBAG region is especially difficult to model for a number of reasons. First, the region has high variability in residential density and has a very large rural component, particularly in the eastern and southern sections of the area. The region also has high income variability, which further complicates the process of linking the residential and employment zones necessary to explaining travel behavior in the region. Heavy commuter travel and interregional travel to the San Francisco Bay Area and a high number of people telecommuting complicate matters further. In addition, the region has a rich collection of tourist activities and special events occurring on weekends and during different seasons. There also are significant agriculture activities from farm workers making seasonal transient (field-to-field) trips and goods movements by freight modes, mainly by truck. The region experiences a wide variation in rural and urban characteristics with significantly

longer trip lengths in rural areas, resulting in higher VMT and peak period spreads. We believe we have successfully addressed these challenges though the deployment of a destination choice model for many of the home-based trip purposes.

Following is a summary of the key modeling components and brief description of the methodology/approach proposed for this model improvement project.

Data, Surveys, and Studies Used in Model Development

Data from the recent Census, the AMBAG 2014 Regional Growth Forecast, the 2011-12 CHTS, the 2012 External Origin-Destination (OD) Study conducted by Fehr & Peers and Air Sage, the SCCRTC Onboard Transit Survey for the Santa Cruz METRO transit system, the City of Watsonville Transit Study, County and Caltrans traffic count data were used for the development, calibration, and validation of the model. In addition, reliable output data from the neighboring MPOs (interregional commute components) and data from the agriculture vanpool program were utilized for the model development.

Update to the Highway, Transit, and Bicycle Networks for the 2010 Base Year, 2020, and 2035 Future Years

The consultant completed a comprehensive review and update to the highway, transit, and bicycle networks for the model update. AMBAG also employed a web-based tool to engage local jurisdictions to review and ground truth key transportation network attributes such as speed, number of lane, traffic counts. The latest data sets have exceptional geographic accuracy. The updated files include bicycle facilities and other geographic considerations pertinent to transit accessibility. For the 2020 and 2035 networks, the consultant worked with AMBAG, the RTPAs, and Caltrans staff to determine which infrastructure improvements to include in each scenario.

Update to the 2010 base year, 2020, and 2035 Future Years TAZ Data Layers

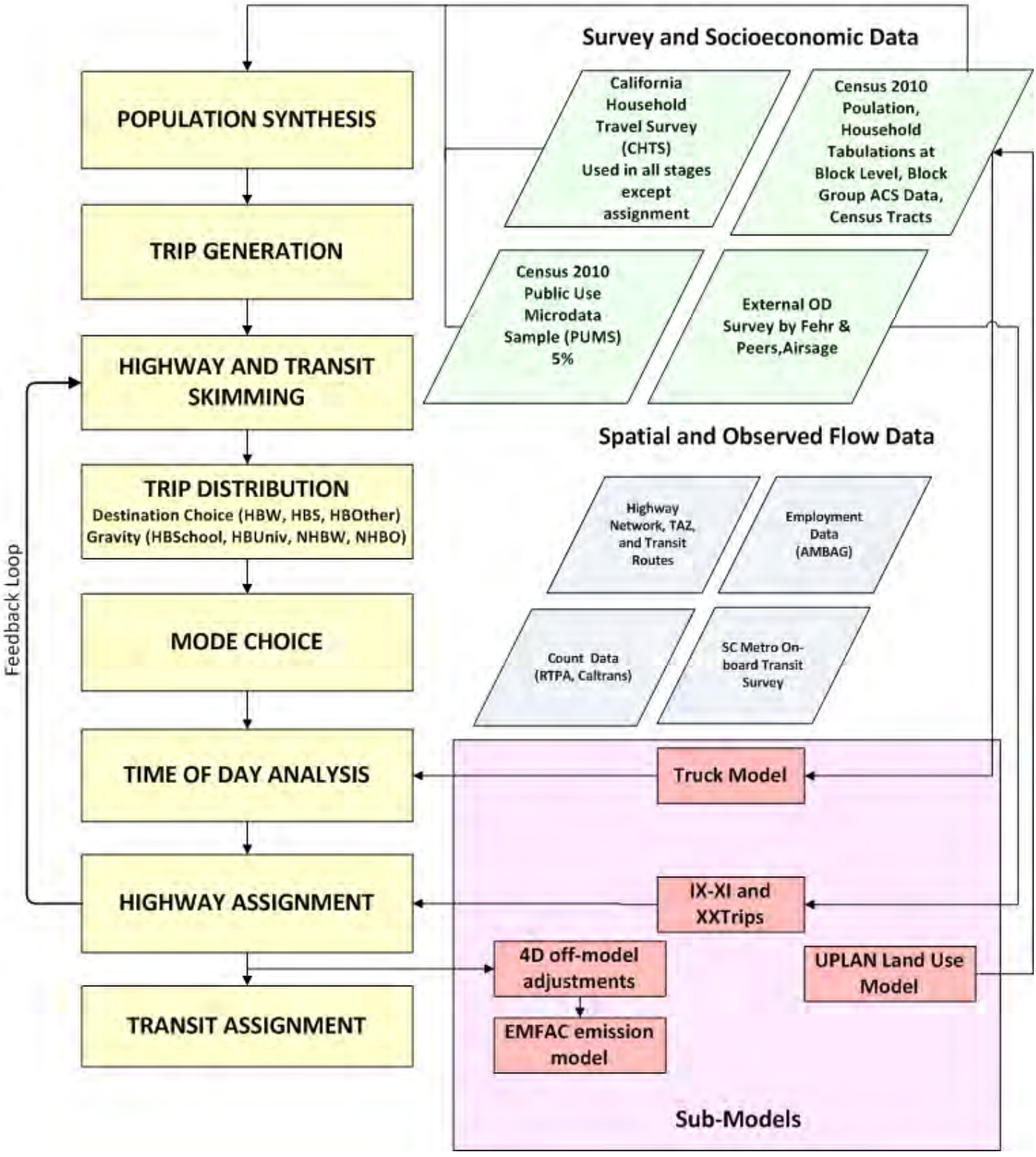
Utilizing current estimates and projections for future year socioeconomic characteristics pertinent to the model at various geographic scopes, the consultant generated attributes using GIS tools for the model TAZ layer. The TAZ geography used in the updated model is an aggregation of 2010 Census Block boundaries. The geography is very similar to that submitted to the Census by AMBAG as part of the TAZ delineation process. The zone structure is comprised of 1,710 zones including 37 external zones that serve as the primary gateways to the study area. This consistency ensures a reliable calculation and transfer of important demographic data from the Census data files. Although the TAZ boundaries will remain the same for the horizon years of the model, the socioeconomic characteristics may change significantly by county and region. AMBAG and its stakeholders provided this information for the future years.

Trip Generation Model

In developing the trip generation model, AMBAG with the consultant's assistance evaluated increasing the number of explanatory variables. In addition to auto availability, age, and household size, other geographic variables such as lifestyle considerations, presence of young children in the household, and the availability of recreational opportunities were explored for inclusion in the model. A final list of variables included is shown below.

The AMBAG region is a large and diverse area. To better handle such diversity, the 2010 AMBAG model estimates a person based trip rate model instead of a household based model. This includes the creation of a synthetic population for the AMBAG region detailing a discrete record of persons and their characteristics to which the trip generation model is applied. Applying person based trip generation models has several advantages. It increases the sample size of data used to estimate the models and better explains the variations in travel behavior. It also provides a better platform on which to quantify the D factors and prepares the foundation for a possible transition to activity based modeling.

Figure F-1: Model Stream for Regional Travel Demand Model



The following attributes are output at the person and household levels and matched against the appropriate census aggregation (block or block group) and are used as inputs into the trip generation model:

For Households:

- Household Size
- Vehicles in Household
- Income Category
- Tenure (own or rent)
- Number of Children under 18 in Household
- Number of persons above 65 years of age in household

For Persons:

- Age
- Employment Status
- Sex
- Enrolled in School
- Education Level Attained
- Race
- Worker Status

The trip generation model forecasts trip productions and trip attractions at the zonal level for seven primary trip purposes: Home based Work (HBW), Home based Shopping (HBShop), Home based School (HBSchool), Home based University (HBUniv), Home based Other (HBOther), Non home based-work (NHBW), and Non home based other (NHBO), and Visitors (to shopping and tourism sites). NHBW refers to trips that are non-home-based but have one trip end at a work location. NHBO trips are similar except that neither end of the trip is a work location. The visitor model is split into two market segments: Visitors to Shopping sites (Visitor_Shop) and Visitor to Tourism sites (Visitor_Tourist). The visitor purposes are the only models not fully supported by the travel survey. They are based on previous AMBAG modeling efforts with some modification.

Interregional Trip Estimates and the Assumptions

AMBAG recently conducted an Origin Destination (OD) study using two different methodologies as well as weeklong classified traffic counts. The OD survey results using license plate video survey were used to account for External-External (X-X), External-Internal (X-I), and Internal-External (I-X) and was validated with traffic counts. AMBAG also consulted with Metropolitan Transportation Commission/Valley Transportation Authority, San Luis Obispo Council of Governments, and Merced County Association of Governments modeling staff for the verification of the future year traffic forecast for respective external gateway locations.

Trip Distribution (Destination Choice Model)

The AMBAG RTDM deployed two primary models, a destination choice model and a gravity model for this model component. Traditionally, distribution models have primarily utilized a formulation of a gravity model. Unfortunately, the gravity model's aggregate nature limits its ability to capture the range of individual destination choice behaviors manifested by the population. A destination choice modeling approach has the potential to introduce more behavioral realism and hence generate trip tables that are closer to reality and more sensitive to smart growth land use policies.

A destination choice model also can include variables not typically present in a traditional gravity model. For instance, the home-based-work trip purpose gravity model can be replaced with a work location choice model for workers that predicts their work zone. Another clear advantage of the destination choice model is that accessibility measures can be directly input as variables to the choice models. Finally, destination choice models will eliminate the need for ad-hoc adjustments such as the use of K-factors in the gravity model.

Time of Day Analysis

A major upgrade to the model is the deployment of time period and trip purpose specific parameters. This includes the utilization of separate peak and off peak period skims, and model parameters. This approach provides a superior explanation of peak and off peak travel patterns throughout the region

AMBAG worked closely with Caltrans, and other relevant local and county agencies to determine the most appropriate day and time periods for modeling. The model uses the following time periods:

- A.M. Peak hour and period (6:00-9:00 A.M.)
- P.M. Peak hour and period (4:00-7:00 P.M.)
- Mid-day (9:00 A.M.-4:00 P.M.)
- Night (7:00 P.M.-6:00 A.M.)

Using the available count data, the AMBAG RTDM was calibrated for each of the time periods shown above.

Mode Choice Model

The mode choice model was evaluated to explore avenues for enhancing its structure, utility specifications, and coefficients. Model parameters were compared against Federal Transit Administration (FTA) guidelines to document any instances of values that fall outside of the ranges suggested by the guidelines. Nevertheless, it should be noted that the most appropriate model parameters for the AMBAG region were obtained by re-estimating the model from the latest CHTS and Census data. The non-uniform travel characteristics, demographics, and population densities of the region meant that additional improvements for optimizing the mode choice component of the travel demand model had to be incorporated. These include:

- Re-estimating the existing models with the latest surveys and model skims.
- Moving from the current daily skims to a time-of-day approach that might better match peak and off peak skims to those perceived and experienced by surveyed travelers.
- Implementing additional nesting structures to better fit the new data.
- Utilizing regional heterogeneity so that the mode choice model nested structure varies by trip purpose.

Weighted nested and multinomial logit model estimations were conducted using the Nested Logit Estimation procedure in TransCAD 6.0. One objective was to estimate separate mode choice models for the peak and off-peak periods. However, no significant difference was observed for any of the purposes. A combined model was therefore estimated for each of the purposes.

The estimated models are a series of logit models (multinomial or nested) that vary by trip purpose and by peak/off-peak periods. For most purposes, the following travel modes are estimated (for further technical details on the mode choice model by each trip purpose please refer to the AMBAG RTDM Technical Documentation Report):

- Auto drive alone
- Auto shared ride (carpool)
- Walk
- Bike
- Transit

Highway and Transit Assignment

For highway assignment the AMBAG RTDM utilized a state of the practice and highly convergent traffic assignment methodology known as Origin-based User Equilibrium. This method improves significantly on previous highway assignment methods by providing a more stable solution to the highway assignment problem. This provided AMBAG RTDM with the ability to more accurately quantify project benefits and explain the highway assignment results in a clearer context.

In the highway assignment step, trips from the origin destination matrix are assigned to the highway network to determine flows on links and route choices between any origin and destination. In the AMBAG model, four assignments are performed: A.M. peak period trips (6:00-9:00 A.M.), P.M. Peak period trips (4:00-7:00 P.M.), Mid-day (9:00 A.M.-4:00 P.M.), and Evening/Night (4:00 P.M. - 6:00 A.M.).

Transit assignment was performed using TransCAD's Pathfinder methodology. This methodology is a generalization and significant improvement of the highly-regarded Optimal Strategies approach and far superior to typical Urban Transportation Planning System (UTPS) methodologies. The transit assignment will include walk and bike access, along with park and ride functionality for both access (A.M.) and egress (P.M.). The Pathfinder methodology has been deployed successfully across the United States, and has gained wide acceptance from the FTA. For the transit assignments peak and off-peak transit trips are assigned separately and then aggregated for time of the day assignments into a total transit flow table.

Sensitivity Testing Results

Fehr and Peers independently conducted a model sensitivity test for modified land use changes (density and diversity), added highway capacity and additional bus rapid transit (BRT)/light rail transit (LRT) transit services using the 2010 and 2035 RTDM.

The conclusions of these tests demonstrate the model's sensitivity to land use and transportation changes. For changes where the model is not sensitive, a discussion of potential enhancements or post-processing methods is summarized below with additional technical details to be found in the 2014 AMBAG RTDM Technical Documentation Report.

Added Roadway Capacity

The model is appropriately sensitive during traffic assignment for roadway widening projects in terms of route selection. The influence of roadway capacity on trip generation, distribution, mode choice, and GHG emission were not evaluated.

Modified Land Use

The changes in land use and the formulation of the mode choice model were not significant enough to cause a change in mode. As a result, the implication of the land use change on VMT is determined by the location and magnitude of the land use rather than the density, diversity, and other D factors. Post-processing for active transportation, Transportation Demand Management, and density were recommended and applied for 2035 MTP/SCS.

Added Transit Service

The model is not sensitive to changes in transit. The mode choice model estimation based on survey data resulted in a fairly static mode split model. As such, the change to transit shifted trips from local bus to BRT or LRT, but overall mode shares remained constant. The 2035 MTP/SCS includes over 70 projects totaling $2,633,933, or 34 percent of available revenue over the next 25 years. In order to capture the benefit of such transit investments, AMBAG applied off-model adjustments using the California Air Pollution Control Officers Association (CAPCOA) recommended approach. [3]

Transportation Demand Management (TDM), Transportation Systems Management (TSM), and Active Transportation

TDM, TSM, and Active Transportation (bicycle facilities, pedestrian facilities, and complete streets projects) were not evaluated in the AMBAG RTDM since there are no variables or sub-models for their implementation. The 2035 MTP/SCS includes almost 400 projects totaling $967,893, or 13 percent of available revenue over the next 25 years. In order to capture the benefit of these investments, AMBAG applied off-model adjustments using CAPCOA recommended approach. [3]

Considering the complexity in the application of such improvements, off-model adjustments were applied at a system level rather than a project by project basis using methodologies from CAPCOA, the Sacramento Association of Governments (SACOG), and other recommended off-model adjustment methodologies.

Off-Model Adjustments

Where the impacts of certain policy scenarios cannot be measured in the AMBAG RTDM, AMBAG relied on "off-model" techniques based on academic literature reviews, collaboration with other MPOs and consultation with CARB's Policies and Practices Guidelines.

Off-model adjustments were made for five programs or bundles of projects that are included in the 2035 MTP/SCS: Transit Service Enhancements, TSM, Active Transportation, TDM and other travel demand reduction programs such as vanpools for agriculture workers, car sharing, Electric Vehicle Infrastructure for the Monterey Bay Area plan-August 2013, as well as the increasing prevalence of telecommuting. The need for these adjustments was recognized in the Regional Targets Advisory Committee Final Report to the California Air Resources Board.

Several references were used for estimating the potential GHG off-model adjustments for Active Transportation projects, TSM, ITS, TDM, and Transit Enhancement initiatives combined with density and neighborhood design:

1. The Urban Land Institute publication "Moving Cooler: An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emission."[1]
2. The series of "policy briefs" authored by Marlon Boarnet[2] and Susan Handy[3] under a grant provided by the California Air Resources Board, and published on the CARB website.[4]
3. The CAPCOA "Quantifying Greenhouse Gas Mitigation Measures."[5]
4. SACOG Model Technical Report, APPENDIX C-4: Final Environmental Impact Report For The Metropolitan Transportation Plan/ Sustainable Communities Strategy For 2035, SACOG, February 2012.[6]
5. Bay Area Plan, Strategy for a Sustainable Region, Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), July 2013.[7]
6. INDEX 4D: A Quick-Response Method of Estimating Travel Impacts from Land Use Changes, Criterion Planners and Fehr & Peers, 2001. [9]

These references were used for several reasons. Each reference synthesized current research and program effectiveness results from many other sources, with high standards for data quality applied to the synthesis. Each reference focused analysis of transportation-generated GHG, particularly "Moving Cooler", including GHG not directly tied to changes in VMT. The reports itemize specific project types, as well as "bundling" the projects in ways that make them very useful for transportation analysis. More importantly, the document provided estimates of the cumulative effects of implementation of the bundles, which accounted for the synergistic effects of the bundled policies. The reports include descriptive information defining the project deployment levels needed to achieve GHG reductions. The table below summarizes the total reductions of the GHG emission for the tri-county AMBAG region with implementation of the 2035 MTP/SCS.

Table F-1: GHG Calculations

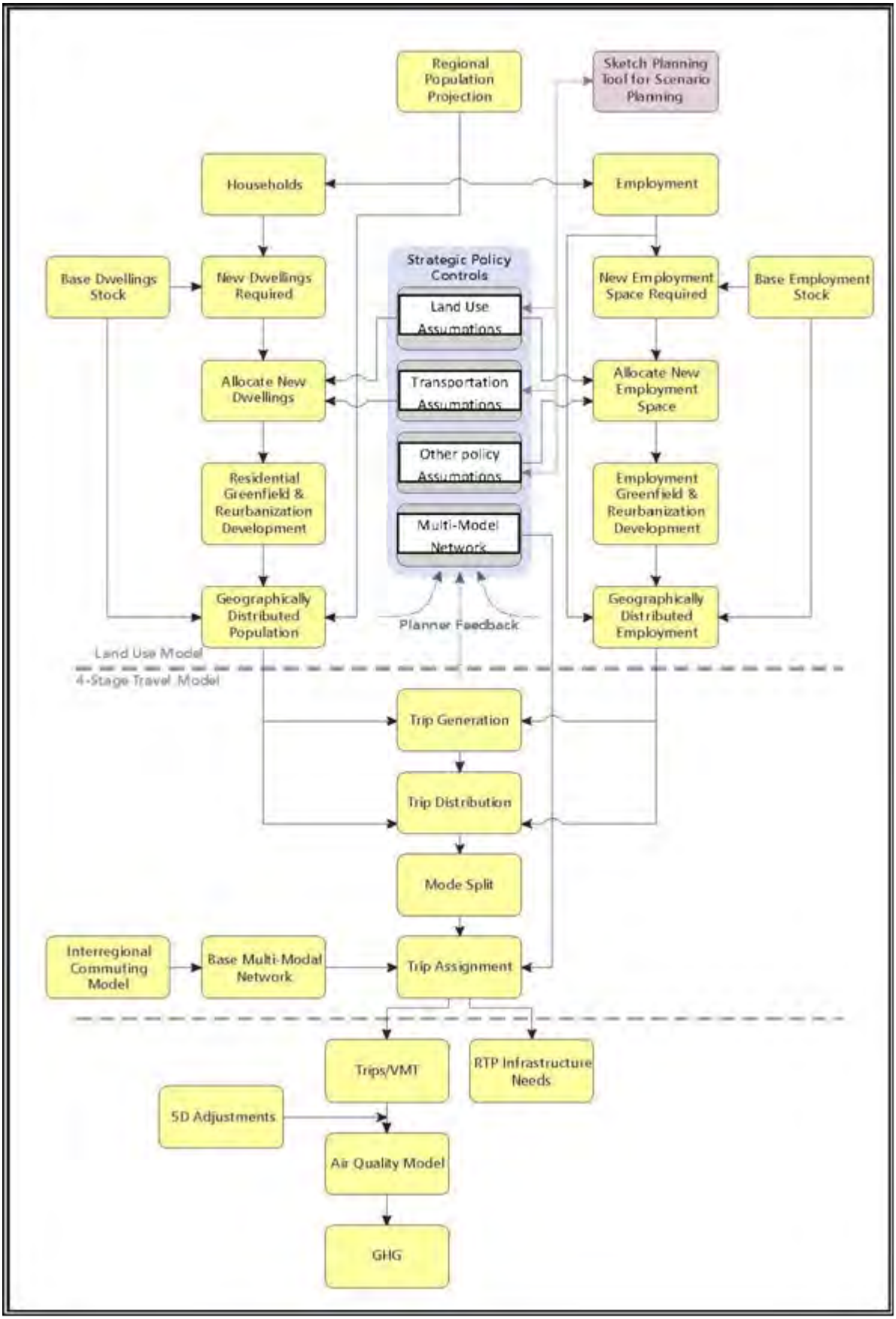
GHG Calculations for Passenger Vehicles	2005	2035
Daily CO2 (lbs/workday/capita) - modeled	15.39	15.09
Daily CO2 % reduction in CO2 from 2005 - modeled		-1.92%
Daily CO2 (lbs/workday/capita) - modeled and off-model adjustments		14.49
Total CO2 % Reduction from 2005 - modeled and off-model adjustments		-5.85%

Source: Computed using 2035 MTP/SCS AMBAG-RTDM data

EMFAC Model

AMBAG used the 2011 EMission FACtors model (EMFAC) to calculate GHG (CO2) emissions for the SCS as required by California Government Code 65080. EMFAC is a California specific computer model that calculates daily emissions of air pollutants from all on-road motor vehicles including passenger cars, trucks, and buses for calendar years 1970 to 2040. In the EMFAC model, the emission

Figure F-2: Model Improvement Plan



rates from each of the motor vehicle types are multiplied by the vehicle activity data to calculate vehicle emissions. The GHG emissions analysis for passenger vehicles, (LDA, LDT1, LDT2, and MDV vehicle types), uses the automobile VMT by speed class from the AMBAG RTDM model run for each scenario.

Using UPlan for the MTP

AMBAG is mandated to develop various scenarios to evaluate alternative land use and transportation growth patterns for the SCS in the MTP. In order to evaluate land use alternatives AMBAG selected the modeling program UPlan to build land use scenarios based on input from a wide variety of audiences. Each land use scenario resulted in data that was then fed into the regional travel demand model for evaluation of the combined effect of land use and transportation changes on vehicle miles traveled and other Board selected performance measures.

UPlan was originally developed by University of California at Davis for the Merced County Association of Governments (MCAG). The UPlan application is a raster based extension used in conjunction with ESRI ArcGIS software and was developed as an analytical tool that allows users to envision future lands use growth patterns.

The UPlan Model is based on the following assumptions:

- The population growth can be converted into demand for land use by applying conversion factors to employment and households.
- The new urban expansion will conform to city and county general plans.
- Cells have different attractions weights because of accessibility to transportation and infrastructure.
- Some grid cells, such as lakes and streams, will not be developed while other cells, such as environmentally sensitive habitats and flood plains, may "discourage" new development.

The inputs into UPlan consists of GIS files converted to 50 ft raster grid cells. Multiple grids are created that represent land use development, transportation facilities, political jurisdictions and other inputs. UPlan allocates growth based on residential and employment parameters and converts growth into acres needed for employment and housing by overlaying "attractors," "discouragers," and masks that have been given various buffers and weights.

For residential, the conversion looks at factors of persons per household and the density of a grid cell based on land use categories. For employment, the factors are determined based on employees per square foot and floor area ratios in commercial or industrial categories.

UPlan consists of three models types: Cluster, County, and Sub-Regional. For AMBAG, the Cluster model was utilized. The Cluster model is designed to model several counties together on the basis that they have strong transportation and land use ties in order to test the impacts of the regional transportation infrastructure and land use policies. The UPlan model consists of model specifics, demographics (residential and employment), general plan land use, slope, attractors, discouragers, and masks to allocate future growth.

Model Specifics

The specific input determines the model parameters such as extent, cell size, display units, and TAZ raster. The model specific parameters used for AMBAG were as follows:

- Extent: County Boundary Raster consisting of all three counties
- Cell size: 50 ft
- Display Units: Acres
- TAZ: raster of TAZ boundaries

Demographics (Population and Employment)

Demographics in UPlan consist of population and employment for both the base year and the future year. The 2010 base year utilized Census data for population and Employment Development Department (EDD) for employment. The EDD data was compared against InfoUSA data for the work conducted for the 2014 Regional Growth Forecast. The future years of 2020 and 2035 use the 2014 AMBAG Regional Growth Forecast data.

General Plan Land Use

The term general plan is used by UPlan to refer to the land use categories used as a basis for allocating either residential or commercial growth. In the AMBAG region there are 21 jurisdictions each with their own general plan. The terminology and density or intensity categories used in any given general plan varies across the region. In order to maintain consistency when analyzing land use, AMBAG worked with local jurisdictions to develop a land use typology system that is descriptive of all potential types of land use and their associated densities in the region. This typology system was then applied to all the general plans in the region in order to provide a consistent definition of land use types across jurisdictional boundaries.

The typology system created consists of twenty-two land use categories, which substantially delayed processing time within UPlan. In order to get the model to run within a couple of hours AMBAG "crosswalked" the twenty-two categories to the seven standard UPlan land use categories. See Table F-2.

These seven (7) categories are ranked and given a strict hierarchical order based on bid price potential in the land use allocation. This ranking simply prioritizes the order in which UPlan allocates the type of growth. As shown in the Table F-3, UPlan first allocated Industrial employment growth then high density commercial growth and so forth.

The model produces a table of acres demanded for each land use category from which the model operates its allocation routing. At the end of the model run a report is generated and notice is given if the total available acres are smaller than the total acres needed for the projection year.

Slope

UPlan has a setting for the maximum slope that each land use category can be is assigned. The units for this can be in either percent or degrees, however historically percent slope has been used. A 30 percent slope was utilized on all land use types for this project.

Attractors, Discouragers and Masks

It is assumed that development occurs in areas that are attractive due to their proximity to existing urban areas and transportation facilities. Conversely, it is assumed that development is discouraged in areas that are unattractive such as flood plains, environmentally sensitive habitats, or earthquake faults. Additionally, there are some geographic areas where development cannot occur such as open space and water bodies. These areas types are called masks.

Attractors and discouragers can be buffered at user-specified intervals. Weights are given to each attractor and discourager and if they have buffers each buffer is given a weight. Each attractor and discourager is assigned to any given land use category separately, such that one land use category can have different attractors or discourages with different weights than another. The same is true of the buffers assigned to the attractors and discourages. For attractors these buffers and weights represent the strength of attraction. For discouragers buffers and weights represent the cost to which development will be discouraged.

Table F-2: Conversion of Land Use Types

General Plan Land Use Type	Uplan Land Use Type
Urban Single-Family	Medium Density Residential
Urban Multi-Family Residential	High Density Residential
Urban Commercial	Low Density Commercial
Urban Mixed Use	High Density Residential
Urban Mixed Use	High Density Commercial
Single-Family Residential	Low Density Residential
Multi-Family Residential	High Density Residential
Neighborhood Commercial	Low Density Commercial
Regional Commercial	High Density Commercial
Employment Center	High Density Commercial
Neighborhood Mixed Use	Medium Density Residential
Neighborhood Mixed Use	Low Density Commercial
Town Single-Family Residential	Medium Density Residential
Town Multi-Family Residential	High Density Residential
Town Commercial	Low Density Commercial
Town Mixed Use	High Density Commercial
Agriculture	Very Low Density Residential
Rural-Town Commercial	Low Density Commercial
Rural-Town Residential	Low Density Residential
Exurban and Rural Residential	Very Low Density Residential
Institutional	High Density Commercial
Airport	Mask
Industrial and Manufacturing	Industry
Open Space/Recreation	Mask

Table F-3: UPlan Land Use Rankings

Allocation Rank	UPlan Land Use
1	Industry
2	High Density Commercial
3	High Density Residential
4	Low Density Commercial
5	Medium Density Residential
6	Low Density Residential
7	Very Low Density Residential

Allocation of Land Use in UPlan

Using the general plans of all the jurisdictions in the region AMBAG developed a typology system that classified land use into twenty-two categories. The typology system acted as a crosswalk between all the various general plan definitions of land use types. For example, one jurisdiction may call sixteen dwelling units per acre "High Density Residential," whereas another may classify this kind of density as Medium Density Residential. Therefore, it was necessary to create consistency among all the different plans.

General Plan

To utilize UPlan and to develop the allocation rules AMBAG associated the typology land uses to UPlan land use categories. For categories that are mixed-use AMBAG assigned multiple UPlan land use types (see Table F-2). UPlan terminology identifies land use parameters as "general plan." For that reason this text will refer to the "general plan" settings, however the land use used as the general plan layers consists of the aforementioned typology and actually represents 21 jurisdictions' general plans.

The UPlan model allocates the population growth and employment growth within the county to the land use types that are designated in the general plan. Areas with higher attractiveness values and large amounts of available land will have a higher proportion of population growth and employment growth.

UPlan land use allocations assume that:

- Future growth will have no effect on land use categories general plan, and
- No redevelopment, abandonment or shift of land use from one type to another will take place unless specifically included as redevelopment areas

For future growth UPlan allocates starting with the highest valued (most attractive) cells. As the higher valued cells are consumed, the model looks for

incrementally lower valued cells until all acres of projected land consumption are allocated. The model does this for each of the land use categories. Projected land consumption is based on the land area required to satisfy the employment and residential projections. The UPlan model starts with industry, then proceeds to high density commercial, high-density residential, low-density commercial, medium-density residential, low-density residential, and very low density residential (Table F-3). This order is chosen to represent the way in which the land market typically operates - higher valued land uses are more competitive in acquiring the most desired properties thereby outbidding the less valuable uses. The allocation sequence matters when mixed use types are designated in the general plan as they encompass different types of land use.

The allocation routine converts future acres consumed to the number of cells needed. It then determines how many cells are available in the highest valued category and if this is less than what is needed, simply converts all those cells to the designation of the land use it is allocating at that time. It then subtracts the number of cells it just allocated and moves on to the next highest cell value and again determines how many cells are available. Allocation only occurs in the land use categories that are designated in the general plan crosswalk Table F-2. The general plan typically specifies the average number of units per acre. In terms of the general ranges of gross density allowable in an area, UPlan has settings to specify the average size of a lot (in acres) for each of the density classes. The current existing developed land per the general plan is masked. The results from UPlan model are households and employment distributed by TAZ.

UPlan Scenarios

Parameters for Each Scenario

The UPlan parameter structure is made up of specific data parameters, buffers, weights, and masks. There is a separate set of parameters for each land use type. There are two categories of parameters: (a) generalized attractions and discouragements that apply everywhere in the region and (b) specific parameters that applied in the set-up and are the base for each scenario

The generalized parameters reflect proximity to, and service levels provided by, transportation system elements such as freeway ramps, transit, and the non-freeway road network. They also indicate proximity to existing land use clusters that attract new growth. The general plan designations are used to control where development can occur.

For each scenario, AMBAG ran each county separately to take into account the specific attractions, weights, and buffers for growth patterns. The output information was merged to create an overall picture for growth.

Calibration of Scenarios

UPlan was calibrated with trial-and-error techniques, which do not guarantee unbiased parameter estimates. No assessment of the degree of linear calibration bias was made. A typical calibration UPlan model run is setup as follows via the “UPlan 2 Model” button in ArcGIS 10.

The calibration of each scenario was performed incrementally. For each scenario, the GIS variables for the attractiveness grid for each land use category were selected and the associated buffer distances and weights were set. The initial selection and settings of the buffers and weights were taken from previous UPlan applications in California.

UPlan was calibrated to produce allocations at the city level by comparing the model outputs with land use change. UPlan outputs are limited to new growth, i.e. incremental growth for population, employment, and housing units.

The most direct and perhaps best way to evaluate the accuracy of UPlan is to qualitatively compare simulated with surveyed new footprint coverage by grid cell. A comparison with the clipped areas revealed that the UPlan land use allocations are not perfect, but the model produces coherent developments. At the micro-scale, developer

preferences and land market factors (e.g., demand, supply, cost, availability, and zoning issues) can strongly influence the location, timing, and type, of land use development in ways not considered by the model. However, all models for the purposes of the regional plan are calibrated at a regional scale and are not intended for simulating the market to the degree of accuracy that a jurisdiction or developer might need for determining viability of development.

Specific Parameters

The 2010 household population and employment was based on the 2010 Census. The 2020 and 2035 populations were based on the 2014 Regional Growth Forecast. The year 2020 was modeled only for the Hybrid Scenarios and not for the Initial Scenarios. Population living in group quarters was excluded from the allocation as this population is restricted to living in specific locations such as university dormitories and prisons. This population is assumed to continue growing in the locations they are currently located in and for that reason are not reallocated.

For a similar reason agricultural employment was excluded from the UPlan allocation of new land use. Agricultural lands may be consumed, but they are not moved. In other words, it is not logical to reallocate agricultural employees and lands to new locations. Additionally, the focus of the land use modeling was to look at different scenarios for land use growth within urbanized areas. For this reason no new growth was modeled for rural or non-urbanized areas. In the County of Santa Cruz urbanized areas included areas within the Urban Service Boundary as defined by the County General Plan, which includes both incorporated areas and certain urbanized unincorporated areas. In the County of San Benito urbanized included areas were considered within the city boundaries of Hollister and San Juan Bautista. In Monterey County urbanized areas were considered to be within each jurisdiction's LAFCO-designated Sphere of Influence (SOI). For unincorporated areas subject to a Community Plan, place types would be applied to the Community Plan Area.

UPlan converts household population and employment growth into land consumption using 50 ft grids based on residential, commercial, and industrial development densities. In an UPlan run, grid level allocated consumption is constrained to available land. This process can be described using the following general demographic rules:

- People take up space
- People live in groups (e .g. households)
- Different households take up different amounts of space (residential densities)
- The number of households multiplied by the space needed per household equals the residential space needed
- Some portion of each household is employed
- Different forms of employment require different amounts of space
- The number of employees multiplied by the space needed per employee equals the total employment space needed

The land consumption parameters used in this model were used for each scenario and were calibrated for AMBAG.

Residential Parameters

Residential Ratio

The Residential Ratio is the proportion of households in each of the four residential density categories, where the sum of the four categories is 100 percent. This was calculated by taking the geographic area of the four residential general plan category types:

- High density residential
- Medium density residential
- Low density residential
- Very low density residential

This was weighted by the "space per household" (gross acres by type) ratios listed above to give a units per area split between the four groups.

Average Lot Size

Average Lot Size is used to specify the average size of a lot (in acres) for each of the residential density classes. Average lot sizes across the county for each density class were estimated by using the unit, size, and square feet information contained in the county parcel database as maintained by the assessor.

Employment Parameters

Employee Ratio

The Employee Ratio is the proportion of employees in each of the three employment categories, where the total of the three categories is equal to 100 percent.

Average building square footage per employee by type

Average building square footage per employee by type is assumed to be a fair representation of the square feet usage likely in each County, based on historic averages, and can be adjusted based on local feedback as necessary.

Floor Area Ratio (FAR)

FAR is calculated by dividing the total square footage of a building by the square footage of its lot. FAR is a commonly used planning measure for zoning ordinances. However, a limitation of UPlan is the inability to program a FAR of greater than one. There is a method of changing the script to force the program to use a FAR of greater than one, however changing the script caused the model to produce other errors. For this reason AMBAG was forced to use a low FAR even though some land use types should probably have a higher FAR associated with them.

Self-Employment

Most UPlan studies have not explicitly addressed self-employment, while many employment forecasts do not include the self-employed and instead enumerate "wage and salary employment." The self-employed are forecasted in the regional growth forecast and therefore are indirectly included in this analysis. However, they are not explicitly modeled as an industry. To include this type in the land use model, numbers would be required for self-employment that can logically be connected to an industry type that needs floor space (i.e. the businesses are not being run out of a house). However, a large percentage of self-employment is in the construction, finance, insurance, real estate, and other service industries. These sectors do not necessarily lend themselves to a specific work location.

Scenario Variable Selections, Weights, and Buffers

For each scenario, the buffer and weight settings are defined for each land use type. As one might expect, transportation infrastructure is attractive to all land use types (i.e. residential, commercial and industrial). Certain types of special generators also attract residential and commercial growth.

Another significant attraction variable was census blocks with net population growth between 2020 and 2035. This variable encourages homogeneous residential development patterns (clustering) by in-filling vacant/underdeveloped land in existing developed areas. Another important attractor for all land use types include the spheres of influence for each city for this same reason.

Base Case

Utilizing the general plans, TAZ and demographic data from 2010, AMBAG developed an existing conditions "base case" from which the different scenarios were compared to determine the long-term net change. For the base case AMBAG utilized the following assumptions for population density, average lot size, proportions of employment, average square footage, and FAR.

Table F-4: Household Population (Excluding Group Quarters)

County	2010	2020	2010 to 2020	2035	2020 to 2035
Monterey	396,355	428,178	31,823	474,833	46,655
San Benito	55,269	72,730	17,461	80,886	8,156
Santa Cruz	251,413	265,819	14,406	294,637	28,818
Region	703,037	766,727	63,690	850,356	83,629

Table F-5: Employment (Excluding Agriculture)

County	2010	2020	2010 to 2020	2035	2020 to 2035
Monterey	136,900	158,545	21,645	173,471	14,926
San Benito	14,600	17,015	2,415	18,041	1,026
Santa Cruz	100,600	110,040	9,440	120,888	10,848
Region	252,100	285,600	33,500	312,400	26,800

Table F-6: Base Residential Assumptions

Scenario	Land Use	Residential Ratio	Average Lot Size
Base Case	High Density Residential	10	0
Base Case	Medium Density Residential	11	0
Base Case	Low Density Residential	41	1
Base Case	Very Low Density	38	2

Table F-7: Base Employment Assumptions

Scenario	Land Use	Employment Proportion	Avg Sq Footage	Floor Area Ratio
Base Case	Industry	16	800	1
Base Case	Low Density Commercial	37	500	0.5
Base Case	High Density	47	250	1

Scenario Assessment in UPlan

Five Initial Scenarios were developed to assess how future land use and transportation changes could affect the regional transportation system, as well as travel demands or needs. These five scenarios were structured around the goals adopted by the AMBAG Board for the 2035 MTP/SCS.

These scenarios were used to communicate broad concepts for consideration by all stakeholders to weigh and evaluate transportation choices and priorities. They also provided a common framework for all parties to discuss the economic, social, and environmental costs and benefits of transportation decisions while taking future uncertainties into consideration.

For each scenario, it was 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. It was also assumed that each scenario had the same amount of revenue available for transportation expenditures.

Land use and transportation criteria for each scenario are described below.

2035 SCS Scenario #1 –Regional Transit Corridors

Land Use

- Focus future development adjacent to existing and proposed rail and regional/ intercity transit corridors and opportunity areas.
- Encourage higher density urban centers in existing cities.
- Locate higher density residential and mixed use development at transit stations along the transit corridors.
- Strong emphasis on farmland preservation and watershed restoration.

Transportation

- Major investment in regional transit and rail transportation infrastructure to create better connections from housing to regional job centers.
- Bus rapid transit (BRT) or regional express between major cities with dedicated lanes, where possible, or the use of bus on shoulders, to provide time savings.
- Transportation system management strategies that support regional BRT such as queue jumps.
- Investments in high occupancy toll (HOT) and high occupancy vehicle (HOV).
- Create transit linkages to/from the proposed High Speed Rail Stations (Gilroy and Diridon).
- Improve commuter rail access within the Monterey Bay region and to the San Francisco Bay Area.
- Provide shuttles from passenger rail stations to tourist attractions.

2035 SCS Scenario #2 – Expanded Community Centers/Livable Communities

Land Use

- Focus additional growth within existing neighborhood communities in and adjacent to existing commercial corridors. (Focus on localization vs. regional mobility.)
- Encourage/facilitate a better jobs/housing balance.
- Encourage mixed use development that supports walkability and convenient access to services within community centers.
- Encourage business incubators and green tech businesses. (Emphasis on small business and start-ups instead of large scale businesses as referenced in Scenario 4.)
- Support the housing and transportation needs of workers in the hospitality industry, particularly along the Monterey peninsula.
- Improve access to educational facilities, particularly for higher-learning.

Transportation

- Focus on creating more "Complete Streets" and encouraging "active" transportation such as walking and biking that are commonly associated with the first and last mile of travel.
- Close local transit gaps and invest in local bus transit services and facilities.
- Significantly improve traffic safety through traffic calming, streetscape landscaping, etc.
- Increase investment in local serving rapid or express bus services along high quality transit corridors.
- Facilitate and fund development of new dedicated bicycle and pedestrian facilities that connect key destinations.
- Encourage the development of roundabouts to improve safety and air quality.
- Encourage the development of pedestrian trails.
- Encourage/expand bikes on bus to help with first and last mile of trips.
- Improve access for pedestrians and bicyclists in areas identified for intensified use

2035 SCS Scenario #3 – Dispersed Growth

Land Use

- Encourage future growth in new "greenfield" development areas and expand growth in existing unincorporated communities.
- Focus on opportunities to expand and improve access to tourism.

Transportation

- Focus on roadway improvements that reduce congestion and travel time.
- Develop improved roadway and transit access that support tourism related jobs.
- Improve/expand highway access between cities particularly at "choke points" with transportation system management and transportation demand management strategies such as auxiliary lanes, ramp metering, interchanges, left turn lanes, park-and-ride lots and safety improvements for at-grade crossings.
- Construct safety enhancement projects on highways.

2035 SCS Scenario #4 – Targeted Growth and Economic Diversity

Land Use

- Concentrate growth and development for both housing and employment in cities that support low income and minority populations, inclusive of proposed annexations and sphere of influence amendments.
- Improve the jobs/housing balance in those areas that support low income and minority populations.
- Encourage sustainable, pedestrian oriented development that is responsive to the economic needs and social heritage of each respective community.
- Promote housing that supports local economic development, particularly workforce housing.
- Encourage economic development that diversifies the economy instead of promoting one particular industry such as tourism related services, processing and manufacturing, healthcare and medical services as well as general retail businesses.
- Promote access to workforce investment opportunities such as vocational training centers.
- Expand land use development around existing and proposed airport facilities to accommodate goods movement.

Transportation

Focus transportation investments along highways in underserved areas. Examples include:

- Commuter express services (e.g. express bus, vanpools, etc.)
- Interchange improvements
- Safety improvements at at-grade crossings
- Focus transit/transportation services that cater to students as well as low income and minority populations. (Increase frequency of Line 23)
- Develop a regional rail transfer facility to enable more efficient transport of goods, particularly produce.
- Re-establish the Coast Daylight/Starlight Express.

2035 SCS Scenario #5 – System Preservation

Land Use

Allocate growth according to existing general plans designations for each respective jurisdiction assuming the AMBAG Regional Growth Forecast for population, housing, and employment. (No specific land use changes proposed for this scenario.)

Transportation

Focus transportation funding on safety, maintenance, and rehabilitation of existing roadway and transit facilities throughout the region.

2035 Hybrid SCS Scenario #A

Land Use

- Focus additional growth within existing neighborhood communities in and adjacent to existing commercial corridors. (Focus on localization vs. regional mobility.)
- Encourage/facilitate a better jobs/housing balance.
- Encourage mixed use development within existing commercial corridors that have high quality transit service in order to supports walkability and convenient access to services within community centers.
- Encourage business incubators and green tech businesses. (Emphasis on small business and start ups instead of large scale businesses as referenced in Scenario 4.)
- Support the housing and transportation needs of workers in the hospitality industry, particularly along the Monterey peninsula.
- Improve access to educational facilities, particularly for higher-learning.

Transportation

- Focus on creating more "Complete Streets" and encouraging "active" transportation such as walking and biking that are commonly associated with the first and last mile of travel.
- Close local transit gaps and invest in local bus transit services and facilities.
- Significantly improve traffic safety through traffic calming, streetscape landscaping, etc.
- Increase investment in local serving rapid or express bus services along high quality transit corridors.
- Facilitate and fund development of new dedicated bicycle and pedestrian facilities that connect key destinations.
- Encourage the development of roundabouts to improve safety and air quality.
- Encourage the development of pedestrian trails.
- Encourage/expand bikes on bus to help with first and last mile of trips.
- Improve access for pedestrians and bicyclists in areas identified for intensified use.

2035 Hybrid SCS Scenario #B

Land Use

Allocate growth according to existing general plans designations for each respective jurisdiction assuming the AMBAG Regional Growth Forecast for population, housing, and employment. (No specific land use changes proposed for this scenario.)

Transportation

- Focus transportation funding on safety, maintenance, and rehabilitation of existing roadway and transit facilities throughout the region.
- Increased investment in new rail in Monterey and Santa Cruz Counties.

Preferred Scenario

The preferred scenario was selected based on a combination of the two hybrids. Projects from both the hybrids were included in a mix that provides for investment in safety, maintenance, operations, transit, complete streets, and active transportation. On the land use side the preferred scenario focuses on mixed use infill development in commercial corridors with high quality transit. See Chapter 4 of the 2035 MTP/SCS for a complete description of the preferred scenario and Sustainable Communities Strategy.

UPlan Results

UPlan is used as an intermediary step in preparing inputs for the regional travel demand model. The goal of modeling any given scenario is to test its performance on a variety of indicators as adopted by the AMBAG Board of Directors. The metrics or indicators used are mostly reliant on GIS analysis or outputs from the regional travel demand model. Both of these means of obtaining results of scenario performance rely on using UPlan to prepare the data.

The output of UPlan is relatively simple, it provides the spatial distribution of the relative location of new jobs, housing and population in the region based on the parameters identified, such as attractors and detractors. This shapefile is then used as an input into either the regional travel demand model or for a GIS analysis that results in a specific metric. For a list of the performance measures reviewed refer to Chapter 5 of the 2035 MTP/SCS document.

The calibrated UPlan model does a reasonable job of allocating the various categories of land uses to allowed growth areas. This is made possible by the geographic specificity and precision in the GIS land use and transportation system data that underlie the UPlan calculations. The generalized UPlan model is applicable in a wide variety of rural, suburban, and urban settings

It may be possible to improve the accuracy of the model by using more sophisticated calibration methods. However, there is large inherent variability in the site-level scale of the UPlan outputs. At this micro level, developers, urban designers, and landowners have significant economic latitude to vary the land use mix, density, and timing of specific projects. Also, one should guard against over calibration, which reflects local policies that may change over time.

Endnotes

1 Recommendations of the Regional Targets Advisory Committee (RTAC) Pursuant to SB375: A Report to the California Air Resources Board, 2009. See pages 7, 11, and 18.

2 Cambridge Systematics, Inc., "Moving Cooler: An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emissions", Urban Land Institute, July 2009.

3 Professor of Planning, Policy, and Design and Economics at the University of California in Irvine.

4 Professor in the Department of Environmental Science and Policy at the University of California at Davis

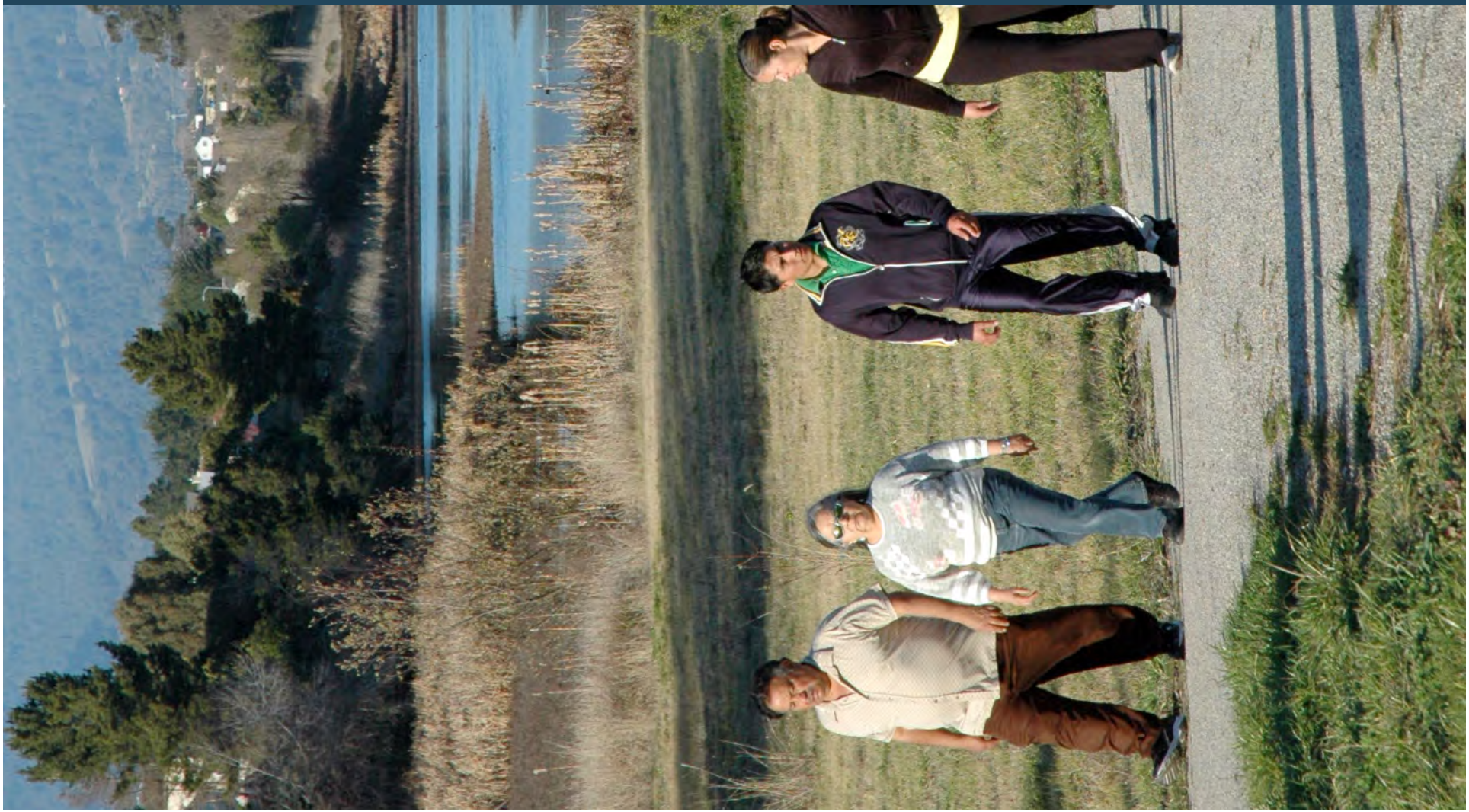
5 http://arb.ca.gov/cc/sb375/policies/policies.htm

6 http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

7 http://www.sacog.org/2035/files/MTP-SCS/appendices/C-4%20SACSIM%20Documentation.pdf

8 http://onebayarea.org/pdf/final_supplemental_reports/FINAL_PBA_Predicted_Traveler_Responses.pdf

G Performance Measures



Regional Performance Measures

Introduction

This appendix highlights the performance of the MTP/SCS for 2035. The performance of the Revenue Constrained network also is compared to other network scenarios, such as 2010 Existing and 2035 No Build.

The performance of the 2035 Revenue Constrained Network compared to existing conditions (2010), 2035, and the 2035 No Build is shown in Table G-1. In addition, this appendix includes the methodology to estimate the performance measures.

Table G-1: Performance Measure Results

Regional Performance Measures	2010 Existing	2020 No Build	2020 MTP/SCS	2035 No Build	2035 MTP/SCS
Access and Mobility					
Work Trips Within 30 Minutes (percent)					
Drive Alone	84.3%	83.7%	83.8%	84.0%	84.2%
Carpool	84.3%	83.7%	83.8%	84.0%	84.2%
Transit	15.4%	15.5%	15.6%	16.9%	17.1%
Commute Travel Time (minutes)	15.7	15.9	15.9	15.7	15.7
Economic Vitality					
Jobs Near High Quality Transit (percent)	17.5%	17.9%	29.0%	27.2%	57.3%
Daily Truck Delay (hours)	2,802	4,487	4,038	11,471	10,667
Environment					
GHG Reductions (Percent reduction from 2005 baseline)*	N/A	0.0%	-3.5%	0.6%	-5.9%
Open Space Consumed (acres)	N/A	N/A	N/A	2,944	2,556
Farmland Converted (acres)	N/A	N/A	N/A	14,611	14,316
Healthy Communities					
Alternative Transportation Trips (percent)	17.3%	17.4%	17.1%	18.1%	17.7%
Air Pollution - all vehicles (tons/day)	31.3	14.1	13.8	9.5	9.4
Peak Period Congested Vehicle Miles of Travel (miles)	128,463	275,639	221,103	749,430	618,975
Social Equity					
Distribution of MTP/SCS Investments (percent)					
Low income population	N/A	N/A	97.8%	N/A	90.3%
Non low income population	N/A	N/A	2.2%	N/A	9.7%
Minority population	N/A	N/A	91.8%	N/A	79.1%
Non minority population	N/A	N/A	8.2%	N/A	20.9%
Poverty population	N/A	N/A	78.9%	N/A	62.2%
Non poverty population	N/A	N/A	21.1%	N/A	37.8%
Access to Transit within 1/2 mile (percent)					
Low income population	14.5%	14.5%	23.5%	16.4%	48.2%
Non low income population	10.3%	10.4%	18.1%	12.8%	38.4%
Minority population	12.8%	12.8%	21.8%	14.9%	47.1%
Non minority population	14.5%	14.7%	24.8%	17.0%	44.3%
Poverty population	16.0%	15.9%	24.8%	13.6%	50.5%
Non poverty population	11.9%	12.0%	20.4%	14.3%	42.6%
System Preservation and Safety					
Maintain the Transportation System (percent)	N/A	N/A	58%	N/A	50%
Fatalities and Injuries per Capita	0.4%	0.4%	0.4%	0.4%	0.4%

Methodology to Estimate Performance Measures

The methodology used to calculate the regional performance measures is detailed below. A variety of tools such as the Regional Travel Demand Model (RTDM), geographic information system (GIS), and EMFAC were used to estimate the performance measures.

Percent of Work Trips That Are 30 Minutes of Less By Mode

This performance measure is calculated by using the Regional Travel Demand Model. It is the work trips that are 30 minutes or less and divided by total work trips by mode: drive alone, carpool, and transit.

Average Work Trip Travel Time

This performance measure is calculated by using outputs from the Regional Travel Demand Model. It is the work trip person-hours of travel divided by total work trips (peak period).

Percent of Jobs Within ½ Mile of a High Quality Transit Stop

This performance measure was calculated using GIS. It is the jobs within a ½ mile of all high quality transit stops divided by the total jobs in the region. Jobs are calculated by using employment data at the traffic analysis zone (TAZ) spatial level. Spatially referenced employment data for the year 2010 was provided by InfoUSA and aggregated to the respective TAZs. The percentage of employees within a ½ mile of a high quality transit stop (HQTS) was estimated as an equivalent proportion of TAZ area within a ½ mile of an HQTS. In other words, the percent area of an individual TAZ within a ½ of an HQTS was applied to the total number of employees within that TAZ. Those employees were then summed with all the rest of employees near an HQTS within the AMBAG region. This method assumes that employees are equally distributed throughout the TAZ. However, given that individual TAZs within urbanized areas (and therefore HQTS) are not spatially broad, the possibility of underestimating employment numbers near HQTS is low.

Daily Truck Hours of Delay

This performance measure is calculated by multiplying the daily total vehicle hour delay by total number of trucks as reported by the Regional Travel Demand Model.

GHG Emissions

This performance measure reports the CO2 emissions for SB 375 vehicle types per capita based on outputs from the Regional Travel Demand Model and the California Air Resources Board's Emissions Factor (EMFAC) model. It is the daily pounds of CO2 divided by total population as a percent reduction from the 2005 baseline.

Impacts to Sensitive Habitat Areas & Open Space

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. Calculation of the acreage of sensitive habitat and open space consumed by each scenario was performed at the parcel level using GIS by examining the changes between existing and alternative land use types for each scenario. To estimate the amount of open space consumed under any given scenario, the sum was derived of all parcel areas which changed from open space (undeveloped land) to developed land.

Farmland Preservation

Calculation of the acreage of agricultural land consumed by each scenario was performed using GIS at the parcel level by examining the changes between existing and alternative land use types for each scenario. To estimate the amount of farmland consumed under any given scenario, the sum was derived of all parcel areas which changed from farmland to developed land.

Alternative Transportation Trips

This performance measure is an output from the

Regional Travel Demand Model. It is the total number of bike, walk, and transit trips.

Smog Forming Pollutants (Daily Tons)

This performance measure was calculated using vehicle miles traveled by speed as reported by the regional travel demand model. That output becomes an input in the California Air Resources Board's Emissions Factor (EMFAC) model. The output of EMFAC provides pollution in various categories. This performance measure is the daily short tons of reactive organic gases plus daily short tons of nitrogen oxides as reported from EMFAC.

Congested Vehicle Miles of Travel

This performance measure uses the Regional Travel Demand Model. It is the total vehicle miles traveled at level of service F (volume/capacity $\geq$ 1.0) divided by total vehicle miles traveled in the peak periods.

Distribution of MTP/SCS Investments

This performance measure is calculated using GIS. It is the dollar value of MTP expenditures serving low income and minority communities divided by total MTP expenditures. Note: this indicator provides a snapshot of MTP expenditures by geographic area. Other factors such as proximity to impacts of transportation projects and services are not reflected in this indicator.

Defining Low Income and Minority

The definition of minority individual was considered any non-white or mixed race person according to the 2010 Census data. Conversely, a non-minority individual was considered any white or non-Hispanic person. For the purposes of this analysis, a tract was considered to be predominantly minority if greater than 65% of the total population was non-white.

The definition of 'low-income' was considered a family whose annual income was less than $75,000 per year. This definition was developed by adjusting the national poverty level to a family of three living within the AMBAG region, as follows. The poverty level was adjusted based on housing prices within the AMBAG region relative to the national average home price. On average, the price of a home within the Monterey Bay Area is three times the national average price of a home. Therefore, the poverty level was adjusted by a multiplier of approximately three, as a general proxy for the higher cost-of-living. This threshold was subsequently multiplied by a factor of 1.5 to capture poverty as well as low income earning families (this multiplier is suggested in the DOT Circular FTA C 4703.1, pg17, note 2). Tract-level income census data for individuals is provided in bins of $10,000 - $15,000 increment income ranges. Therefore, low-income families were counted as those earning between $0 and $74,999 per year. For the purpose of this analysis, a tract was considered predominantly low-income if greater than 65% of residing families earned less than $75,000 annually.

Poverty was considered those families with a combined income of less than $25,000 per year. The limit of $25,000 was derived based on the US Federal Poverty Thresholds for 2013 for a family of 3-4 individuals. This level was estimated at approximately $20,000 per family. Due to the method of binning family income levels by the US Census Bureau, AMBAG's definition of poverty for this analysis was adjusted to $25,000. For the purpose of this analysis a tract was considered predominantly impoverished if greater than 20% of residing families earned less than $25,000 annually.

Percent of Population Within ½ Mile of a High Quality Stop

This performance measure was calculated using GIS. Existing and proposed high quality transit stops (HQTS) were located based on information provided by RTPAs. The definition of an HQTS includes any mass transit stop that is serviced at intervals of 15 minutes or less during peak hours as well as rail stations. Existing HQTS include but are not limited to the JAZZ Bus Rapid Transit (BRT) line provided by Monterey-Salinas Transit; several BRT lines operated by Santa Cruz Metro; as well as major transit centers located in Marina, Salinas, Hollister, and Scotts Valley. Proposed HQTS were added to the existing data to represent future build-out of region transit projects. Proposed

HQTS include but are not limited to a new BRT corridor between Marina and Salinas; a new BRT line in Hollister; and bolstering existing BRT lines in Monterey and Santa Cruz. Although they are not technically considered high quality transit corridors by the standard definition due to less frequent headways, the proposed branch line rail stations are considered major stops per Senate Bill 375 and therefore are also considered for this analysis.

The percentage of the regionwide population of each sub-group who reside within a ½ mile of a current or proposed HQTS was calculated using available demographic data from American Community Survey. Income and minority data were available at the census tract spatial resolution. Race populations were quantified by the number of minority/non-minority individuals residing within a tract. Income information was quantified by the number of families (any two or more people living together related by marriage, birth, or adoption) with a combined income below predefined thresholds residing within a tract.

Since census tracts can span broad spatial distances relative to a ½ mile buffer, a method was needed to parse the sub-populations within large tracts. The percentage of families and individuals residing within a ½ radius of HQTS was estimated using the ratio of residential parcels within the buffered ½ mile to total number of residential parcels within each respective census tract. This method was found to be adequate for estimating the percentage of people within a ½ mile radius of an HQTS given the lack of detailed and consistent parcel level data available for the region. (GIS)

Percent of Transportation Investments Towards Maintenance and Rehabilitation

This performance measure was calculated by taking the sum of maintenance and rehabilitation transportation investments divided by all transportation investments.

Annual Projected Accidents

This performance measure uses data from the Regional Travel Demand Model. It is the projected vehicle miles traveled by functional class (collectors and higher) multiplied by accident and fatality rates. Data for accidents and fatalities obtained from the Statewide Integrated Traffic Records System (SWITRS) for the most recent years available, 2009 and 2010.

H Complete Streets

Introduction

The Monterey Bay Area Complete Streets Guidebook contains sample policies and engineering best practices that can be adopted by local jurisdictions to comply with California Complete Streets Legislation (AB 1358). Various complete street types are identified and defined in the guidebook, along with sample cross-sections, associated land uses and suggested roadway user prioritization. The complete street types provide design recommendations for various roadway arrangements. Another key component of the guidebook is a complete streets project review and design checklist. The checklist is a tool that can be used in planning and public works departments to identify opportunities for complete streets and document constraints or exemptions.

A unique component of the Monterey Bay Area Complete Streets Guidebook is a framework for evaluating the possible economic effects of complete streets. The economic framework categorizes potential effects of both direct and non-direct transportation impacts on investments, business activity, property values, and government fiscal health. The complete Monterey Bay Area Complete Streets Guidebook is attached.

H Attachments

Monterey Bay Area

COMPLETE STREETS GUIDEBOOK

August 2013

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PARTNER AGENCIES

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ADVISORY COMMITTEES

Monterey County

Technical Advisory Committee

Bicycle & Pedestrian Facilities Advisory Committee

Santa Cruz County

Interagency Technical Advisory Committee

Bicycle Committee

Elderly & Disabled Transportation Advisory Committee

San Benito County

Technical Advisory Committee

Bicycle & Pedestrian Advisory Committee

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EXECUTIVE SUMMARY

People are the lifeblood of a community, and streets are its veins and arteries. Streets are vital to daily travel, economic exchange and maintaining an acceptable quality of life. Streets connect people to important destinations and serve as destinations themselves, as places to walk with friends, ride a bicycle, view public art, or enjoy the local farmers market. Although for many years streets have primarily been designed to serve automobile traffic, they are public places to be used by all people including non-drivers.

Local and State transportation policy has evolved from planning and designing almost exclusively for the movement of cars, to an increasing focus on the movement of people and goods. Complete streets policy and design embodies this paradigm shift by recognizing that
(1) not all people travel by car, and
(2) land use affects who uses the street and how that street should function.

The Monterey Bay Area Complete Streets Guidebook builds upon best practices from across the nation and was developed to assist local jurisdictions in planning, designing and implementing complete streets projects. Tools such as talking points to engage decision-makers and community members and a project review checklist are included in the Guidebook and technical Appendix. The policies, processes and design treatments included in the Guidebook have been vetted, and refined by experts, planners, advocates and policy makers nationally and locally. The materials included in the Monterey Bay Area Complete Streets Guidebook builds on similar reports such as the Charlotte Department of Transportation Urban Design Guidelines, the Manual for Living Streets developed by the County of Los Angeles, the Smart Growth America Best Complete Streets Policy, and the Caltrans Complete Streets Action Plan. The contents of the Guidebook are summarized in the following sections.

EXECUTIVE SUMMARY

CHAPTER 1: GENERAL PLAN VISION, GOALS & POLICIES

This chapter of the Guidebook provides suggestions as to how communities can meet requirements of the Complete Streets Act (AB 1358) by incorporating complete streets policies into their general plans. Sample vision statements are provided in the chapter and complete street general plan policies can be found in Appendix B.

CHAPTER 2: COMPLETE STREET PERFORMANCE MEASURES

Performance measures indicate how well a street functions and meets the needs of all applicable users. Performance measures can also evaluate the effects of a policy or project on the performance of the system and to assess whether it has achieved its goal. The Guidebook provides a discussion of the 2010 Highway Capacity Manual methodology for calculating multimodal level of service as well as more qualitative performance measures.

CHAPTER 3: COMPLETE STREETS ACTION PLAN

The Action Plan of the Guidebook outlines strategies for coordinating intra-agency tasks to better integrate complete streets into the transportation design processes. A key component of the Action Plan involves providing complete streets design training to planners, civil and traffic engineers, project managers, plan review personnel, inspectors and other personnel responsible for design and construction of streets. A sample Action Plan is included as **Appendix D** to the Guidebook, and integrates complete streets into every step of community development in a way that can be tailored to the needs of each jurisdiction.

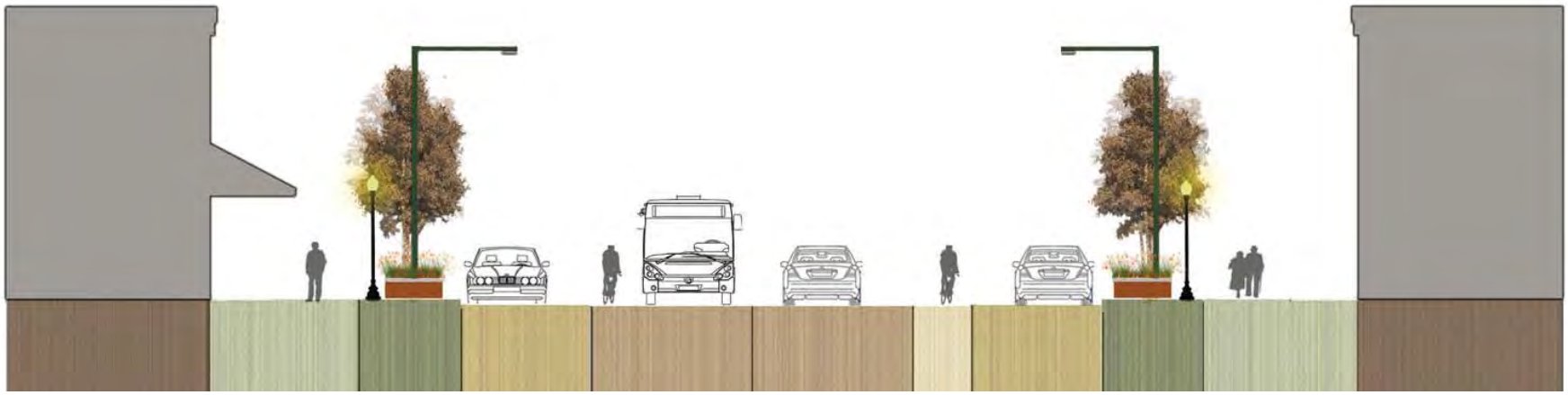
CHAPTER 4: COMPLETE STREETS TYPES

This chapter provides information to agency decision-makers on how to match the appropriate complete streets features to adjacent land uses and roadway users. This chapter introduces complete street types and a discussion of roadway user needs and design solutions.

CHAPTER 5: COMPLETE STREETS DESIGN

This chapter provides best practices examples of street features to be considered when designing and engineering complete streets. Example cross-sections are included and organized by complete street type and by user zones. Additional bicycle facility treatments are shown in Appendix K.

Conceptual Cross-Section



Draft Monterey Bay Area Complete Streets Guidebook (August 2013)

EXECUTIVE SUMMARY

CHAPTER 6: IMPLEMENTING COMPLETE STREETS PROJECTS

The Guidebook outlines a 6-Step Process for implementing complete streets that involves defining the existing land use and transportation context, identifying deficiencies and goals for the future, determining the appropriate complete street type, considering alternative designs, and balancing the trade-offs between modes. Questions for each step of the process are included in Appendix I.

The Project Review Checklist in Appendix H of the Guidebook can be used to follow these 6-steps. The Checklist may be adopted by local jurisdictions to reveal opportunities for complete streets projects and document how the needs of all users were considered.

CHAPTER 7: TRANSITIONING TO COMPLETE STREETS

Frequently, the last steps in implementing complete streets are the most difficult, which involves enacting requirements and regulations and compiling funding to enable the development of complete streets improvements. Specific tools and strategies for addressing these challenges are described in this chapter.

CHAPTER 8: EDUCATION, ENCOURAGEMENT & ENFORCEMENT PROGRAMS

Education, encouragement, and enforcement programs complement complete street infrastructure and can play an important role in achieving community goals such as health and safety. This chapter identifies local education, encouragement and enforcement strategies.

CHAPTER 9: TALKING ABOUT COMPLETE STREETS

Complete streets are roadways designed and operated to enable safe access for all users. However, the meaning of complete street may vary between communities, applications or individuals. This chapter is intended to serve as a resource for professionals, decision makers and the public who are interested in discussing and educating others about complete streets concepts.

INTRODUCTION

PURPOSE

The Monterey Bay Area Complete Streets Guidebook provides resources and procedures for developing streets in the Monterey Bay Area that meet the needs of all users including non-drivers of all ages and abilities. Although great strides have been made by local jurisdictions across the Monterey Bay Area to provide adequate facilities for all roadway users, many streets are not "complete" in the Monterey Bay Area due to lack of sufficient bicycle and pedestrian facilities. In recognizing that roadways have primarily been designed to serve the automobile, the Monterey Bay Area Complete Streets Guidebook highlights bicycle and pedestrian access as an essential design objective.

The policy guidance and recommendations herein may be adopted by jurisdictions to address the following:

- Ensure future changes to roadways function well for all roadway users;
- Pursuant to the Strategic Growth Council grant, meet Sustainable Communities Strategies requirements in state law;
- Comply with California Complete Streets legislation (AB 1358);
- Adopt a planning process in which all roadway users considered;
- Reduce vehicle miles traveled and reach regional greenhouse gas targets pursuant to California law (SB 375); and
- Achieve objectives identified in local Climate Action Plans.

Unlike many guidebooks, which may be more prescriptive, the Monterey Bay Area Complete Streets Guidebook places greater emphasis on process and the importance of understanding the trade-offs between different design considerations. Balancing the needs of all roadway users can be challenging in the Monterey Bay Area, where right-of-way and funding is limited. The planning processes recommended by this guidebook seek to ensure that the resulting streets provide for the safety and comfort of all users to the greatest extent possible.

Goals of the Complete Streets Guidebook

- Provide tools for transitioning streets to complete streets
- Improve safety, especially for the most vulnerable users
- Facilitate understanding the impacts on communities of implementing complete streets policies
- Identify types of improvements needed to accommodate growth and address congestion in areas of compact development
- Better integrate land use and transportation to reduce vehicle miles traveled
- Establish a collaborative process for integrating planning and designing streets
- Serve as a resource for implementing the California Complete Streets Act (AB1358)

HOW TO USE THE GUIDEBOOK

Interested parties may use the Guidebook in whole or in part to address the following:

- Practice six steps to successfully implementing Complete Streets: addressing complete streets from planning and design to implementation **(Chapter 6: Projects and Implementation)**
- Incorporate Complete Streets into community plans **(Chapter 1: Vision , Goals and Policy)**
- Measure the effectiveness of complete streets policy **(Chapter 2: Performance Measures & Targets)**
- Provide a context for how Complete Streets can affect current systems and procedures **(Chapter 3: Complete Streets Action Plan)**
- Develop projects based on land use context and street functional classifications **(Chapter 4: Complete Street Types)**
- Design treatments for complete streets **(Chapter 5: Design Treatments)**
- Become familiar with tools for transitioning to complete streets **(Chapter 7: Transitioning to Complete Streets)**
- Learn about programs that enhance or are improved by complete streets projects **(Chapter 8: Education, Enforcement and Encouragement)**
- Communicate the benefits of complete streets and engage the community **(Chapter 9: Talking about Complete Streets)**

ADOPTION

This guidebook is suitable for full or partial adoption by local jurisdictions and regional agencies to guide the planning and design of streets. Adoption of this guidebook represents an agency's commitment to incorporate complete streets into policy, project evaluation, design, implementation, training, and public involvement. Jurisdictions may also adopt a complete streets ordinance or resolution that references the Monterey Bay Area Complete Streets Guidebook.

It is recommended that local and regional agencies that adopt or use this guidebook should:

- Review their approach to street design through all stages of the process, from advanced planning through preliminary design and construction;
- Update existing design manuals and training materials to address complete streets concepts;
- Incorporate a comprehensive range of policies which address complete streets in the general plan or regional plan;
- Support training for planners and engineers in complete street concepts and design considerations; and
- Seek ongoing public input from the community.

Adoption of the guidebook, in whole or in part, is a necessary first step in ensuring complete streets are consistently developed in the Monterey Bay Area. Agencies may have to take additional steps and modify their internal processes in order to fully and successfully implement the guidebook. Tools to assist local jurisdictions in these tasks can be found throughout the Monterey Bay Area Complete Streets Guidebook.

BACKGROUND

The Monterey Bay Area Complete Streets Guidebook was developed to address complete streets on local and regional scales. In 2011, the Association of Monterey Bay Area Governments (AMBAG), which serves as the Metropolitan Planning Organization for the three county region of Monterey, Santa Cruz and San Benito Counties, in coordination with the three Regional Transportation Planning Agencies (RTPAs) in each county, received a grant from the Strategic Growth Council to conduct a complete streets needs assessment and develop a complete streets guidebook specific to the Monterey Bay Area. In addition to addressing regional complete streets issues, the Guidebook is a tool to help jurisdictions meet State complete streets requirements. The California Complete Streets Act (AB 1358), passed in 2008, requires that any major revision of a jurisdiction's General Plan include modification to the circulation element to "plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads and highways" (California Government Code section 65302(b)(2)). Several jurisdictions in Santa Cruz, Monterey and San Benito Counties currently meet this requirement but many do not.

The Monterey Bay Area Complete Streets Guidebook will benefit the entire region by encouraging bicycle, pedestrian and transit usage. The Metropolitan Transportation Plan (MTP) is prepared by AMBAG in cooperation with the RTPAs to plan for the long-range transportation needs of the region over the next 25 years. Pursuant to California Senate Bill 375, the MTP incorporates a Sustainable Communities Strategy and a transportation and land use strategy that will achieve regional greenhouse gas emissions reduction targets established by California Air Resources Board. The regional targets are: a 0% increase in greenhouse gas emissions by 2020 and a 5% reduction from 2005 greenhouse gas levels by 2035. Implementation of complete streets projects will contribute to reductions in greenhouse gas emissions by providing safe, convenient alternatives to driving.

The Monterey Bay Area Complete Streets Guidebook builds on best practices from across the nation. The policies, processes and design treatments included in the Monterey Bay Area Complete Streets Guidebook have been vetted, refined, and approved by experts, planners, advocates and policy makers nationally and locally. The materials included in the Monterey Bay Area Complete Streets Guidebook include references from similar documents such as the Charlotte Department of Transportation Urban Design Guidelines, the Manual for Living Streets developed by the County of Los Angeles, the Smart Growth America Best Complete Streets Policy, and Caltrans Complete Streets Action Plan.

Complete streets are being incorporated into every level of transportation planning in the Monterey Bay Area from the Metropolitan Transportation Plan and Regional Transportation Plans to local plans and projects.

Metropolitan Transportation Plan/SCS

Regional Transportation Plans

Local General Plans

Area Plans

Local Projects

WHAT ARE COMPLETE STREETS?

Complete streets are roadways designed to safely and comfortably accommodate all users, including, but not limited to motorists, cyclists, pedestrians, transit and school bus riders, delivery and service personnel, freight haulers, and emergency responders. Complete streets accommodate people of all ages and abilities. Complete streets expand transportation choices by making walking, bicycling, and public transportation more convenient and safe. This includes consideration of varying levels of tolerance for traffic stress when choosing a transportation mode, particularly as it relates to bicycling.

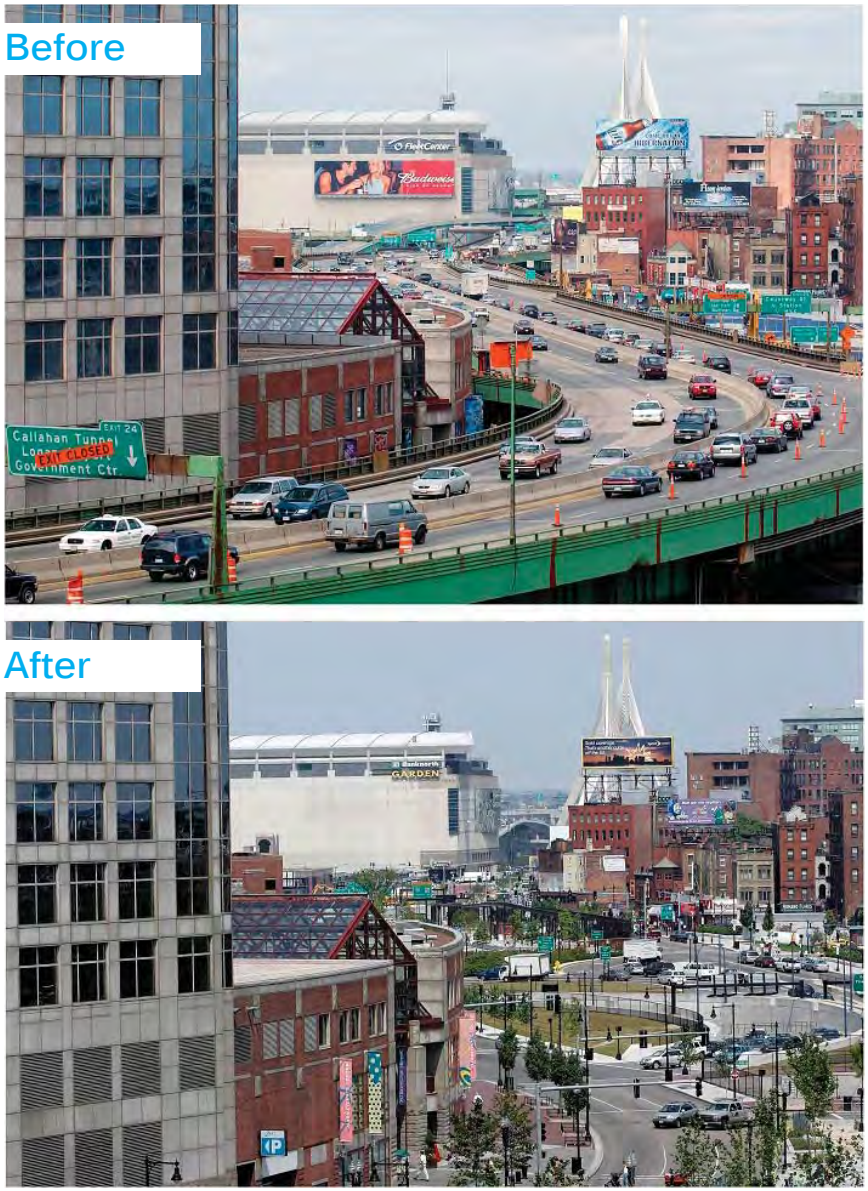
The Monterey Bay Area Complete Streets Guidebook does not prescribe “one size fits all”. Complete streets facilities should look different depending on the surrounding land use context and user needs. Each street in a complete streets network is designed to provide safe accommodation for the various intended users. This does not mean all streets must be designed to equally support all users. Instead, a diverse palette of street design options that consider the location, land uses, and multimodal transportation volumes should be considered.

WHY COMPLETE STREETS?

More and more complete streets are being developed across California as decision-makers realize the value they add to their communities. Complete Streets projects address user needs across multiple modes, and provide numerous individual and community-wide benefits; although trade-offs between modes are often required in areas where there are right of way and funding constraints.

Improving access to goods and services has long been an important transportation goal and has guided transportation policy, facility design and measures of success. Historically the focus has been on accessibility for motorists to goods and services. Concentrating all efforts on one mode of transportation meets the needs of only a portion of roadway users. Complete streets can more fully improve a transportation network by increasing accessibility and mobility for non-motorized modes and addressing trade-offs between modes.

"Big Dig" Boston, MA



User Needs

The need for diverse transportation systems has existed among non-drivers for many years. In recent years there has been an increasing demand for alternatives to the automobile from individuals who historically have chosen to drive. Young people in particular are opting to ride the bus, bicycle and walk in greater numbers and fewer young people have driver's licenses or own automobiles than previous generations.

The number of older, low-income and disabled non-drivers is also increasing, as is the need for alternative ways to get around. An aging population may mean higher demand for public transit and in particular, paratransit. Restructuring existing transportation systems to address special needs can benefit not only the users of the system but also the service provider. Monterey-Salinas Transit, for example, has started a senior shuttle service in the Carmel Valley Area to begin meeting this new demand. The smaller senior shuttle vehicles allow for increased route flexibility and lower fuel demand, which benefits both transit riders and Monterey-Salinas Transit.

Today, the majority of Monterey Bay Area residents use an automobile as their primary mode of transport. Congestion and safety are the two greatest concerns of automobile drivers. Like other transportation investments, complete streets may impact local automobile congestion, automobile access, traffic patterns in neighborhoods, and parking. Potential impacts are dependent on the local context, application and design timeframe.

Cost-Effectiveness

Complete streets can be affordable to users and implementing agencies. The cost of transportation is increasing relative to fuel prices. For many American households the cost of car ownership is the second largest monthly expense after housing. Households that are dependent upon daily automobile use spend more income on transportation and have less disposable income (See Figure 0-1). Rising transportation expenses have a negative effect on the local economy and particularly on low income individuals with limited mobility many of whom are seniors and those under eighteen. In the face of rising automotive transportation costs, complete streets provide more affordable transportation options such as riding the bus, bicycling and walking.

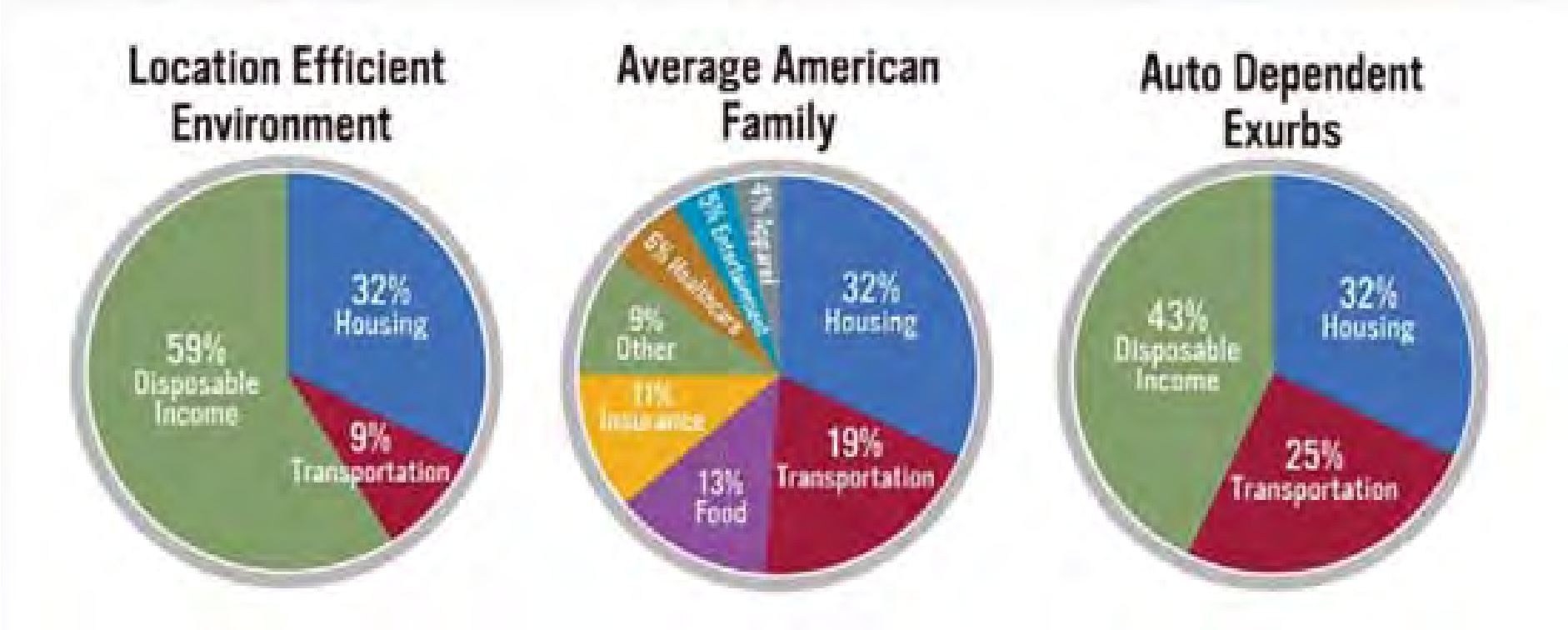


Figure 0-1: U.S. Department of Transportation

When it comes to implementing complete streets, jurisdictions can incorporate complete streets elements into currently planned projects by incorporating them in the early design stage. A cost-effective way to develop complete streets projects is to re-evaluate pending roadway projects and identify opportunities to accommodate additional users within the existing right-or-way.

For example, a standard resurfacing/restriping project could be modified to undergo a road diet or provide striping for bicycles at intersections. A road diet reduces the number of travel lanes, typically from four to two and adds a center left-turn lane and bicycle lanes or bicycle lanes and a sidewalk (Figure 0-2). Striping bicycle lanes at intersections dedicates space and indicates where the bicyclist should position themselves in order to cross more safely. These types of project can benefit all users of the roadway by providing a smoother road for drivers, decreasing conflicts between bicyclists and motorists, and creating greater separation between automobile traffic and pedestrians on sidewalks.

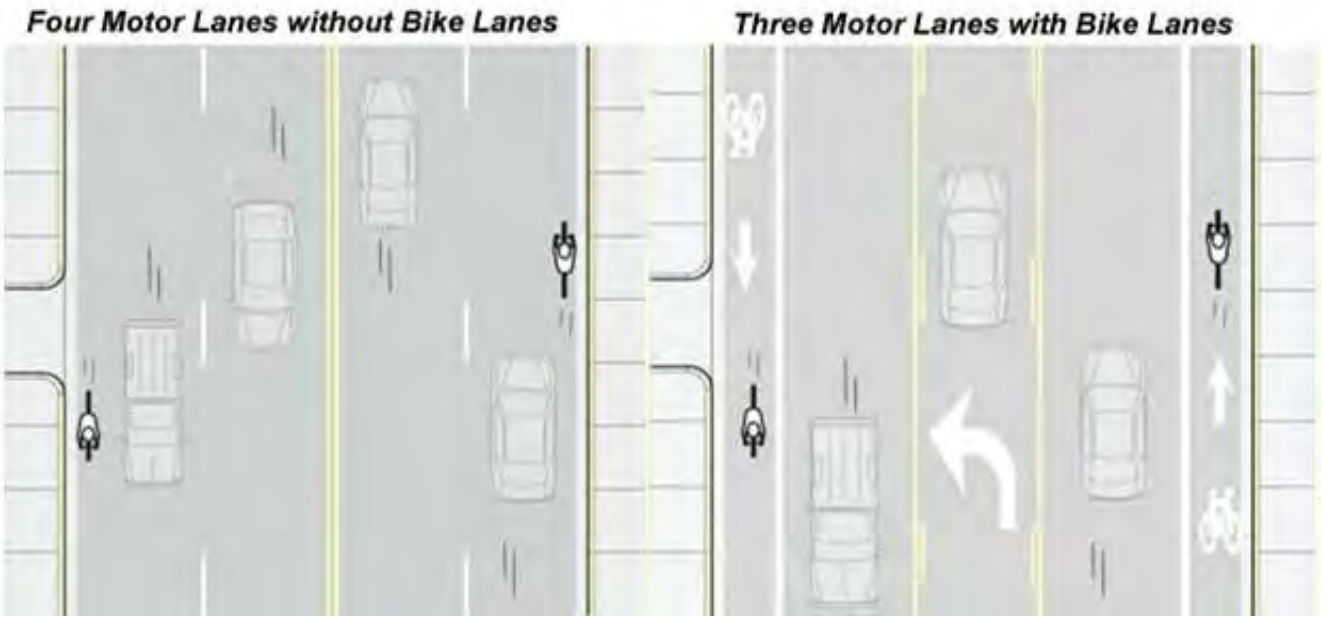


Figure 0-2: Road Diet Before and After (nozziwalkablestreets.com)

Benefits

Complete Streets can provide the following benefits:

Transportation Equity - Different travelers may expect varying accommodations by a street. A street design that works well for a motorist may not work well for a pedestrian or a bicyclist. People experiencing poverty or language barriers, people of color, older adults, youth, people with disabilities and other groups with limited or no access to a vehicle tend to experience a disproportionately small share of benefits from transportation investments focused on motorists. Complete street design attempts to restore equity in the transportation system by improving transportation options for non-drivers and enabling greater use of the transportation system.

Safe, Convenient and Attractive Travel Choices - Surveys throughout the Monterey Bay Area indicate residents desire to have a greater number of transportation choices. Typically, the primary reason given for not using non-motorized transport is safety concerns. Complete street design emphasizes safe and convenient travel choices for all modes.

Reduced Traffic Congestion - Increasingly more people are choosing not to drive and some are moving into cities where there are more transportation options. Complete streets can provide attractive choices for individuals who desire an alternative to automobile; thereby decreasing automobile volumes.

Increased Roadway Capacity – While populations continue to grow constraints such as environmental, physical and cost limit the opportunity to increase roadway capacity with more travel lanes. Complete streets can accommodate more people if they are copmlete and support travel by bus, bicycle or on foot, instead of by car.

Healthy Communities, Economy and Environment – There is a correlation between a diversified transportation network and healthier communities, and a stronger economy and a cleaner environment. By encouraging active transportation such as walking and cycling, complete streets can result in improved health for residents. Reduced GHG and criteria pollutant emissions may result in reduced incidence of respiratory disease. These factors have the potential to keep the local workforce healthier and more productive.

Improved Access for People with Disabilities - Individuals with disabilities are more likely to use the sidewalk network and take transit. Yet, roadways are often difficult to navigate for people who use wheelchairs, have diminished vision, can't hear well, or for people who move slowly. Complete streets policies can have the effect of removing barriers to independent travel by designing facilities to meet the needs of all users.

Reinvestment in the Local Economy – Improved complete streets will incentivize non-automotive modes of travel which are less expensive than driving and vehicle ownership. By reducing vehicle related expenses for commuters, they will have discretionary incomes which can be invested locally.

Economic Activity- Property values, business activity, redevelopement, fiscal health of governments and economic growth can all be postiviely impacted by complete street investments as a result of increased trip volumes, improved trip quality, benefits to safety and health, potential reductions in construction and maintenance costs, and provisions for new public amenities. A detailed discussion of the correlation between complete streets and economic activity is included in Appendix J.

HOW TO BALANCE ROADWAY USERS NEEDS

All of the possible benefits derived from complete streets investments must be evaluated in the context of how they affect the transportation network as a whole and the tradeoffs between alternative investments. For instance, prioritizing bicycle and pedestrian facilities on neighborhood streets may have potential impacts on automobile congestion, automobile access, traffic patterns, and parking. In contrast, prioritizing automobile facilities can have impacts on bicycle and pedestrian safety, and access, and may reduce opportunities for convenient alternatives to driving. The impacts on congestion and safety for all modes must be considered in the discussion of tradeoffs between modes as it relates to complete streets planning and design.

Despite challenges, many local jurisdictions in the Monterey Bay Area have made significant investments in bicycle and pedestrian infrastructure during the past two decades in an effort to serve a larger and more diverse group of roadway users. The result has been a considerable improvement in the bicycle network and pedestrian facilities. However, in many cases bicycle and pedestrian facilities are not provided when projects are constrained by right of ways or lack of funding. Prior planning practices have supported an approach to project design that emphasizes maintaining the existing roadway function first and adding bicycle and pedestrian improvements only where space and funding allow. In some cases a street may have been made more complete had alternative designs been considered. The trade-offs between investments can be challenging and the balance between modes is a result of a complex factors.

The tools provided in the Monterey Bay Area Complete Streets Guidebook, and discussed in detail below, are intended to support a transparent discussion of trade-offs amongst design features and roadway users and encourage evaluation of design alternatives. Consideration of all roadways users current and future needs using the complete streets framework promoted in the Monterey Bay Area Complete Streets Guidebook should result in cost-effective investments that provide convenient and safe facilities for all modes in the most appropriate locations.

Chapter 1: General Plan Vision, Goals and Policies

This chapter of the Monterey Bay Area Complete Streets Guidebook provides suggestions as to how communities can meet requirements of the Complete Streets Act by incorporating complete streets policies into general plans. Although the California Complete Streets Act requires complete streets policies only in the circulation element, the most effective policies are present or supported in more than one element of the general plan.

Guidance for developing a vision statement and circulation element and land use element goals are provided in this chapter and in Appendix B.

VISION

The vision statement of a general plan encapsulates community values and desires and provides inspiration for goals and policies. Developing a vision statement that considers complete streets is often a precursor to adopting complete street goals and policies. A vision statement may be included in the circulation element of the general plan focusing entirely on the community's vision, or may appear at the beginning of the circulation element. Vision statements are generally developed through a consensus-driven, collaborative community engagement process. When developing a vision statement the following questions should be considered:

- **What are the benefits of adopting a Complete Streets policy in our community?**
- **What reason for adoption (such as health, safety or providing transportation choice) will consistently rally support from the community, its transportation professionals and its leaders?**
- **What is our vision for Complete Streets?**

The model vision language below is provided to offer an example of a detailed vision statement and demonstrate the range of goals that can be considered in setting out a statement.

Sample Transportation Vision Statement

"The community of [Jurisdiction] envisions a safe, balanced and environmentally-sensitive multi-modal transportation system that supports greater social interaction, facilitates the movement of people and goods, and encourages active living, mobility independence, and convenient access to goods and services for all users including but not limited to pedestrians, bicyclists, children, seniors, persons with disabilities, motorists, movers of commercial goods and transit"

GOALS & POLICIES

Communities may include the entire sample complete streets policy in the general plan circulation element as a complete policy package, or may selectively adopt specific objectives or policies. Communities are encouraged to tailor the policy and implementation measures to local needs, concerns, and conditions, and to identify the local agency or department responsible for implementation. Most circulation elements already include goals, objectives, and policies addressing the needs of motorists and movers of commercial goods, so the suggested complete streets goals and policies focus on other types of users.

Sample general plan goals and policies are included as in Appendix B.

Chapter 2: Performance Measures

Performance measurement is an important tool in the implementation of complete streets. Performance measures can inform planners, decision makers and public how effective complete streets policies and projects are at reaching community goals. Performance measures are particularly important in today's environment where there is strong competition for limited transportation funds. In grant funded projects, results must be demonstrated using performance measures.

The Monterey Bay Area Complete Streets Guidebook provides a list of relevant performance measures for evaluating the effectiveness of complete street policies and projects. The suggested performance measures may be used in several different ways to facilitate the implementation of complete streets policies. First, performance measures can be used for needs assessment to identify problems in the system and to assess their relative severity. Second, performance measures can be used to rank projects for funding in the programming process. Third, performance measures can be used in impact assessments. In this application, the probable impact of a proposed development project on the performance of the street system is projected, and the result is used as the basis for impact fees or other exactions, such as requirements to provide bicycle and pedestrian facilities. Fourth, performance measures can be used to evaluate the effects of a policy or project on the performance of the system and to assess whether it achieved its goal.

Table 1 lists performance measures that can be used to gauge the effectiveness of five complete streets policy objectives (safety, health, access, economic benefit and equity). These suggested performance measures support the goals of the Metropolitan Transportation Plan and the Regional Transportation Plans for Monterey, Santa Cruz and San Benito Counties.

Using consistent methodology for collecting before and after data is important when measuring performance. Best practices for data collection, such as the establishment of a consistent way of conducting bicycle and pedestrian is helpful to demonstrate changes in trends over time that may result from the implementation of complete streets. The Santa Cruz County 2012 Bike and Pedestrian Count Report aimed to standardize methodolgies for bicycle and pedestrian counts done within the county using the Institute of Transportation Engineers Pedestrian and Bicycle Council recommend methods and includes templates and instructions for data collection.

MEASURES OF EFFECTIVENESS

Table 1: Complete Streets Performance Measures

	Measure	Source
Safety	Reduce colissions involving bicycles and pedestrians	SWITRS counts
	Improve speed suitability through street design	Number of bicycle routes on low speed streets
	Increase the number of local traffic calming plans	Number of traffic calming plans adopted by local jurisdictions
	Decrease the number of citations for jaywalking, reckless behavior or missing helmet (if under 18 years)	Pedestrian and bicycle observation surveys
	Reduce the number of bicycle and pedestrian hazards	Number of bicycle and pedestrian facilities repaired
Health	Increase the percent of people who walk, bike and take transit	American Community Survey or local survey
	Increase the number of students walking, bicycling or taking transit to school	Bicycle and pedestrian counts and surveys
	Increase the number of events that promote alternative transportation	Number of events held in Santa Cruz County that promote alternative transportation
Access	Number of households within 1/4 mile of transit stop	
	Increase the percent of people who walk, bike and take transit	American Community Survey
	Decrease transit headways on high quality transit corridors	Santa Cruz Metro
	Improve the quality of walk, bike, and transit trips	MMLOS or QOS
	Increase the % of population within a 30 minute walk, bike or transit trip of key destinations	GIS Street Network and Place Type Designations
Economic Benefit	Increase property values	Tax assessment
	Increase business activity	Taxable sales
	Increase investment	Number of new commercial and residential investments
	Government fiscal health	Cost per mile of transportation improvements
Equity	Increase the number of improvements completed near key destinations for transportation disadvantaged populations such as near schools, hospitals, transit stops	GIS Project Location and Key Destinations

LEVEL OF SERVICE

The traditional performance measure for street design is Level of Service (LOS). A methodology for calculating Level of Service can be found in the current version of the Highway Capacity Manual (HCM) published by the Transportation Research Board. This measure, in all its forms, is a function of the ratio of the number of cars on a road to the road's carrying capacity, and is expressed by assumed delay for each vehicle. Historically, it has been used to calculate how much road capacity is needed to serve a given volume of vehicles, and it is directly tied to the goal of reducing automobile congestion and delay. In most common use, LOS is reported on an A through F scale, with LOS A representing free-flowing automobile traffic, and F representing complete congestion. Although it has the advantage of being highly standardized and widely used, traditional vehicular LOS measurement does not account for all users of a roadway nor tradeoffs between different modes. This results in facility design based solely on the needs of automobile users often at the expense of others.

The revised version of the Highway Capacity Manual, adopted in 2010, includes methods (referred to as Multimodal LOS), for measuring the quality of travel for bicyclists and pedestrians, including comfort and sense of safety. In the absence of establish standards, communities have been developing their own methods for measuring LOS for bicycles, pedestrians, and transit. In general, bicycle, pedestrian, and transit levels of service tend to be more complex to measure than vehicle LOS.

One of the common concerns with using Multimodal Level of Service is that it requires a substantial amount of data that may not be regularly or reliably collected. If data does not exist for the study area, new data must be collected in order to utilize this performance measure, which can be time intensive and expensive. Some communities are not pursuing new LOS measures, but instead are choosing more qualitative measures of success. The Santa Cruz County Regional Transportation Commission recently tested a Quality of Service (QOS) measure to evaluate how transportation investments affected the quality and convenience of bicycle, pedestrian and transit trips (Appendix C). The performance measures recommended in Table 1 provide a range of options for evaluating the effectiveness of complete streets policies and projects while recognizing limited data and resources available to project sponsors.

Chapter 3: Action Plan

Successful implementation of complete streets requires collaboration amongst several departments and stakeholders at the policy, planning, project delivery and maintenance and operations levels. The Action Plan of the guidebook outlines the requirements for coordinating inter-departmental tasks. A key component of the Action Plan involves updating training practices for planners, civil and traffic engineers, project managers, plan reviews, inspectors and other personnel responsible for design and construction of streets to integrate complete streets. A sample Action Plan is included as Appendix D, which integrates complete streets into every step of community development in a way that can be tailored to the needs of each jurisdiction. For example, instructions and training could be instituted for maintenance crews to assure their work complies with complete streets policies. Resources for updating specific manuals are also provided in Appendix D.

LEGAL STANDING OF STREET MANUAL

Local jurisdictions generally follow certain established standards for designing streets. Confusion can exist as to which standards to follow, what is merely guidance, when jurisdictions can adopt their own standards, and when they can use designs that differ from state standards. It is critical for cities and counties to understand how adopting the Monterey Bay Area Complete Streets Guidebook in part or in whole meshes with other standards and guides Appendix E discusses the myriad of accepted design documents and is based on the Los Angeles County Model for Living Streets Design Manual discussion of design documents.

Chapter 4: Complete Streets Types

Complete streets are context sensitive. The intent of this chapter is to provide information on how to match relevant street elements to the existing or desired land uses along the street and the roadway users. This chapter includes a description of complete street types to provide project sponsors with a template for roadway designs that serves all users and prioritizes modes based on the land use and transportation context.

LAND USE CONTEXT

Place types developed by AMBAG in coordination with local jurisdictions are used in th Monterey Bay Area Complete Streets Guidebook to describe the complete streets land use context. These place types were established during the development of the Sustainable Communities Strategy to create common classifications for similar land uses across the Monterey Bay Area.

Place types consider land use characteristics (ex. urban, town, neighborhood, suburban, and rural) as well as use (ex. residential, commercial, institutional). Each place type creates a distinct context for land use and transportation investments. Applying place types can help the guidebook user identify complete street features that fit the land uses being considered. A detailed description of place types adopted by AMBAG for use in developing the Sustainable Communities Strategy is included in Appendix F.

COMPLETE STREET TYPES

The complete streets types take into consideration various user perspectives and the surrounding land use context in addition to the street function. The complete streets types described in this chapter serve as a tool for linking street functional classifications and land uses. Figure 4-1 demonstrates how complete streets types relate to traditional functional classifications.

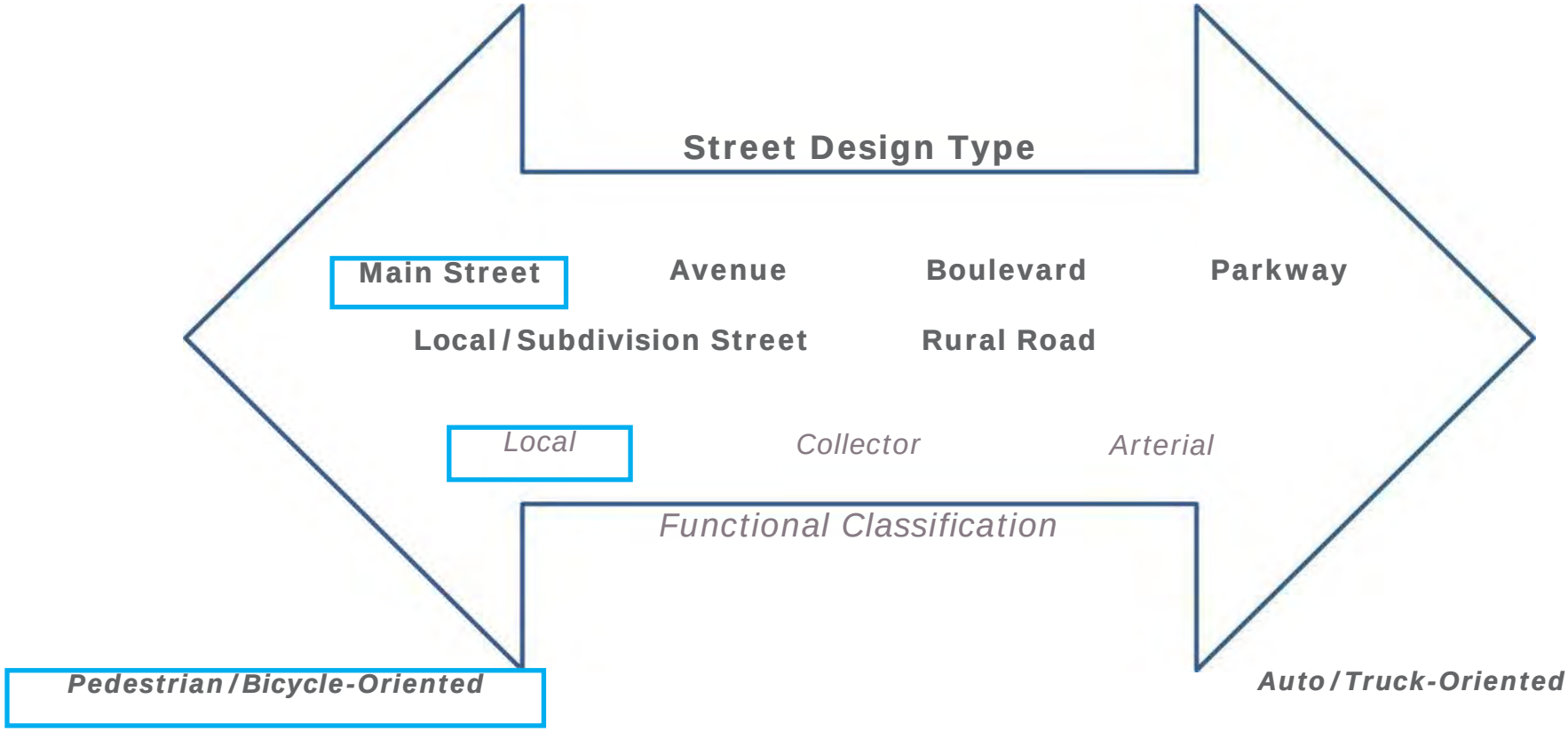


Figure 4-1 Complete Street Design Type and Functional Classification

Table 2 names complete streets types and provides a description of the transportation and land use attributes associated with each type. The land use place types developed through the Sustainable Communities Strategy planning process (**Appendix F**) are also listed. Each of complete street type indicates which roadway users shold be prioritized based on land use and transportation context. Both the land use place type and complete street types should be identified early on in the process of planning and designing streets. Cross sections for each complete street type are included in Chapter 5: Complete Streets Design. Illustrative cross sections for complete streets types are based on the Charlotte Department of Transportation: Urban Street Design Guidelines, 2007.

For specific design treatments to considering when developing complete street cross sections see Chapter 5: Complete Street Design.

Main Street (Pacific Avenue, Santa Cruz)

Rural Road (Blanco Road, Monterey County)

TABLE 2: COMPLETE STREET TYPES

SEGMENT TYPE	TRANSPORTATION & LAND USE DESCRIPTION	USER PRIORITIZATION	LAND USE PLACE TYPES	EXAMPLES
Main Streets	Pedestrian-oriented "destination" streets; land uses: mixed-use, commercial, entertainment, office, civic; short blocks, grid street pattern; can be used as a flexible space for community events (ex:// .farmers markets)	1. Pedestrians 2. Bicyclists 3. Transit 4. Autos/Trucks Special accommodations for delivery trucks	Urban Commercial; Urban Mixed-Use; Town Commercial; Town Mixed-Use; Rural-Town Commercial; Institutional	Alvarado Street (Monterey); Ocean Ave (Carmel); Pacific Ave (Santa Cruz); Main St (Salinas)
Avenues (collector)	Bicycle and transit-oriented streets connect neighborhoods to job centers and commercial areas. Higher speeds than main streets; land uses: diverse mix of land uses including but not limited to residential, schools, parks, neighborhood commercial and commercial	1. Bicyclists 2. Pedestrians 3. Transit 4. Autos/Trucks Special accommodations for pedestrians (children and seniors) at crossings	Urban Multi-Family Residential; Multi-Family Residential; Neighborhood Commercial; Town Multi-Family Residential; Town Mixed-Use; Institutional; Open Space/Recreation	Sloat Ave (Monterey); California St (Santa Cruz)
Boulevards (minor arterials)	Higher speeds and volumes of automobile traffic than avenues, but more pedestrian and bicycle-friendly than parkways	1. Transit 2. Autos/Trucks 3. Bicyclists 4. Pedestrians	Multi-Family Residential; Neighborhood Commercial; Regional Commercial; Employment Center; Neighborhood Mixed-Use; Institutional; Open Space/Recreation	Munras Ave (Monterey); Capitola Rd (Live Oak/Capitola Branciforte Ave (Santa Cruz)
Parkways (major arterials)	Auto-oriented designed to move high volumes of vehicular traffic quickly; land uses: major destinations such as regional commercial, academic institutions and visitor-serving uses	1. Autos/Trucks 2. Transit (BRT/Rail) 3. Bicyclists 4. Pedestrians	Regional Commercial; Employment Center; Airport; Institutional; Open Space/Recreation	Imjin Parkway/Rd (Marina); Soquel Drive (Aptos); Canyon Del Rey (Del Rey Oaks); Ocean Street (Santa Cruz)

TABLE 2: COMPLETE STREET TYPES

SEGMENT TYPE	TRANSPORTATION & LAND USE DESCRIPTION	USER PRIORITIZATION	LAND USE PLACE TYPES	EXAMPLES
Local Streets	Low-speed and low-traffic volume shared streets (bicycle, pedestrian & auto) with on-street parking; land uses primarily residential, neighborhood commercial, office, mixed-use, schools and parks	1. Pedestrians 2. Bicyclists 3. Autos/Trucks 4. Transit	Urban Single-Family Residential; Urban Multi-Family Residential; Urban Mixed-Use; Single-Family Residential; Multi-Family Residential; Town Single-Family Residential; Town Multi-Family Residential; Rural Town Residential; Institutional; Open Space/Recreation	Cayuga (Santa Cruz); Riverview Drive, Capitola; San Miguel Ave, Salinas;
Rural Roads	Mostly auto-oriented with few bicycle facilities for agricultural workers and long-distance cyclists	1. Autos/Trucks 2. Transit 3. Special accommodations for school buses Bicyclists 4. Pedestrians	Agriculture and Rural Residential; Exurban Residential; Industrial and Manufacturing; Open Space/Recreation	Corralitos Road (Santa Cruz); West Beach St, Santa Cruz County; Old Stage Rd, Monterey County;
Scenic Roads	Mostly auto-oriented with bicycle facilities, some pedestrian facilities and access to natural resources	1. Autos 2. Bicyclists 3. Pedestrians 4. Transit 5. Accommodations for recreational cyclists and hikers	Exurban Residential; Agriculture and Rural Residential; Open Space/Recreation	Old San Jose Road (Santa Cruz); Sunset Drive, Pacific Grove; San Andreas Rd, La Selva Beach; Carmel Valley Rd, Monterey County;

USER NEEDS

New roads and road improvements should be designed to provide safe and convenient routes for all applicable users and purposes including, but not limited to:

Pedestrians (all ages and abilities)

Bicyclists (all ages and abilities)

Transit (riders and operators)

Motorists

Commercial/agricultural large vehicle drivers

Commuters

Tourists

Active/recreational users

Emergency responders

Each user group has different needs and group-specific priorities for any given roadway. These needs and priorities should be considered when designing or rehabilitating a roadway in order to accommodate all users. Table 3 illustrates the needs specific to each user group and examples of design solutions. One of the greatest challenges of planning for and designing complete streets is balancing the often conflicting needs of different roadway users in a limited space For example, motorists generally want uninterrupted quick travel, wide lanes and large turning radii whereas pedestrians prefer to travel along streets with low volumes of slow traffic, small turning radii and frequent crossings.

TABLE 3: ROADWAY USER NEEDS		
USER GROUP	**PROBLEMS ENCOUNTERED**	**DESIGN SOLUTIONS/APPLICATIONS**
Pedestrians – Commuters/Residents	Crossing delayed, few crossings, little separation from moving vehicles, high traffic volumes, few access points to destination, inadequate ADA access, little/no shade or shelter, poorly-lit walkways and crossings, slippery surface materials, obstructed routes, inefficient drainage, indirect routes	Pedestrian signal actuation and adequate crossing time, traffic calming, continuous sidewalk network, short blocks, ample width, planting strip/on-street parking, ADA ramps, street trees and pedestrian-scale lighting appropriately designed storm drains
Pedestrians – Seniors, disabled and children	Small gaps in traffic, long crossing distances, few crossings , inadequate ADA access, shade or shelter, poorly-lit walkways and crossings, slippery surface materials, obstructed routes, inefficient drainage	Adequate crossing time at signalized intersections, curb extensions, high-contrast markings, two-stage actuated crossings, medians, audible countdown pedestrian phase (signalized) and ADA ramps, street trees, pedestrian-scale lighting
Pedestrians – Visitors/Tourists	Few/no pedestrian destinations, limited/no way-finding, unmarked crossings, narrow sidewalks, little/no shade or shelter, few/no pedestrian amenities, poorly-lit walkways and crossings	Pedestrian plaza, way-finding signage, high-contrast marked crossings, wide sidewalks, on-street parking, street trees, outdoor seating, public art, public toilets, pedestrian-scale lighting
Bicyclists – Intermediate to Advanced; Commuters	Little separation from motorized vehicles (moving and/or parked), indirect routes/limited access to job centers, shopping and major destinations, bicycle detection at few/no signalized intersections, insufficient short-term and long-term bicycle parking, few/no commuter facilities	On-road facilities (Class II lanes/Class III shared roadway), well-connected bikeway network, marked bicycle detection, bicycle racks and covered/indoor bicycle parking, public or employer-provided shower facilities,

TABLE 3: ROADWAY USER NEEDS		
USER GROUP	**PROBLEMS ENCOUNTERED**	**DESIGN SOLUTIONS/APPLICATIONS**
Bicyclists – Novice; Children	Little separation from motor vehicle traffic, disjointed/incomplete bikeway network, narrow right-of-way, insufficient/no bicycle parking	Off-road facilities (Class I paths), complete bikeway network, bicycle racks, marked bike detection
Bicyclists – Recreational/Touring	Little separation from motorized vehicles, insufficient/no way-finding	Wide paved shoulders, way-finding signage and distance markers, bike racks
Transit – Riders	Limited access to and from transit stop, poorly-lit stop, poor visibility, no/insufficient transit route and schedule information, no/insufficient seating, no/insufficient shelter, no/small buffer from moving traffic	Marked pedestrian crossing, curb extensions, ADA ramps, pedestrian-scale lighting, transit shelter facing out to street, real-time traveler information, transit shelter/station
Transit - Operators	Limited space to operate transit vehicles, numerous conflicts, long delays	Large turning radius, wide travel lanes, generous merging distance, signal prioritization, street furniture setback from curb

Levels of Traffic Stress- Low Stress Users

Within each roadway user group are individuals with varying abilities and levels of experience. Ability and experience both factor into how comfortable an individual is travelling by a certain mode or on different types of transportation facilities. User ability, experience, comfort, and traffic stress tolerance should be taken into consideration with designing complete streets. Research focused on bicycling has shown that roadway users have varying levels of tolerance for traffic stress. For instance, adults who commute by bicycle to work are more likely to feel comfortable riding in a bike lane on a busy street next to fast moving motor vehicles than those who have less experience bike riding or are unfamiliar with the street network.

Traffic stress may include a combination of perceived danger and other stresses such as noise and exhaust fumes associated with motor traffic. Several recent research efforts, including those at the Mineta Transportation Institute, have classified streets according to the stress they impose on cyclists. Although some of the classifications for level of traffic stress vary, the general concepts are the same. Roads with the lowest level of traffic stress can be accepted by most children (who are less capable of negotiating traffic and more prone to irrational and sudden movements), and the highest level of stress is tolerated by advanced cyclists whose skill enables them to share road with motor traffic. In order to accommodate the majority of roadway users, complete street design should strive to create routes and features that support “low stress users”.

NEIGHBORHOOD SHARED STREETS

Neighborhood shared streets, or “greenways”, can be an important characteristic of the complete street network. Neighborhood shared streets are located on local streets and emphasize slow speeds and lower volumes. To achieve lower speeds and volumes, neighborhood shared streets employ some or all of the following features:

- Traffic calming features to slow vehicle speeds
- Pavement markings that signal drivers and bicyclists to share the road and show where pedestrians should cross
- Bicycle and pedestrian scale way finding signs to provide information about nearby amenities, such as business districts and parks
- Partial street closures that limit the number of vehicles on the
- Public spaces and amenities to encourage pedestrian and bicycle activity.

A list of Quality Criteria (Appendix G) for greenways has been developed by the City of Seattle and is included in this packet for use by project sponsors to evaluate greenway designs and locations and to facilitate public dialogue about greenways.

Neighborhood shared streets may be a helpful tool for developing “low stress” routes for bicyclists and pedestrians in the Monterey Bay Area. Neighborhood shared streets are often less costly than dedicated bicycle and pedestrian facilities, which also serve “low stress” users. Like other types of complete street type investments, impacts of neighborhood shared streets, particularly the potential for diverting traffic to nearby neighborhood streets, should be evaluated as part of the discussion about tradeoffs. See the discussion regarding low stress users under Levels of Traffic Stress-Low Stress Users earlier in this chapter.

Chapter 5: Complete Streets Design

PURPOSE

The Monterey Bay Area Complete Street Guidebook provides examples of various street features to be considered when designing complete street facilities, so that they are utilized in the appropriate places. Copmlete street design should adhere to design principles and consider critical factors affecting design. The design features herein are organized by complete street type (i.e. Main Streets, Avenues, Local Streets, etc…) and by user zones (i.e. pedestrian, bicycle, street furniture, parking, etc…). Much of the content of this chapter has been adapted or borrowed from the Los Angeles County Model Design Manual for Living Streets.

EXCEPTIONS

The design elements and engineering best practices described in this chapter may not be appropriate for use in all jurisdictions. Local policy must be adhered to and engineering judgment applied; for example, the City of Monterey restricts the use of speed bumps/humps and uses other methods and measures to calm traffic.

DESIGN PRINCIPLES

Design for all users

Street design should accommodate all users of the street, including pedestrians, bicyclists, transit users, automobiles, and commercial vehicles. A well-designed traveled way provides appropriate space for all street users to coexist.

Design with the network in mind

Streets should be well connected and provide access to land uses for a diverse group of users.

Design intuitively

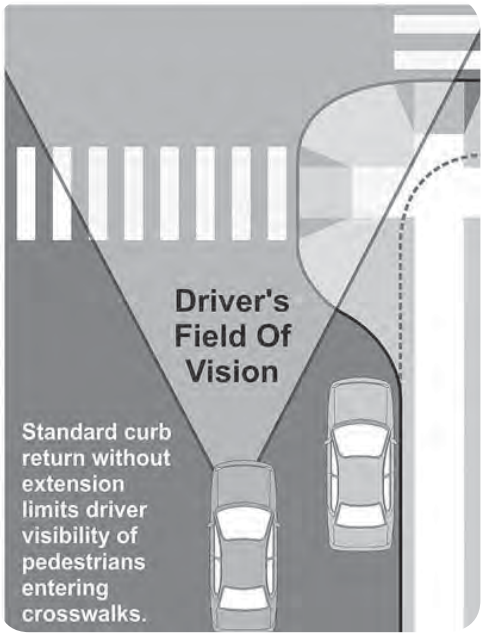
Street design should be intuitive for the users and require minimal signage and markings.

Design using the appropriate speed for the surrounding context

The right design speed should respect the desired role and purpose of the street, including the type and intensity of land use, urban form, the desired activities on the sidewalk, such as outdoor dining, and the overall safety and comfort of pedestrians and bicyclists. The speed of vehicles impacts all users of the street and the livability of the surrounding area. Lower speeds reduce crashes and injuries.

Design for safety

The safety of all street users, especially the most vulnerable users (children, the elderly, and disabled) and modes (pedestrians and bicyclists) should be paramount in any design of the traveled way. The safety of streets can be dramatically improved through appropriate geometric design and operations.



FACTORS AFFECTING DESIGN

Design To Accommodate All Users

Providing safe and convenient routes for all users is a core goal of complete street design. Therefore, it is important to identify and consider the needs of all potential roadway users. Since most modern roadways have been designed for motorists, complete streets design often puts more emphasis on other users such as pedestrians, bicyclists and transit.

Everyone is a pedestrian at some point every day, even if they drive, take the bus or ride a bicycle for the bulk of their trip. Areas that draw pedestrians such as downtowns generate activities that support the community and contribute to a higher quality of life. A recent survey of Monterey Bay Area residents concluded that more people would like to walk and to have nicer pedestrian facilities in their community. Despite some efforts to improved facilities, much more can be done to improve pedestrian conditions.

Studies have shown that most pedestrian crashes occur when a person crosses the road, and the most common crash type is a conflict between a crossing pedestrian and a turning vehicle at an intersection. Vehicle speed is directly related to the severity of injuries in collisions involving pedestrians. The severity of pedestrian injuries and risk of death in a collision with a motorized vehicle dramatically increases as the impact speed increases above 25 miles per hour (see Figure 5-1). Traffic calming can significantly improve pedestrian safety by slowing motor vehicles, especially in areas where there are high rates of pedestrian crossings.

Although incredibly important, pedestrian facility design should not be solely focused on improving safety, but should also consider factors that improve comfort and walking for pleasure. The two most effective methods to achieve these goals are to minimize the footprint dedicated to motor vehicle traffic and to slow down the speed of moving traffic. This approach allows the designer to use features that enhance the walking environment, such as trees, curb extensions, and street furniture, which in turn slow traffic, resulting in a virtuous cycle. All streets should have sidewalks except for rural roads and shared-space streets.

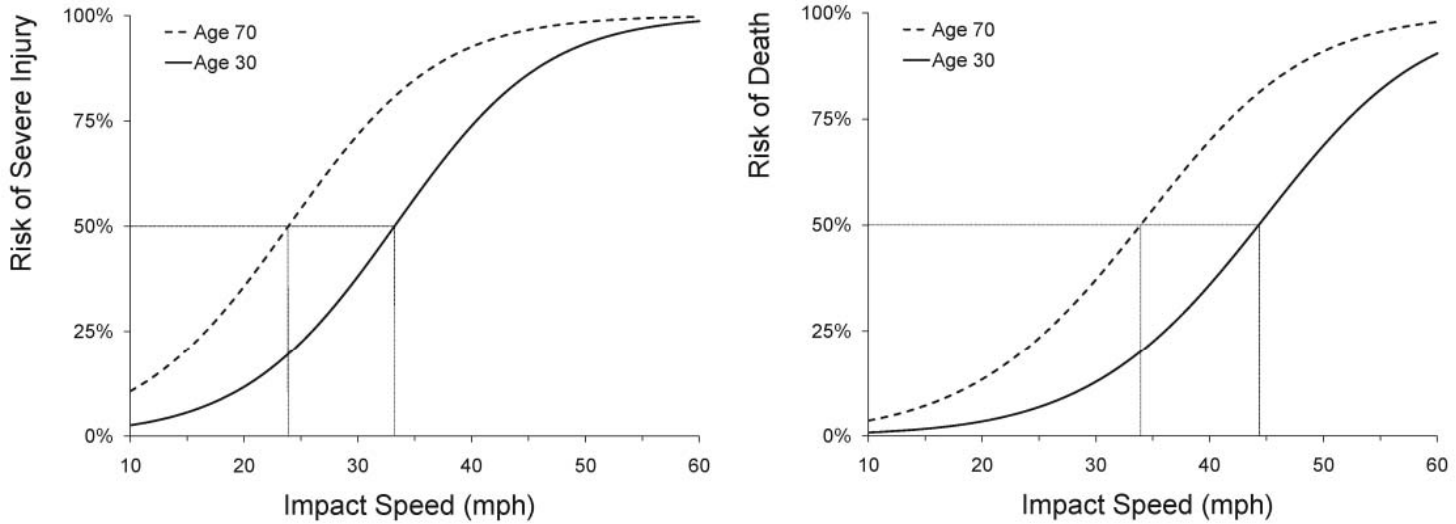


Figure 2: Risk of Pedestrian Injury or Death vs. Vehicle Impact Speed (AAA Foundation for Traffic Safety, 2011)

Accomodating all users also requires considering different needs within each user group. For instance, conditions arise in sidewalk networks that may create trip and fall hazards. Although these conditions, such as such as broken and raised pavement, slopes, vegetation intruding into the walkway, vehicles obstructing sidewalks, and signs, poles, stands or benches that obstruct or narrow the path are a danger for all pedestrians, the elderly, and others with impairments that affect vision and balance, are more susceptible to such hazards. In recognition of the negative impacts poor sidewalk conditions can have on elderly and disabled individuals in particular, the Santa Cruz County Regional Transportation Commission Pedestrian Safety Work Group developed a Program Model for Sidewalk Network Maintanence.

Another example of differenting between needs of users within each user group is the range of experience in bicycle users. Adults who commute by bicycle to work are more likely to feel comfortable riding in a bike lane on a street with higher vehicle volumes and speeds; whereas less experienced bike riders, including children, may feel more comfortable on a bike facility buffered from motor vehicles.

How Streets are Sized

The size and geometric design of a street (including lane width, corner radii, median nose design, and other intersection design details), is determined in large part by the design vehicle, or the typical vehicle considered for use on that particular roadway. Designing for a larger vehicle than necessary is undesirable, due to the potential negative impacts larger dimensions may have on pedestrian crossing distances and the speed of turning vehicles. On the other hand, designing for a vehicle that is too small can result in operational problems if larger vehicles frequently use the facility.

For design purposes, the wheel-base 40 feet (WB-40) is appropriate unless larger vehicles are more common. On bus routes and truck routes, designing for the bus or large WB-40 type truck may be appropriate, but only at intersections where these vehicles make turns. For example, for intersection geometry design features such as corner radii, different design vehicles should be used for each intersection or even each corner, rather than a one-size-fits-all approach, which results in larger radii than needed at most corners. The design vehicle should be accommodated without encroachment into opposing traffic lanes. It is generally acceptable to have encroachment onto multiple same-direction traffic lanes on the receiving roadway.

Furthermore, it may be inappropriate to design a facility by using a larger control vehicle, which uses the street infrequently, or infrequently makes turns at a specific location. An example would be a vehicle that makes no more than one delivery per day at a business. Depending on the turn frequency, under designing the control vehicle can make streets more appropriate for multimodal use by reducing lane and right-of-way widths, without having to encroach on sidewalks and ramps, while allowing larger vehicles to encroach on opposing traffic lanes or make multiple-point turns.

Design Speed

In contrast to the high-speed design approach, the goal for complete streets is to establish a roadway design speed that creates a safer and more comfortable environment for motorists, pedestrians, and bicyclists. The complete streets approach also increases access to adjacent land, thereby increasing its value, and therefore is more appropriate for the surrounding context. For most complete streets, design speeds of 20 to 35 mph are desirable. Alleys and narrow roadways intended to function as shared spaces may have design speeds as low as 10 mph.

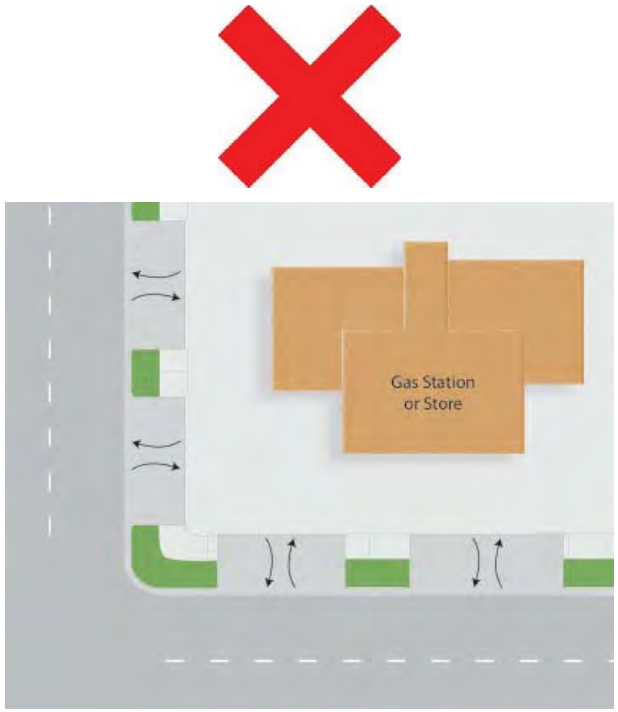
Design speed does not determine nor predict exactly at what speed motorists will travel on a roadway segment. Rather, design speed determines which design features are allowable or mandated. Features associated with high-speed designs, such as large curb radii, straight and wide travel lanes, ample clear zones , and guardrails, degrade the walking experience and make it difficult to design complete streets. Ultimately, designing roads which encourage high speeds creates a vicious cycle. A slower design speed allows the use of features that enhance the walking environment, such as small curb radii, narrower sections, trees, on-street parking, curb extensions, and street furniture, which in turn slow traffic, creating a virtuous cycle.

A narrow roadway with sharrow markings encourages slower speeds and is more comfortable for bicyclists.

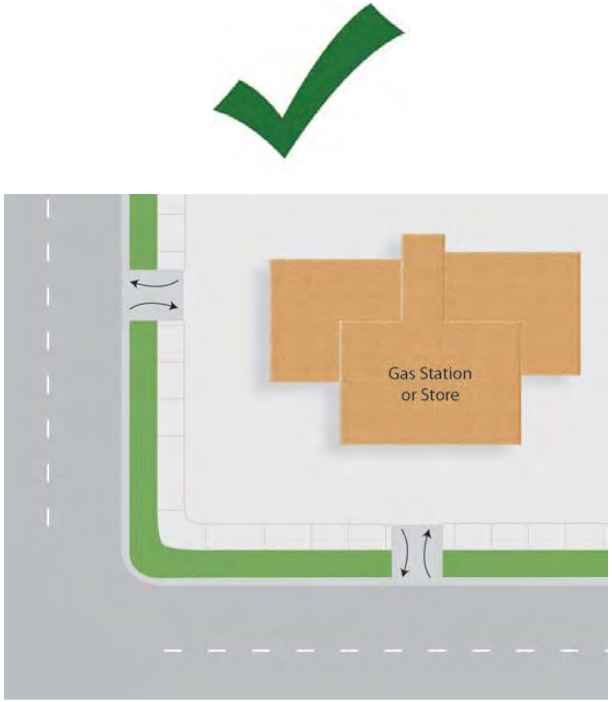
Parkways or expressways are designed for higher speeds which can also benefit transit and bicycle commuters if appropriate facilities are provided.

Access Management

A major challenge in street design is balancing the number of access points to a street with the need for multiple users to enter the facility. There are many benefits of well-connected street networks; on the other hand, most conflicts between users occur at intersections and driveways. The presence of many driveways in addition to the necessary intersections creates many conflicts between vehicles entering or leaving a street and bicyclists riding or pedestrians walking along the street. Particularly in commercial zones, new driveways should be minimized and old driveways should be eliminated or consolidated, and raised medians should be placed to limit left turns into and out of driveways.



Corner with many wide driveways (Credit: Michele Weisbart)



Reconstructed corner with fewer, narrower driveways (Credit: Michele Weisbart)

COMPLETE STREET TYPES CROSS SECTIONS

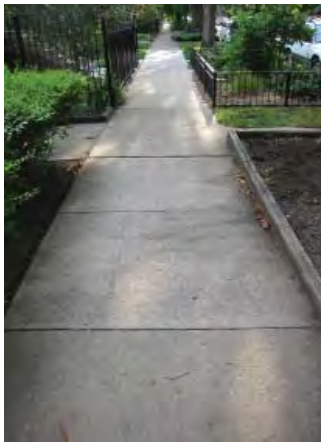
Complete street type cross sections represent example roadway designs that take into consideration the convenience and comfort of all roadway users based on land use and transportation context. Complete street types cross sections should serve as a starting point when designing for complete streets and should not be interpreted as design requirements. Existing roadways undergoing improvements may not have sufficient right-of-way to accommodate all of the design features shown in the complete street cross sections.

The advantage of starting with a complete street type cross section when designing projects is that it provides project sponsors and stakeholders with a vision of a complete street, which prioritizes roadway user needs based on land use and transportation context, before moving into the discussion about constraints and trade-offs. In many cases the final project design will not replicate what is shown in the complete street type cross sections, but that the project design will maintain the balance of roadways user needs as illustrated in the cross sections using the resources, skills and techniques available.

For example, a rural roadway, which is primary designed for truck/agricultural vehicles and private automobiles, and where vehicle lanes cannot be reduced to provide exclusive bicycle or pedestrian facilities, utilizing sharrows to indicate bicycle use of traffic lane and/or providing a wide paved shoulder to allow pedestrian access may be considered when evaluating roadway designs.

User Zones

The complete street types identify the roadway characteristics by mode using “user zones” with the preferred dimensions of elements along the street. The complete street type cross sections go beyond street functional classification by considering bicyclists and pedestrians, not only automobile movement. The specific function of zones may vary by complete street type. However, generally the zones can be defined as follows:



Pedestrian zone: Includes unobstructed sidewalks with appropriate widths based on demands generated by adjacent land uses and pedestrian facilities, as appropriate.

Street Furniture zone: Includes pedestrian, bicycle and transit supportive amenities such as transit shelters, seating, lighting, bicycle parking, signage, kiosks and public art.

Green zones: Includes landscaping or hardscape amenity zones. Supports pedestrian zone by maintaining comfortable pedestrian travel by providing a buffer from motorized zone or by shortening pedestrian crossings through establishing an “island” in the roadway. Can also support traffic calming and neighborhood livability.

Parking zone: Includes parking to serve adjacent businesses. The parking zone also can serve to calm traffic and provide a buffer to the pedestrian zone. Parking zone may be utilized as intermittent transit and bicycle lanes often referred to as “business access and transit lane” (BAT) and/or floating bicycle lanes.

Motor vehicle zone: Includes a variety of possible lane configurations to accommodate desired motorized vehicle speed and volumes.

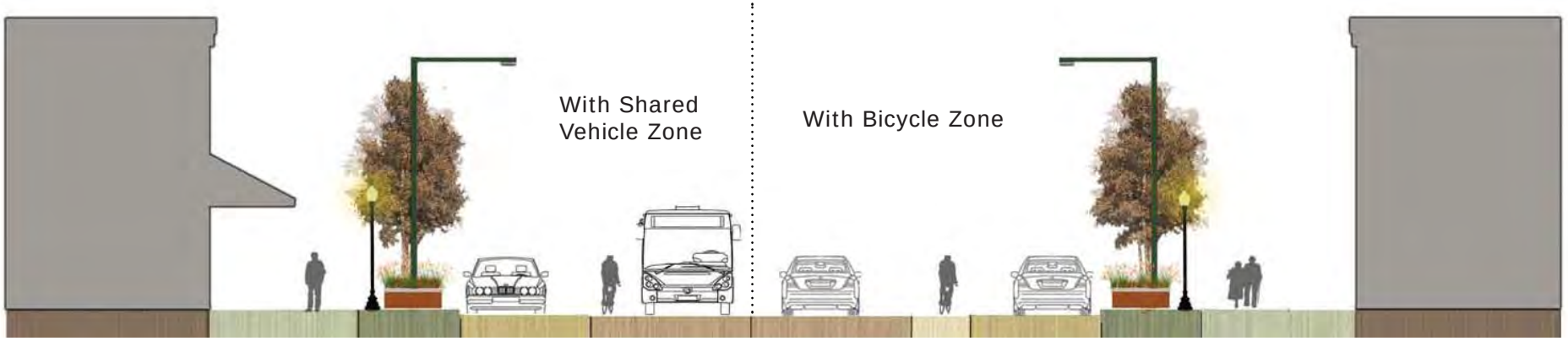
Bicycle zone (exclusive zone): Includes dedicated bicycle facilities on typicall on higher speed and volume roadways and may include additional buffering from other modes. Bicycle treatments can be found in **Appendix K.**

Bicycle zone (mixed vehicle zone): Includes shared facilities with motorists typically on low volume and speed roadways and pavement markings, where appropriate.

Emergency vehicle zone: No specific zone is exclusive to emergency vehicles. Together, motor vehicle and bicycle zones will be meet the California Fire Code that requires public streets to have an unobstructed travel way of at least 20 feet, unless an exception is made.

Main Street Zones

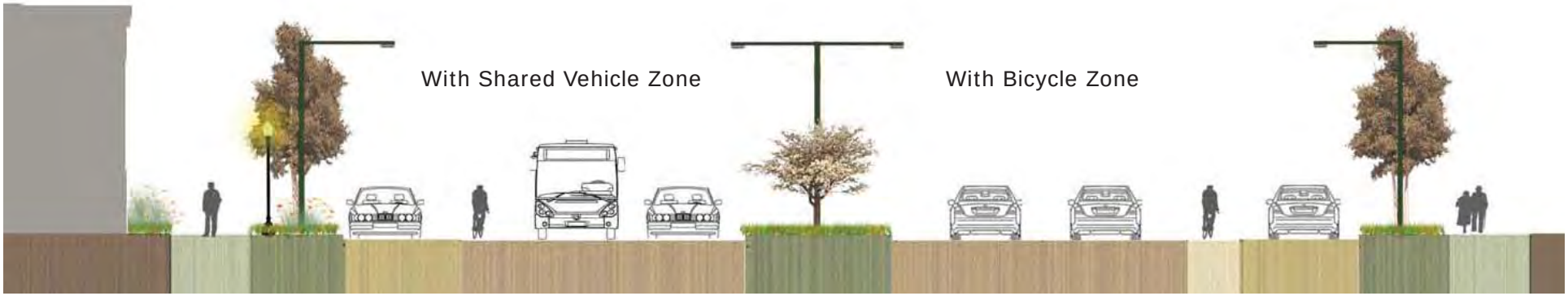
- **Design Speed** – Less than 30 miles per hour
- **User Prioritization**– Pedestrians & Bicyclists
- **Land Use Place Types** - Urban Commercial; Urban Mixed-Use; Town Commercial; Town Mixed-Use; Rural-Town Commercial; Institutional



Pedestrian	Street Furniture	Green	Motor Vehicle	Bicycle	Parking
Main Streets generate high levels of pedestrian traffic and pedestrians should be prioritized over other modes. The unobstructed pedestrian zone should be at least 10' wide and extend to the building frontage.	Pedestrian amenities such as seating, lighting, wayfinding signage, public art, kiosks, and bicycle racks near store entrances are encouraged	Street trees add character to the street and provide shade and shelter from the rain. Trees with deep roots should be selected over those with shallow roots to avoid uplifted sidewalk which can become a tripping hazard	Travel lanes should be 13' if shared with bicyclists; otherwise travel lanes should be narrowed to 10' to provide space for 6' bicycle lanes. Images for each zone	Shared bicycle facilities are appropriate due to low vehicle speeds. Markings ("sharrows") that position bicyclists away from the "door zone" of parked vehicles are recommended as they reduce the risk of injury to bicyclists.	On-street parking is encouraged and acts as a buffer between pedestrians and the motor vehicle zone. Parallel parking is preferred, however angled parking is acceptable. Parking meters should be places as to not block access to the pedestrian zone.

Avenues

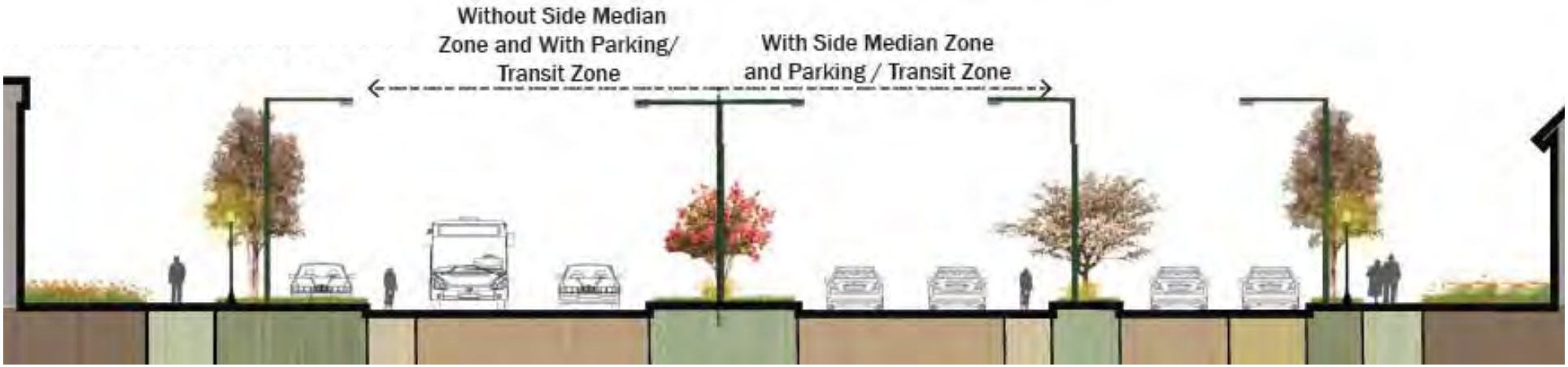
- **Design Speed** – 25-35 miles per hour
- **User Prioritization** – Bicycles, Pedestrians & Transit
- **Land Use Place Types** - Urban Multi-Family Residential; Multi-Family Residential; Neighborhood Commercial; Town Multi-Family Residential; Town Mixed-Use; Institutional; Open Space/Recreation
- **Local Examples**: Sloat Avenue (Monterey); Branciforte Avenue (Santa Cruz)



Pedestrian	Street Furniture	Green	Motor Vehicle	Bicycle	Parking
Avenues serve a variety of land uses and thus generate medium to high levels of pedestrian activity. The unobstructed pedestrian zone should be at least 6' wide but 8' or 10' is preferred.	Amenities such as transit shelters, seating, pedestrian-scale lighting, wayfinding signage, public art, kiosks, and bicycle racks near store entrances are encouraged.	Permeable hardscaping, landscaping and street trees are desired. The green zone should be a minimum of 8' to provide adequate buffer between pedestrians and motorists.	Travel lanes should be 13' if shared with bicyclists; otherwise travel lanes should be narrowed to 10' to provide space for 6' bicycle lanes. Images for each zone	Shared bicycle facilities are appropriate on streets with low vehicle speeds 6' bike lanes are recommended on streets with a posted speed of 30 mph or more. The gutter pan is not considered part of the lane width or bicycle lane width.	On-street parking may be provided. One benefit to parking is that it acts as a buffer between pedestrians and the motor vehicle zone. However, on streets with limited right-of-way there may not be room for both parking and a dedicated bike lane.

Boulevards

- **Design Speed** – 30-40 miles per hour
- **User Prioritization** – Transit, Autos/Trucks & Bicycles
- **Land Use Place Types** - Multi-Family Residential; Neighborhood Commercial; Regional Commercial; Employment Center; Neighborhood Mixed-Use; Institutional; Open Space/Recreation
- **Local Examples**: Munras Avenue (Monterey); Capitola Road (Live Oak/Capitola)



Pedestrian	Street Furniture	Green	Motor Vehicle	Bicycle	Parking
The unobstructed pedestrian zone should be at least 6' wide but 8' or 10' is preferred. The pedestrian zone should also be set back from the street. to mitigate discomfort generated from greater volumes of fast-moving vehicles.	Amenities such as transit shelters, seating, pedestrian-scale lighting, wayfinding signage, public art, kiosks, and bicycle racks near store entrances are encouraged	The green zone should be a minimum of 8' to provide adequate buffer between pedestrians and motorists. Medians should be landscaped and permeable but remain accessible to pedestrians.	The outside travel lanes should be 14' if shared with bicyclists; otherwise travel lanes should be 11'-12'. Boulevards should not have continuous left-turn lanes but instead be separated by a median wherever feasible. Medians should be a minimum of 8' wide.	6' bike lanes are recommended. The gutter pan is not considered part of the bicycle lane width.	On-street parking is not required but allowed where appropriate. Off-street parking is desired.

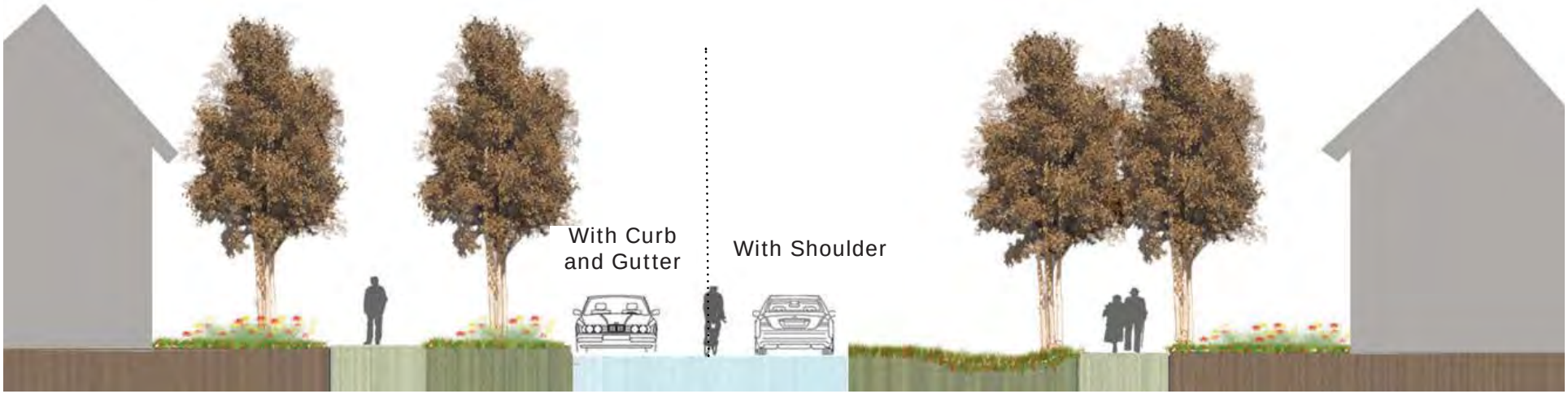
Parkways

- **Design Speed** – 35-45 miles per hour
- **User Prioritization** – Auto/Trucks, Transit & Bicycles
- **Land Use Place Types** - Regional Commercial; Employment Center; Airport; Institutional; Open Space/Recreation
- **Local Examples** - Imjin Parkway/Rd (Marina); Soquel Drive (Aptos); Canyon Del Rey (Del Rey Oaks)

Pedestrian	Street Furniture	Green	Motor Vehicle	Bicycle	Parking
Preferred accomodation for pedestrians is a multi-use path set back from the street.	Amenities such as transit shelters, seating, pedestrian-scale lighting, wayfinding signage, public art, and kiosks are desireable. Transit stops should connect to the sidewalk and/or multi-use trail.	The green zone should be a minimum of20' to accomodate the "clear zone" and to provide adequate buffer between pedestrians and motorists. Medians should be landscaped and permeable but remain accessible to pedestrians.	Travel lanes should be 11'-12' wide. Parkways should not have continuous left-turn lanes but instead be separated by a median wherever feasible. Medians should be a minimum of 17' wide. Shoulders are allowable on an urban parkway if appropriate.	Preferred accomodation for bicyclists is a multi-use path set back from the street. 6' bike lanes are also appropriate and may better serve experienced bicyclists. The gutter pan is not considered part of the bicycle lane width.	On-street parking should not be permitted along parkways. Instead park and ride lots served by transit should be provided.

Local Streets

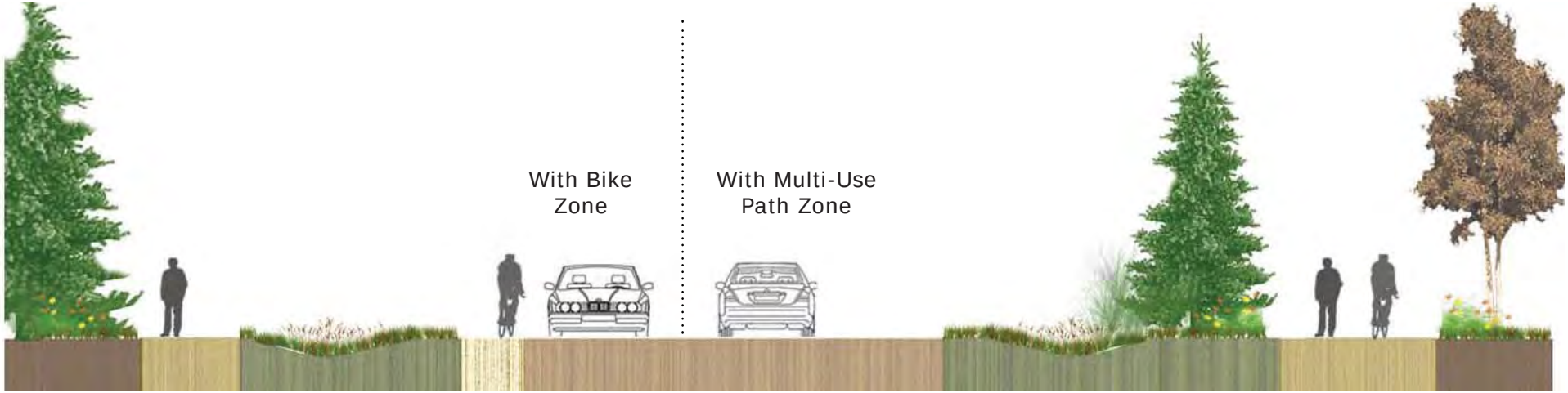
- **Design Speed** – < 25 miles per hour
- **User Prioritization** – Pedestrians, Bicycles & Autos/Trucks
- **Land Use Place Types** - Urban Single-Family Residential; Urban Multi-Family Residential; Urban Mixed-Use; Single-Family Residential; Multi-Family Residential; Town Single-Family Residential; Town Multi-Family Residential; Rural Town Residential; Institutional; Open Space/Recreation



Pedestrian	Street Furniture	Green	Motor Vehicle	Bicycle	Parking
Unobstructed pedestrian zone should be a minimum of 5' with a vertical curb (rolled curbs allow parked cars to encroach in the pedestrian area). Streets with very low traffic volumes may not require sidewalks and instead function as a shared street or "Woonerf ".	Pedestrian-scale lighting and some bicycle/pedestrian wayfinding signage for destinations such as community centers, parks and schools	The green zone should be a minimum of 4' to accomodate landscaping/trees. Bioswales and raingardens may also be appropriate in the green zone.	Travel lanes should be a minimum of 9'-10' with a 4' shoulder. Medians are not typically provided on local streets with the exception of partial medians which can be used for traffic calming and aesthetic purposes	Shared bicycle facilities are appropriate due to low vehicle speeds and traffic volumes. Neighborhood shared streets should have additional amenities such as bicycle boulevard signage, sharrows, partial street closures and traffic calming features.	Parallel on-street parking is recommended along local streets. The parking serves as a buffer between pedestrians and motorists.

Rural Roads

- **Design Speed** – Varies
- **User Prioritization** – Autos/Trucks, Transit & Bicycles
- **Land Use Place Types** –Agriculture and Rural Residential; Exurban Residential; Industrial and Manufacturing; Open Space/Recreation
- **Local Examples** – Corralitos Road (Santa Cruz)



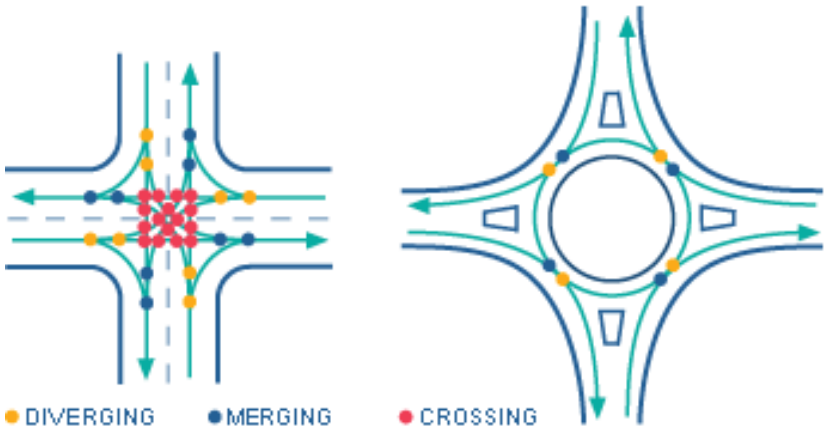
Pedestrian	Street Furniture	Green	Motor Vehicle	Bicycle	Parking
A wide paved roadway shoulder can accomodate both pedestrians and bicyclists in a rural setting. A sidewalk or multi-use path outside of the clear zone may also be appropriate (especially if it provides access to a community resource such as a school).	Pedestrian-scale lighting, amenities at transit stops and some bicycle/ pedestrian wayfinding signage for destinations such as community centers, parks and schools near rural town centers.	The green zone consists of the roadway shoulder and ditch. This area may be paved at intersections to reduce the amount of dirt, mud and debris carried onto the roadway by agricultural vehicles.	A wide paved roadway shoulder can accomodate bicyclists. Multi-use paths ouside of the clear zone may also be appropriate.	Travel lanes should be a minimum of 10'-12' with a 6'-8' shoulder.	On-street parking is not recommended on rural roads.

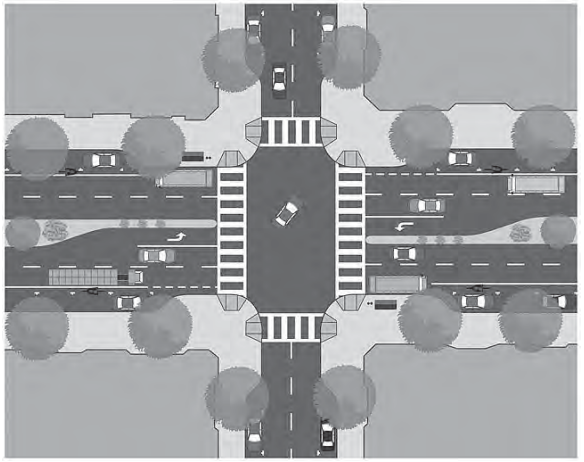
INTERSECTIONS

Principles

The following principles apply to all users of intersections:

- Good intersection designs are compact.
- Unusual conflicts should be avoided.
- Simple right-angle intersections are best for all users since many intersection problems are worsened at skewed and multi-legged intersections.
- Roundabouts reduce points of conflict and severity of potential collisions compared to signalized or stop controlled intersections.
- Access management practices should be used to remove additional vehicular conflict points near the intersection.
- Signal timing should consider the safety and convenience of all users and should not hinder bicycle or foot traffic with overly long waits or insufficient crossing times.





Signalized Intersections

To improve livability and pedestrian safety, signalized intersections should:

- Provide signal progression at speeds that support the target speed of a corridor whenever feasible.
- Provide short signal cycle lengths, which allow frequent opportunities to cross major roadways, improving the us ability and livability of the surrounding area for all modes.
- Ensure that signals detect bicycles.
- Place pedestrian signal heads in locations where they are visible.
- At locations with many crossing pedestrians, time the pedestrian phase to be on automatic recall, so pedestrians do not have to seek and push a pushbutton.
- Where few pedestrians are expected and automatic recall of walk signals is not desirable, place pedestrian push buttons in convenient locations, using separate pedestals if necessary. Use the recommendations regarding push button placement for accessible pedestrian signals found in the Manual on Uniform Traffic Control Devices (MUTCD).
- Include pedestrian signal phasing that increases safety and convenience for pedestrians.

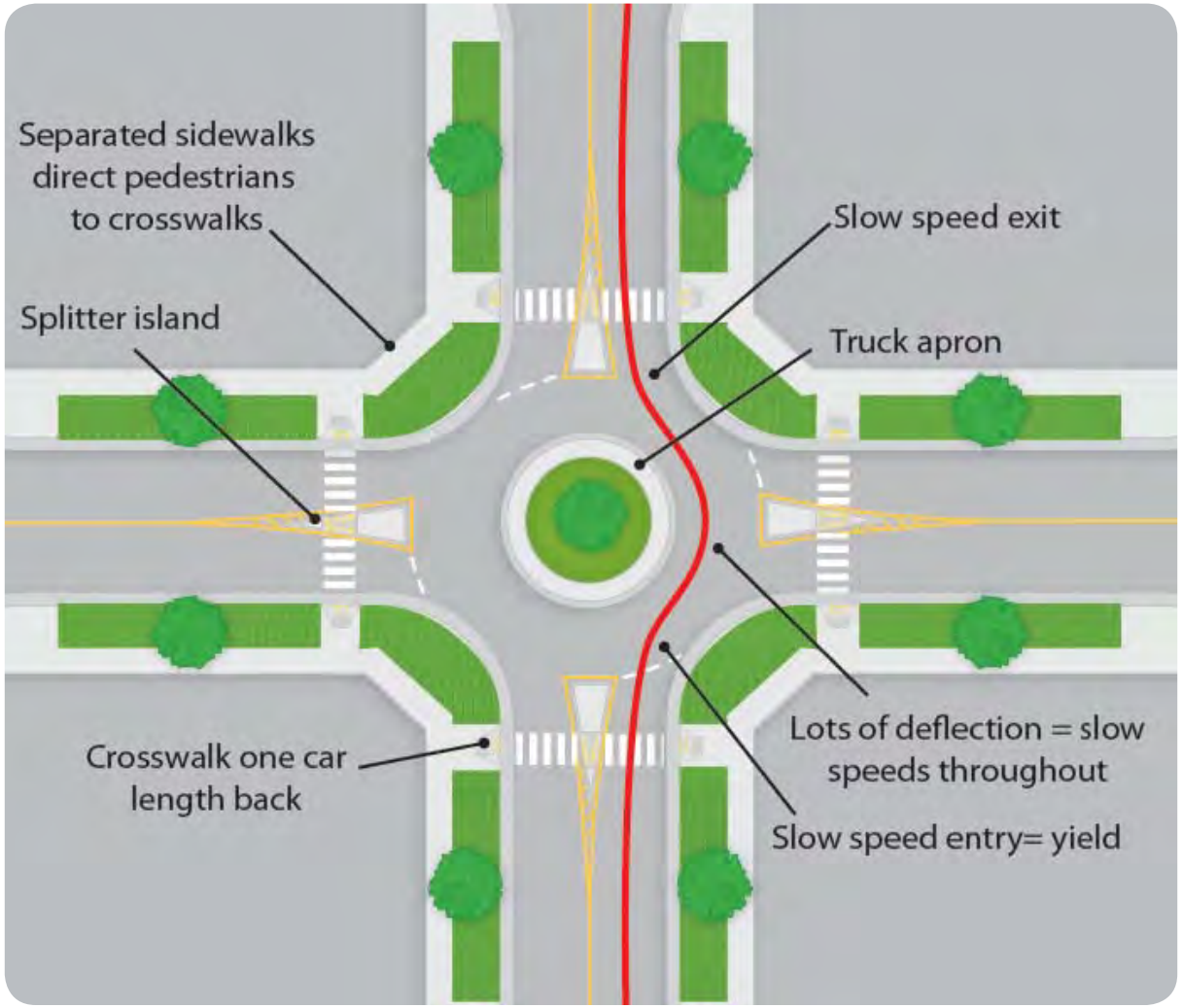
Yield and Stop-Controlled Intersections

Most intersections are either stop-controlled or yield-controlled. In general, stop signs are overused and often mistakenly used for traffic calming. Stop signs are not a traffic calming device. An intersection must meet warrants set forth in the Manual of Uniform Traffic Control Devices (MUTCD) before stop controls may be installed. Intersection control options include the following:

- Yield control, which is under-utilized and should be considered to reduce unnecessary stops caused by the overuse of stop signs.
- Uncontrolled intersections are yield controlled by default.
- Two-way stop control, the most common form of intersection control. This is also an overused device. At many intersections a neighborhood traffic calming circle is a preferable and more effective option.
- All-way stops are often overused, incorrectly, to slow traffic. The use of all-way stops should be consistent with the MUTCD. At many intersections a neighborhood traffic calming circle is a preferable and a more effective option.

Roundabouts

Roundabouts reduce vehicle-to-vehicle and vehicle-to-pedestrian conflicts and, thanks to a substantial reduction in vehicle speeds, reduce all forms of crashes and crash severity. In particular, roundabouts eliminate the most dangerous and common crashes at signalized intersections: left-turn and right-angle crashes.



Other benefits of roundabouts include the following:

- Little to no delay for pedestrians, who have to cross only one direction of traffic at a time.
- Improved accessibility to intersections for bicyclists through reduced conflicts and vehicle speeds.
- A smaller carbon footprint. Less lighting is required for operation and fuel consumption is reduced as motor vehicles spend less time idling and don't have to accelerate as often from a dead stop.
- Opportunity to reduce the number of vehicle lanes between intersections. For example, a five-lane road may be reduced to a two-lane road due to increased vehicle capacity at intersections.
- Little to no stopping during periods of low flow.
- Significantly reduced maintenance and operational costs required by signals and lights
- Reduced delay, travel time, and vehicle queue lengths.
- Lowered noise levels.
- Less fuel consumption and air pollution.
- Simplified intersections.
- Facilitated U-turns.
- The ability to create a gateway and/or a transition between distinct areas through landscaping.
- Light rail can pass through the center of a roundabout without delay because rail has the right of way, although gates may be required

The primary disadvantage of a roundabout is that sight-impaired people can have difficulty navigating around large roundabouts. However, this difficulty can be mitigated with ground level wayfinding devices.
Before starting the design of a roundabout it is very important to determine the following:

- The number and type of lane(s) on each approach and departure as determined by a capacity analysis.
- The design vehicle for each movement.
- The presence of on-street bike lanes.
- The goal/reason for the roundabout, such as crash reduction, capacity improvement, speed control, or creation of a gateway or a focal point.
- Right-of-way and its availability for acquisition if needed.
- The existence or lack of sidewalks.
- The approach grade of each approach.
- Transit, existing or proposed.

UNIVERSAL PEDESTRIAN ACCESS

The following design principles inform the recommendations made in this chapter and should be incorporated into every pedestrian improvement:

- The walking environment should be safe, inviting, and accessible to people of all ages and physical abilities.
- The walking environment should be easy to use and understand.
- The walking environment should seamlessly connect people to places. It should be continuous, with complete sidewalks, well-designed curb ramps, and well-designed street crossings
- The walking environment should not be obstructed.

Legal Framework

Under Title II of the Americans with Disabilities Act (ADA) of 1990, state and local governments and public transit authorities must ensure that all of their programs, services, and activities are accessible to and usable by individuals with disabilities. They must ensure that new construction and altered facilities are designed and constructed to be accessible to persons with disabilities. State and local governments must also keep the accessible features of facilities in operable working condition through maintenance measures including sidewalk repair, landscape trimming, work zone accessibility, and snow removal.

Under the ADA, the U.S. Access Board is responsible for developing the minimum accessibility guidelines needed to measure compliance with ADA obligations when new construction and alterations projects are planned and engineered. These guidelines for public rights-of-way are found in draft form in the Public Rights-of-Way Accessibility Guidelines. The U.S. Department of Transportation has recognized this document as current best practices in pedestrian design and has indicated its intent to adopt the final guidelines.

In addition, Title II of the ADA also requires states and localities to develop ADA Transition Plans that remove barriers to disabled travel.

ADA Transition Plans are intended to ensure that existing inaccessible facilities are not neglected indefinitely and that the community has a detailed plan in place to provide a continuous pedestrian environment for all residents. These plans must:

- Inventory physical obstacles and their location.
- Provide adequate opportunity for residents with disabilities to provide input into the Transition Plan.
- Describe in detail the methods the entity will use to make the facilities accessible.
- Provide a yearly schedule for making modifications.
- Name an official/position responsible for implementing the Transition Plan.
- Set aside a budget to implement the Transition Plan.

Obstructions can make passage difficult or impossible for wheelchair users. (Credit: Michael Ronkin)

User Needs

Wheelchair and scooter users are most affected by the following:

- Uneven surfaces that hinder movement.
- Rough surfaces that make rolling difficult and can cause pain, especially for people with back injuries.
- Steep uphill slopes that slow the user.
- Steep downhill slopes that cause a loss of control.
- Cross slopes that make the assistive device unstable.
- Narrow sidewalks that impede the ability of users to turn or to cross paths with others.
- Devices that are hard to reach, such as push buttons for walk signals and doors.
- The lack of time to cross the street.

Walking-aid users are most affected by the following:

- Steep uphill slopes that make movement slow or impossible.
- Steep downhill slopes that are difficult to negotiate.
- Cross slopes that cause the walker to lose stability.
- Uneven surfaces that cause these users to trip or lose balance.
- Long distances.
- Situations that require fast reaction time.
- The lack of time to cross the street.

Prosthesis users often move slowly and have difficulty with steep grades or cross slopes.

People with visual impairments include those who are partially or fully blind, as well as those who are colorblind. Visually impaired people face the following difficulties:

- Limited or no visual perception of the path ahead.
- Limited or no visual information about their surroundings, especially in a new place.
- Changing environments where they rely on memory
- Lack of non-visual information
- Inability to react quickly
- Unpredictable situations, such as complex intersections that are not at 90 degrees
- Inability to distinguish the edge of the sidewalk from the street
- Compromised ability to detect the proper time to cross a street
- Compromised ability to cross a street along the correct path
- Need for more time to cross the street

People with cognitive impairments encounter difficulties in thinking, learning, and responding, and in performing coordinated motor skills. Cognitive disabilities can cause some to become lost or have difficulty finding their way. They may also not understand standard street signs and traffic signals. Some may not be able to read and benefit from signs with symbols and colors.

Children and many older adults don't fall under specific categories for disabilities, but must be taken into account in pedestrian planning. Children are less mentally and physically developed than adults and have the following characteristics:

- Less peripheral vision.
- Limited ability to judge speed and distance.
- Difficulty locating sounds.
- Limited or no reading ability, so do not understand text signs.
- Occasional impulsive or unpredictable behavior.
- Little familiarity with traffic.
- Difficulty carrying packages.

The natural aging process generally results in at least some decline in sensory and physical capability. As a result, many older adults experience the following:

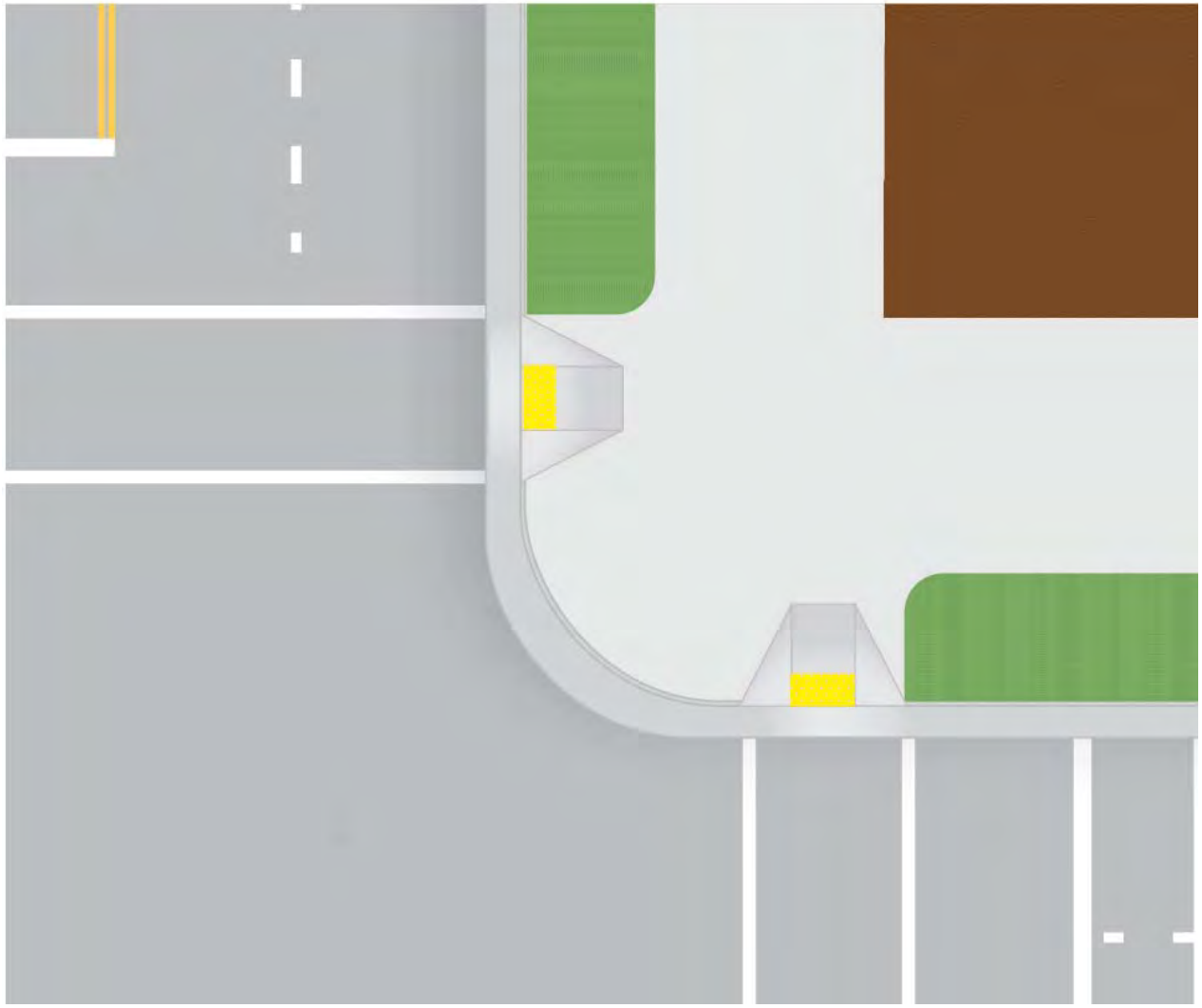
- Declining vision, especially at night.
- Decreased ability to hear sounds and detect where they come from.
- Less strength to walk up hills and less endurance overall.
- Reduced balance, especially on uneven or sloped sidewalks.
- Slowed reaction times to dangerous situations.
- Slowed walking speed.

Accessible Pedestrian Facility Best Practices

Crosswalks and ramps at intersections should be placed so they provide convenience and safety for pedestrians. The following recommended practices will help achieve these goals:

- Allow crossings on all legs of an intersection, unless there are no pedestrian accessible destinations on one or more of the corners. Closing a crosswalk usually results in a pedestrian either walking around several legs of the intersection, exposing them to more conflicts, or crossing at the closed location, with no clear path or signal indication as to when to cross.
- Provide marked crosswalks at signalized intersections.
- Place crosswalks as close as possible to the desire line of pedestrians, which is generally in line with the approaching sidewalks.
- Provide as short as possible a crossing distance to reduce the time that pedestrians are exposed to motor vehicles. This is usually as close as possible to right angles across the roadway, except for skewed intersections.
- Ensure that there are adequate sight lines between pedestrians and motorists. This typically means that the crosswalks should not be placed too far back from the intersection.
- When a raised median is present, extend the nose of the median past the crosswalk with a cut-through for pedestrians.
- Provide one ramp per crosswalk, or two per corner for standard intersections with no closed crosswalks. Ramps must be entirely contained within a crosswalk. The crosswalk can be flared to capture a ramp that cannot be easily relocated. Align the ramp run with the crosswalk when possible, as ramps that are angled away from the crosswalk may lead some users into the intersection.

At intersections where roads are skewed or where larger radii are necessary for trucks, it can be difficult to determine the best location for crosswalks and sidewalk ramps. In these situations, it is important to balance the recommended practices above. Tighter curb radii make implementing these recommendations easier.



One curb ramp per crosswalk should be provided at corners. Ramps should align with sidewalks and crosswalks. (Credit: Michele Weisbart)

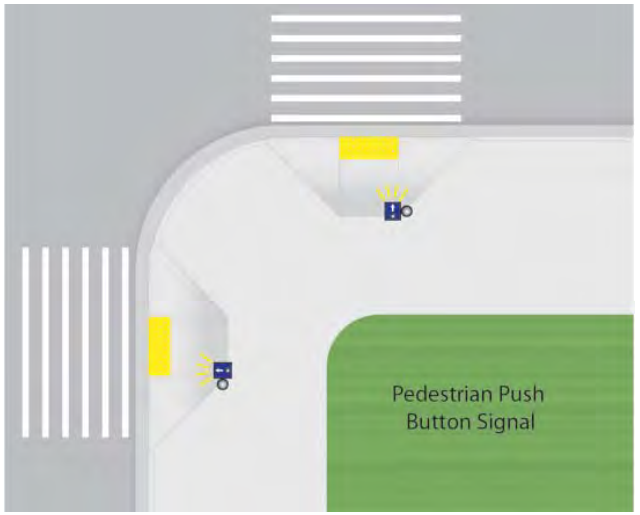
Crossing Times

In planning for people with disabilities, slower speeds must be considered. This is critical in setting the timing of the walk phase of signalized intersections. The Manual on Uniform Traffic Control Devices requires that transportation agencies use an assumed walking speed of 3.5 feet/second for signal timing. In situations where a large number of older adults or persons with disabilities cross, this may be inadequate to meet their needs. Some cities instead use 2.8 feet/second.

Cities may also use Pedestrian-User-Friendly-Intelligent traffic signals to ensure that all pedestrians have adequate time to cross. Pedestrian-User-Friendly-Intelligent crossings use infrared monitors to detect the presence of pedestrians in the crosswalk, and will hold the signal red for cross traffic until the pedestrian has left the crosswalk. Pedestrian-User-Friendly-Intelligent crossings help slower pedestrians, but also help the flow of traffic because they allow the normal pedestrian design speed to be set at a higher level.

Pedestrian-Activated Push Buttons

Pedestrian-activated traffic controls require pedestrians to push a button to activate a walk signal. As noted in Chapter 7, “Pedestrian Crossings,” pedestrian-activated signals are generally discouraged. The walk signal should automatically come on except under circumstances described in that chapter. Where pedestrian-activated traffic controls exist, they should be located as close as possible to curb ramps without reducing the width of the path. The buttons should be at a level that is easily reached by people in wheelchairs near the top of the ramp. The U.S. Access Board guidelines recommend buttons raised above or flush with their housing and large enough for people with visual impairments to see them. The buttons should also be easy to push.

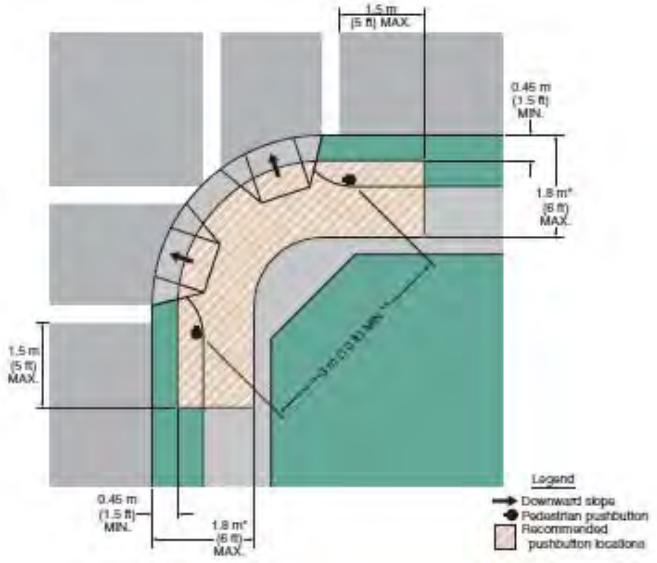


Pedestrian push button placement
(Credit: Michele Weisbart)

Accessible Pedestrian Signals

Wayfinding for pedestrians with visual impairments is significantly improved with the use of Accessible Pedestrian Signals at signalized intersections. In fact, Accessible Pedestrian Signals are the most commonly requested accommodation under Section 504 of the Rehabilitation Act of 1973. Accessible Pedestrian Signals communicate information about pedestrian timing in non-visual formats such as audible tones, verbal messages, and/or vibrating surfaces. Verbal messages provide the most informative guidance.

These devices should be installed close to the departure location and on the side away from the center of the intersection. Since they are typically only audible 6 to 12 feet from the push button, 10 feet should separate two devices on a corner. If two accessible pedestrian pushbuttons are placed less than 10 feet apart or on the same pole, each accessible pedestrian pushbutton shall be provided with a pushbutton locator tone, a tactile arrow, a speech walk message for the WALKING PERSON (symbolizing WALK) indication, and a speech push button information message. Volumes of the walk indication and push button locator tone shall automatically adjust in response to ambient sound.



Chapter 6: Six-Step Implementation Process

The purpose of this chapter is to explain how the perspectives of all stakeholders interested in or affected by existing or future streets can be incorporated into the review for planning and designing streets. The recommended process is summarized in Appendix H, Complete Street Project Review Checklist. This process was modeled after the work completed in the Charlotte Department of Transportation Urban Streets Design Guidelines, and San Francisco Bay Area, Routine Accommodation Checklist.

PROCESS FOR PLANNING AND DESIGNING COMPLETE STREETS

The six step process outlined below emphasizes coordinating city planning, urban design, and transportation planning activities by establishing a sequence of fact finding and decision-making steps. Applying this process to planning and designing streets is intended to support the creation of more streets which meet the needs of more people.

Six-Step Process

The process described below provides a great deal of flexibility to those involved in the decision-making process. This flexibility is intended to foster creative solutions by ensuring that land use planners, engineers, transportation planners, transportation system users, and others work together to think through the implications of alternative street designs. The six-step process will play an important role in addressing the significant challenge of retrofitting streets with limited right-of-way by means of completing a tradeoff analysis.

The six step processes below was vetted and carefully refined through a process lead by the Charlotte Department of Transportation in North Carolina. Since its adoption, the process has been credited was accomplishing complete streets goals and avoiding the need for costly redesign and preventing missed opportunities.

The following three assumptions are built into the six-step process:

- The process will involve a variety of stakeholders. The number of stake holders and discussions will vary, depending on the magnitude of the project(s).
- The resulting street will be as "complete" as needed and possible, given the context of the facility.
- The complete streets evaluation will clearly document the major tradeoffs made among competing design elements, how those were discussed and weighed against each other, and the preliminary and final outcomes. Thorough documentation will ensure that all stakeholders' perspectives are adequately considered in the final design.

Figure 6-1 shows the review steps to be included in applying the Monterey Bay Area Complete Street Guidebook. Each of the six steps is defined in more detail later in this chapter. The steps described below can be applied either to a single street or to a collection of streets in an area, such as when an area plan is being developed.

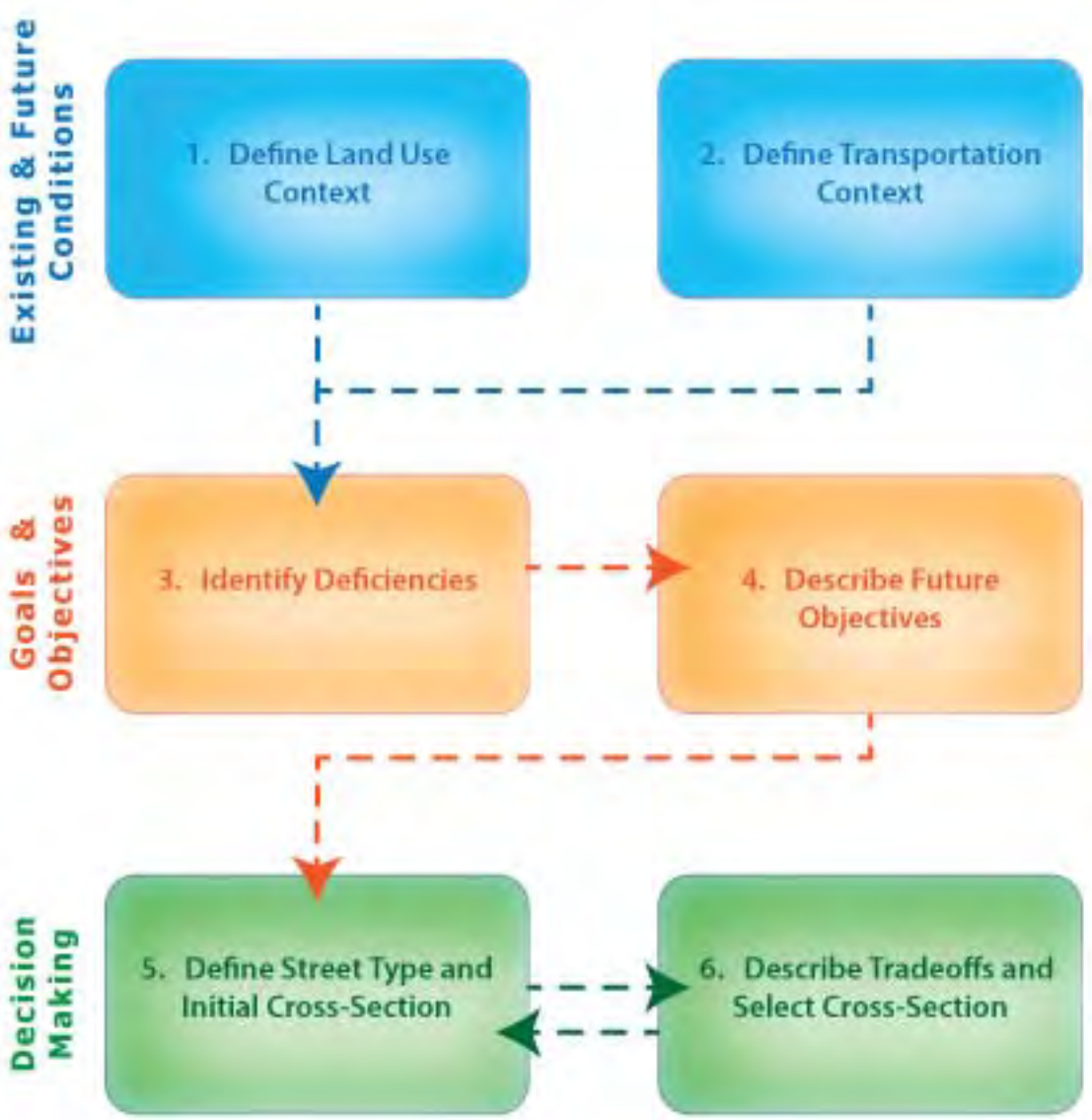


Figure 6-1 Six Step Process

Step 1: Define the Existing and Future Land Use and Urban Design Context

The classification and ultimate design of any street should reflect both the existing and expected future land use contexts. These contexts should be considered from the area wide level down to the immediately adjacent land uses. For example, a street is likely to be classified and/or designed differently if it is in an area slated for higher density development, such as a transit station area, versus in a neighborhood of single family houses, where very limited development changes are anticipated.

Step 2: Define the Existing and Future Transportation Context

The transportation assessment should consider the existing and expected future conditions of the transportation network adjacent to the street to be designed. The design should not be strictly related to capacity on a segment in isolation. Rather, the design should reflect the entire transportation context, including function, multimodal features, and form. The Complete Streets Project Review Checklist (Appendix H) should be used to assess and document existing and future conditions. Questions to facilitate dialogue and consideration of existing and future conditions are included in Appendix I.

Step 3: Identify Deficiencies

Once the existing and future land use and transportation contexts are clearly defined and understood at the area wide level, the design team should be able to identify and describe any potential deficiencies. This step should consider the relationship between different modes and the land use context. Use the Complete Streets Project Review Checklist (Appendix H) to identify and document deficiencies. Questions to facilitate dialogue and consideration of deficiencies are included in Appendix I.

Step 4: Describe Future Objectives

This step synthesizes the information from the previous steps into defined objectives for the street project. Objectives could be derived from the plans and/or policies for the area around the street, as well as from the list of deficiencies identified in step three. The objectives will form the basis for the future street classification and design. Sample questions that can be used to facilitate dialogue about potential issues can be found in Appendix I.

Step 5: Recommend Street Type and Initial Cross-Section and Constraints

The plan/design team recommends the appropriate complete street type(s), and cross-section design based on previous steps. The rationale behind the classification should be documented using the Complete Streets Project Review Checklist in Appendix H. Table 3 provides a reference for matching land use place types and street typologies and sample cross-sections. This step should also include a recommendation for any necessary adjustments to the land use plan/policy and/or transportation plan for that area. Since the street type and the design are influenced by the land use context, subsequent land use decisions should reflect and support the agreed-upon street type and design.

At this point, any constraints to the provision of the initial preferred cross-section should be clearly identified. These may include:

- Lack of right-of way,
- Existing structures,
- Existing trees or other environmental features,
- Topography, and
- Location and number of driveways.

Step 6: Describe Tradeoffs and Select Complete Street Type

Most likely the initial cross-section will need to be refined to better address the land use and transportation objectives, given the constraints identified in step five. If the technical team develops more than one alternative design, these multiple alternatives should be presented to the stakeholders, and made available to the public. Any refinements to the cross section should result from a through consideration of tradeoffs among competing uses of the existing or future public right-of way.

EXCEPTIONS

The Federal Highway Administration (FHWA) (2000) lists three exceptions to providing accommodations for bicycle and pedestrian travel on all streets. They follow the FHWA's guidance on accommodating bicycle and pedestrian travel and identified best practices frequently used in existing complete streets policies. Project sponsors may find it beneficial to consider these exceptions when evaluating trade-offs.

- Accommodation is not necessary on corridors where specific users are prohibited, such as interstate freeways or pedestrian malls.
- Cost of accommodation is excessively disproportionate to the need or probable use. It is unnecessary to attach a percentage to define "excessive" as the context for many projects will require different portions of the over all project budget to be spent on the modes and users expected. Additionally, costs may be difficult to quantify. A cap on amount spent for roadway improvements may be appropriate in unusual circumstances, such as where natural features (e.g. steep hillsides, shorelines) make it very costly or impossible to accommodate all modes. Any such cap should always be used in an advisory rather than absolute sense. A documented absence of current and future need. This exception can be problematic if the method for determining future need is not defined. Ensure that a qualified individual or committee is tasked with approving this exception. Many communities have included other exceptions that the National Complete Streets Coalition, in consultation with transportation planning and engineering experts, also feels are unlikely to create loopholes.
- Transit-specific facilities, such as bus shelters, are not required where there is no existing or planned transit service.
- Routine maintenance of the transportation network that does not change the roadway geometry or operations, such as mowing, sweeping, spot repair, or when interim measures are implemented in temporary detour or haul routes. Be sure to check your internal procedures and policies regarding these activities so that facilities such as bike lanes are swept in a timely manner".

MONTEREY BAY AREA COMPLETE STREETS ASSESSMENT

As part of the development of the 2014 Monterey Bay Area Sustainable Communities Strategy, staff from the regional transportation agencies in the tri-county area worked with key stakeholders from each jurisdiction to develop criteria for evaluating how well streets meet the needs of all users. The goal of this complete streets needs assessment was to identify deficiencies in the existing transportation networks and opportunities for improvements, which would provide safe mobility for all users including bicyclists, pedestrians, transit riders and motorists, particularly in areas identified for increased density and diversity of land use as part of the Sustainable Communities Strategy. Key components of the Monterey Bay Area Complete Streets Assessment are discussed further in this section and can serve as a model inventory for project sponsors and stakeholders.

Complete Streets Inventory

Compiling an inventory of complete street transportation attributes was the first step in conducting the Monterey Bay Area Complete Streets Assessment. This inventory identified the existing mobility context and documented complete streets facilities and considered gaps in the transportation network and services. It is recommended that project sponsors and stakeholders utilize the inventory provided in Appendix A in whole or in part when developing complete street projects for inclusion in local plans.

To support the complete streets needs assessment, RTPA staff worked with regional transit agencies to identify current and future “high quality transit routes” and “major transit stops” as defined by SB375. Identifying high quality transit routes and major transit stops, which serve 15 minute headways during peak periods, were important in order to identify potential priority areas for pedestrian investments, since the majority of transit trips begin with a roadway user walking to the transit stop.

Complete Streets Project List

The result of the Monterey Bay Area Complete Streets Assessment included a list of transportation projects that would support multi-modal facilities, improve connectivity and reduce vehicle miles traveled within each area. For each project, opportunities were identified to develop low stress routes which emphasize the quality, comfort, convenience and safety of bicycle, pedestrian and transit facilities. Each project list was considered by the respective regional transportation planning agencies for inclusion in the regional tranpsortaiton plan.

Complete streets projects typically fell into one of the following categories:

- Bicycle/pedestrian enhancements (ex. bicycle lane treatments such as painted or buffered bike lanes and pedestrian buffers such as landscaping, bicycle actuation at traffic signals, pedestrian scale lighting, wider side walks)
- Pedestrian crossing improvement (ex. raised cross walks, enhanced striping contrast, cross walk beacon, bulbouts and pedestrian islands)
- Bike/pedestrian network filler (ex. new bicycle lane or sidewalks which eliminates gap in existing network)
- Bike intersection improvement (ex. bike boxes, bike signal priority)
- New bike/ped connection (ex. new bike/ped path not located on current transportation facility)
- Bike parking facilities (ex. bicycle racks)
- Neighborhood shared streets (ex. pavement markings, wayfinding, traffic control on local streets to give priority to bicycles and pedestrians and reduce vehicle speed and volume)
- Pedestrian place/universal street (ex. roadway or alley with restricted vehicle access which often is serves as a plaza for assorted businesses)
- Crosswalk frequency (ex. new/additional cross walks to reduce spacing between cross walks)
- Commercial area bike/ped access (ex. pavement treatments, tactile strips and wayfinding)
- Traffic calming (ex. bulb outs, landscaping)
- High Occupancy Vehicle/transit priority (ex. signal priority for transit and carpool lanes)
- Bus pullouts
- Wayfinding (ex. pedestrian and bicycle scale signage providing information about surrounding amenities)
- Information and incentives for bicycling, walking and transit

Chapter 7: Transitioning To Complete Streets

COMPLETE STREETS TRANSITION PLAN

Implementing complete streets begins with adoption of polices, plans and designs described in this guidebook. Frequently, the last steps in implementing complete streets are the most difficult and involve enacting requirements and regulations and providing funding for complete streets improvements. Specific tools for addressing these challenges are described in this chapter.

Providing all of the ingredients for implementing complete streets will take a significant investment in some communities. Below are some tools that local jurisdictions may want to consider to facilitate the transition of motor vehicle oriented street towards streets that provide a greater range of safe and convenient choices for all users.

Zoning Ordinance Review

Zoning ordinance, subdivision ordinance, and municipal code may need to be reviewed to identify where policy is weak in establishing standards. The following zoning ordinance features will support implementation of complete streets:

- Requirements for access management and transit-oriented development;
- Regulations that support recommended complete street characteristics and non-motorized site design for development sites, setbacks, and building entrances;
- Regulations promoting higher density and multi-use developments, which encourages walking and bicycling between destinations;
- Regulations that require easements for bicycle and pedestrian facilities and require new development to make improvements consistent with bicycle, pedestrian, transit, and traffic calming plans.
- Incentives for developments that provide enhanced bicycle, pedestrian and transit facilities.

Local Area Plans

Local area specific plans can be helpful in developing a complimentary set of investments which support a systems approach to complete streets. In some cases, local area specific plans may have strong potential for implementing complete streets policies by taking a comprehensive approach to ensuring consistency with higher level plans, while at the same time providing detail which is responsive to specific local area evidence-based needs. In the early 2000s, the City of Monterey worked with residents to develop neighborhood traffic calming plans. Since their adoption, the City has successfully implemented the majority of these plans.

City of Monterey Neighborhood Traffic Calming Plan

Bicycle and Pedestrian Plans

Bicycle transportation plans and pedestrian master plans should also be utilized to develop complete streets projects. Ensuring that complete streets projects are consistent with these mode specific plans is an effective way to support the development of a network of complete streets. Establishing a network of complete streets is important because roadway users typically utilize several transportation facilities and more than one mode when traveling between their origin and destination.

Ensuring that new projects are consistent with bicycle and pedestrian plans can be utilized as strategy for transiting to complete streets, particularly to improve connectivity. For example, the Tahoe Regional Planning Council worked closely with local jurisdictions to establish zoning ordinances for its bicycle and pedestrian plan. These ordinances require new developments to implement bicycle and pedestrian facilities identified in the plan if they are located within or along a proposed development parcel.

FUNDING COMPLETE STREETS

Funding for complete streets project remains a challenge in the Monterey Bay Area where transportation needs far outweigh available transportation funds. Complete streets projects are currently being considered in the development of the Monterey Bay Area Sustainable Communities Strategy as part of a suite of projects to reduce vehicle miles traveled in areas identified for growth and more intensified use. Although many complete streets projects may be identified to receive funding in the long-range transportation plan and sustainable communities strategy, they will need to compete for limited transportation resources.

Existing Funding Sources

- Transportation Development Act Funds
- Regional Surface Transportation Program
- Neighborhood Improvement Program (City of Monterey)
- Bicycle Transportation Account
- Office of Traffic Safety
- Highway Safety Improvement Program
- Transportation Alternatives Program (formerly Transportation Enhancement funds)
- Regional Development Impact Fees

Potential New Funding Sources

Active Transportation Program: Legislation is currently under consideration at the state level to consider consolidating the federal Transportation Alternatives Program, the state Bicycle Transportation Account, the state and federal Safe Routes to Schools and the Environmental Enhancement and Mitigation program into a single statewide competitive program.

Multimodal Impact Mitigation Fees: Development impact fees are now being assessed and applied to bicycle, pedestrian and transit projects. Like traditional impact fees, multimodal impact fees are used to mitigate the cost of new demands on the transportation system resulting from trips incurred by new development. Local jurisdictions with multimodal impact fees are using model projections, multimodal level of service thresholds, or multimodal trip generation rates by land use type, (such as those developed by the Institute of Transportation Engineers), as the mechanism for assessing the mitigation payment amount. Fees are them applied to investments that are reasonably connected to the development impacts. Multimodal impacts fees work in areas where there is already pedestrian, bicycle and transit activity or in areas that could potentially benefit from and support diverse transportation options.

Local Transportation Sales Tax Measure: Over 85% of California residents live in a region with an approved transportation measure which dedicates sales tax funding to transportation projects. Local transportation measures are applied to projects identified in an approved expenditure plan and currently require a two-thirds majority vote.

Public and private grant programs focused on improving health by reducing greenhouse gas emissions, improving air quality and reducing obesity through physical activity may also play a role in funding complete streets projects.

REGIONAL COMPLETE STREETS PHASING PLAN

The tools provided in the Monterey Bay Area Complete Streets Guidebook support a transition from streets that are primarily auto-oriented to streets which safely and comfortably accommodate all users. The Monterey Bay Area Complete Streets Guidebook takes the approach that by incorporating complete streets into policy, plans, and design, streets will begin to become more complete in stages, beginning in the short-term (2020) and continuing into the long-term (2035).

Given the significant need for road rehabilitation throughout the Monterey Bay Area , complete streets improvements that can be coupled with roadway rehabilitation projects are more likely to be completed in the short-term (2020), such as complete street features that can be realized primarily through roadway restriping. Other projects expected to be completed in the short-term are those funded by continuous funding sources such as Transportation Development Act funds, which frequently support curb ramp improvements, and Safe Routes 2 School funds which support bicycle, pedestrian and traffic calming around schools. The projects which require a greater amount of resources will be implemented closer to the 2035 horizon if current funding trend continue.

Short-term projects such as bicycle lane striping

Long-term projects such as the Monterey Branch Line Light Rail Service and Stations

Chapter 8: Education, Encouragement & Enforcement

Education, encouragement, and enforcement programs complement complete street infrastructure programs and can play an important role in achieving complete streets objective.

EDUCATION

Developing complete streets is a critical step in providing alternatives to driving. However, to achieve an actual shift from driving to walking, bicycling or taking transit requires a change not only in the safety and reliability of those alternatives, but also a change in an individual's preference, perception and behavior. . Many local jurisdictions around the Monterey Bay Area are implementing marketing campaigns to encourage healthy and active lifestyles. Obesity and sedentary lifestyles are on the rise for both adults and children in America, and daily exercise needs to be integrated into American lifestyles. In the Monterey Bay Area region, marketing campaigns, such as Bike Week, add support to existing messages of getting more exercise while pro¬moting complete streets principles.

A telephone survey conducted in the AMBAG region in May 2013 provided information regarding travel preferences. Throughout the region, survey participants overwhelmingly indicated that they rely on their cars to travel; however, they felt that if it were more convenient or more comfortable, they would like to walk or bicycle to shopping or recreation destinations. Integrating Complete Streets features into our transportation system can help this desire to become a reality.

Complete Streets policies are viewed as an important element for achieving Safe Routes to School goals, as children are one of our most vulnerable transportation users. Safe Routes to School programs have become tremendously popular not only across the country, but within the Monterey Bay Area. These programs benefit from Complete Streets policies that can help turn all routes into safe routes. Examples of Safe Routes to School Programs include:

- Safe Routes to School Maps
- Bike/Walk to School Day
- Walking School Buses
- Bicycle Train
- Bike to School Day Resource Guide:
- Monterey County: (http://www.tamcmonterey.org/bikeweek/breakfast.html)
- San Benito County: (http://sanbenitorideshare.org/schools/safe-routes-to- school/)
- Santa Cruz County: (http://bike2work.com/s_cruz/)

Training

Another critical component of a successful education program is providing decision makers and project designers with information on the latest approaches to roadway design to help establish a common level of understanding and facilitate discussions complete streets. Planners are encouraged to hold workshops or provide their elected governing bodies and advisory committees with presentations on facility design and other topics related to bicycling and walking as a means to understand Complete Streets principles. Agencies may want to consider “certifying” staff members as complete streets specialists when a specific level of training in complete streets concepts is completed. Several resources for this type of training are available, including:

- The UC Berkeley Tech Transfer Program
- The Transit Cooperative Research Program (TCRP)
- The National Complete Streets Coalition
- The National Rural Transit Assistance Program

More informal training may involve meeting with local jurisdictions who have experience implementing complete streets policies or hosting roundtables for project sponsors to discuss lessons learned. The regional transportation planning agencies can help educate city and county project planners and designers to ensure that Complete Streets concepts are well understood and can be incorporated into future projects.

Walking Audits

Walking audits are a tool that can be very useful to educate users about the needs on a particular street. Walking audits can be completed individually or as a group. The auditor(s) should use a checklist to note the overall quality of their travel on the street and identify gaps in the pedestrian network, safety or accessibility concerns, areas needing repair, and other opportunities to enhance the corridor to make it more comfortable for all users.

Vehicle Code

Pedestrians and bicyclists should be educated about vehicle codes related to their transportation mode. The Traffic Safe Communities Network in Santa Clara County has produced a guidebook for this purposes that can be found at: http://www.ots.ca.gov/pdf/BicyclePedSafetyBrochure.pdf.

The guide includes references to the California Vehicle Codes that establish safe practices for bicycling and walking. This is a tool that can be used by local jurisdictions to ensure that those walking and bicycling for transportation are informed about their rights and responsibilities.

ENCOURAGEMENT

Communities can encourage the development of complete streets projects by demonstrating the need for and benefits of active transportation and transit. Some activities may include conducting organized community bike rides, walking events and providing transit access to community gatherings. A community may also focus on breaking down barriers to active transportation and transit by producing user-friendly bike maps and transit schedules, providing commuting incentives and bike share programs and offering discounted transit passes. The Monterey Bay area has several events and programs aimed at encouraging walking and biking, including the following:

- Bike Week , including Bike to Work & Bike to School Events
- Walk to School Week
- Condor Classic
- Sea Otter Classic
- Community bicycle rides

In addition, an integral partner in promoting and implementing Complete Street efforts are colleges and universities within the Monterey bay Area. Local jurisdictions may work to share resources and leverage opportunities to educate the public and leadership on the value and implementation of complete streets within the region.

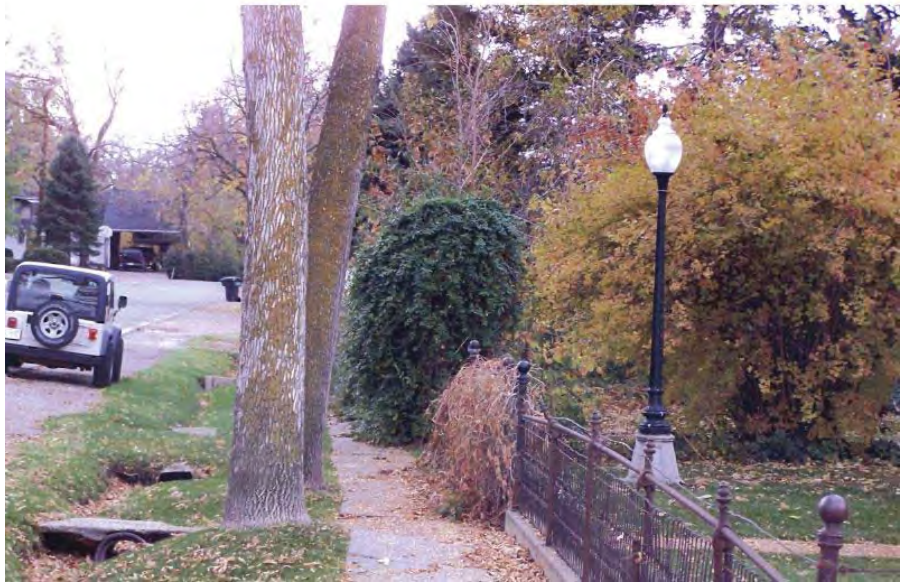
Elementary and high schools are also taking an active role in Complete Streets by helping promote more active lifestyles, such, as encouraging children to walk or bike to school. Bike to School Day and Walk to School Day educational campaigns have been tremendously successful in the region as Complete Streets make it easier for students to get around by all modes of transportation, providing more choices for those who want them. The Transportation Agency for Monterey County offers a Bike to School Day 2012 Resource Guide online at tamcmonterey.org.

ENFORCEMENT

Enforcement emphasizes the complete streets connection between the law enforcement community and project planners and designers. Often times, communities have an established relationship with a liaison within the local police department or California Highway Patrol to monitor and promote safe bicycling and walking. This relationship builds on local efforts to prevent bicycle theft, enforcement campaigns to encourage cyclists and motorists to share the road safely, and understand the California Vehicle Codes addressing safe bicycling and walking.

Enforcement agencies should be encouraged to understand the concepts of Complete Streets planning and design, and work closely with planners, engineers, and policymakers to ensure that users are comfortable when travelling. The rights of both vehicles and non-motorized transportation should be understood by all users, as well as planners and engineers, to ensure that Complete Streets projects can be appropriately enforced.

Code enforcement is another tool that can be used to support the maintenance of safe sidewalks or other maintenance of the traveled way. These codes should be considered by planners and designers when implementing Complete Streets projects.



Chapter 9: Talking About Complete Streets

The accepted definition of complete streets is: roadways designed to meet the needs of all users regardless of mode choice, age or ability. However, the meaning of complete street may vary by community, application or individual. This chapter is intended to serve as a resource for professionals, decision makers and the public who are interested in discussing and educating others about complete streets concepts.

SIMILAR CONCEPTS

The complete streets terminology is similar to terms such as “livable streets”, “context sensitive solution”, “sustainable transportation”, and “transit oriented developed”. All of these concepts give greater emphasis to alternatives to driving alone than traditional transportation planning concepts which primarily focused on vehicle transportation. Each of these newer terms reveal an approach to planning and designing transportation facilities which takes into consideration transit, bicycling and walking and the demands and desires of each community. Unlike the other terms, “complete streets” is the most encompassing phrase associated with this approach and conveys the need for streets to have all the necessary and appropriate parts to achieve its objective, as opposed other concepts that place greater emphasis on one particular transportation design such as transit accommodations, or pedestrian scale facilities.

COMMUNITY VALUE

In order to facilitate dialogue about complete streets between various stakeholders, this section provides some suggestions for talking about complete streets in way that resonates with roadway users not familiar with in transportation planning terminology. Groups that may be engaged in complete streets discussion include, but are not limited to policy makers, advocacy groups, schools, law enforcement, neighborhood associations, and business groups.

When encouraging dialogue about complete streets amongst with stakeholders, begin with a common understanding of complete streets. See Chapter 1: What are Complete Streets, Why Complete Streets? When talking about the benefits of complete streets, consider the following:

What does improved access mean?

- Increasing people's ability to meet most of their daily needs (ex. shopping, school, services, work) without having to drive.
- Improving the convenience of walk, bicycle and transit by designing facilities that provide shorter routes that are not obstructed and reduce weight times at intersections.
- Improving the comfort of walk, bicycle, and transit by designing facilities that are buffered from high traffic volumes or speeds, reducing pedestrian exposure to traffic at intersections and providing lighting and shade.

What does economic benefit mean?

- Reinvesting money in the local economy by reducing fuel consumption and vehicle related expenses.
- Reducing household cost by not spending it on fuel and other vehicle-related expenses
- See Appendix J, Economic Framework for Evaluating Complete Streets.

Why care about safety?

- Traffic crash injuries can result in severe and/or permanent health damage, affecting quality of life and at a great cost to individuals and societies.
- Bicycle and pedestrians are disproportionately negatively impacted by collisions.
- Increasing the number of people of walking, biking, and public transportation use result in lower rates of chronic disease (including cancer, diabetes, stroke, and heart disease) and mortality.
- Slower vehicle speeds have a positive correlation with improved safety for all modes.

Why is equity important?

- People experiencing poverty or language barriers, people of color, older adults, youth, and people with disabilities tend to experience a disproportionately small share of benefits from transportation investments, particularly because traditional transportation investment prioritize vehicles. These groups are overrepresented in households without access to a vehicle.
- Other elements of the transportation system, such as lack of ADA compliance or safe street crossings also create extra barriers that may prevent these groups from experiencing the full benefit of transportation investments

How are the environment and complete streets related?

- The street is a system: a transportation system, an ecosystem and a system of social and economic interactions.
- Improve habitat in right-of-ways.
- Increase tree canopy in rights-of-way which can increase habitat and reduce the urban heat island affect.
- Treat storm water volumes and flow to improve water quality and reduce run off.
- Avoid impacts to natural areas.
- Reduce greenhouse gas emission and fossil fuel consumption by reducing the number and length of vehicle trips and improving the flow of traffic (and minimizing motor idling).

ADDRESSING SPECIFIC USER GROUPS

Consult the following fact sheets developed by Smart Growth American when addressing specific user groups or topics. Go to www.smartgrowthamerica.com to download pdf or view web versions of fact sheets. Smart Growth American offers the following fact sheets:

Children
People with Disabilities
Older Adults
Health
Public Transportation
Climate Change

Economic Revitalization
Gas Prices
Safety
Lower Transportation Costs
Create Livable Communities
Equity

Ease Traffic Woes
Costs of Complete Streets
Change Travel Patterns
Complete and Green Streets
Networks of Complete Streets
Rural Areas and Small Towns

Bibliography

California Department of Transportation. “Complete Streets Action Plan.” Retrieved from http://www.dot.ca.gov/hq/tpp/offices/ocp/complete_streets.html. June 2013.

Charlotte Department of Transportation. Urban Street Design Guidelines. Charlotte, N: 2007.

County of Los Angeles. Model for Design Manual: Living Streets. Los Angeles County, CA: 2011

McCann, Barbara and Rynne, Suzanne. “Complete Streets: Best Policy and Implementation Practices” American Planning Association. Volume 559. (2010): pg. 54-55.

Mekuria, Maaza C., Furth, Peter G., Nixon, Hilary. “Low Stress Bicycling and Network Connectivity”. Mineta Transportation Institute. May 2012.

Moore, Terry and Taylor, Philip. “White Paper on the Economics of Complete Streets.” ECONorthwest. August 2013.

National Complete Streets Coalition. “Fact Sheet: Complete Streets -People with Disabilities.” Smart Growth America.” Retrieved from http://www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals/factsheets/disabilities. July 2013.

National Complete Streets Coalition & Smart Growth America. “Complete Streets Local Policy Workbook.” August 2012.

San Francisco Bay Area. “Routine Accommodation Checklist.” Retrieved from http://www.mtc.ca.gov/planning/bicyclespedestrians/routine_accommodations.htm. June 2013.

Santa Cruz County Regional Transportation Commission & Community Traffic Safety Coalition, & University of California Santa Cruz IDEASS Program. “Santa Cruz County Bike and Pedestrian County Report.” May 2012.

Santa Cruz County Regional Transportation Commission: Pedestrian Safety Work Group. “Improving the Safety and Accessibility of Sidewalks in Santa Cruz County”. June 2010.

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APPENDIX A: Complete Streets Needs Assessment Matrix

COMPLETE STREETS & CORRIDORS																								
	LIMITS		MOBILITY CONTEXT																	LAND USE CONTEXT	PLANNING			
CS CORRIDOR/STREET BY PRIORITY AREA	1	2	DISTANCE (MI)	Daily Traffic	Functional Classification	# of Lanes	Speed Limit	Signalized Intersections	Four Way Stop	Signal Synchronization	Block Length (ft)	Poor Pavement Condition	On-Street Parking (type)	Traffic Calming Devices	Truck Route	Quality Transit Corridor (2035)	Bike Route	SRTS	Wayfinding Signage/ Transfer Information	PLACE TYPES SERVED	COMPLETE STREET TYPE	ISSUES	RECOMMENDED SOLUTIONS	COMMENTS
Pleasure Point																								

PEDESTRIAN NEED/FACILITIES																										
			CONNECTIVITY & COMFORT			CROSSINGS															SAFETY	GAPS	PLANNING			
STREET	Limit 1	Limit 2	Sidewalks	Paved Sidewalk Width	Buffer	Cross Street	Signalized Intersections	Audible Countdown	Walk Phase Timing	Uncontrolled Crossing	Crossing Distance	# Lanes	Median	Crosswalk Signage	Crosswalk Visibility	School Crossing	ADA Ramps	Detectable Warning	Curb Extensions	Lighting	Collision History	Sidewalk Gaps	Proposed Facilities	ISSUES	RECOMMENDED SOLUTIONS	Comments
																									New sidewalks on southside of Brommer. New connections between 30th and 31st	
																							Sidewalk buffer needed	Overall pedestrian environment could be more attractive.		

BICYCLE NEED/FACILITIES

Street	Limit 1	Limit 2	CONNECTIVITY & COMFORT				CROSSINGS		SAFETY	GAPS	PLANNING			
			Bicycle Facility Type	Bicycle Lane Width	Bicycle Parking	Route Signage	Bicycle Detection (Signalized Intersections)	Uncontrolled Crossings (Class I)	Collision History	Bikeway Gaps	Proposed Facilities	ISSUES	RECOMMENDED SOLUTIONS	COMMENTS

TRANSIT NEED/FACILITIES

	CONNECTIVITY & COMFORT											GAPS	PLANNING			
	STOPS & STATIONS							SERVICE								
Street	Cross Street	ADA Access	Bicycle Racks	Distance to Marked Pedestrian Crossing	Shelter	Lighting	Amenities	Routes	Peak Hour Headways	Existing Transit Capacity (along corridor)	Link to Key Destinations	Transit Travel Speeds	Transit Gaps	Proposed Facilities	ISSUES	RECOMMENDED SOLUTIONS	COMMENTS

APPENDIX B: Sample Goals & Policies

Communities may include the entire sample complete streets policy in the general plan circulation element as a complete policy package, or may selectively adopt specific objectives or policies. Communities are encouraged to tailor the policy and implementation measures to local needs, concerns, and conditions, and to identify the local agency or department responsible for implementation. Most circulation elements already include goals, objectives, and policies addressing the needs of motorists and movers of commercial goods, so the package below focuses on other types of users. In tailoring the package for your jurisdiction you may wish to include the entire package as a separate policy set with cross-references to other pre-existing provisions of the circulation element, or you may choose to use some or all of the goals, objectives, and policies below for amendments to existing provisions.

Goal C1: Provide streets that are safe, comfortable, and convenient routes for walking, bicycling, and public transportation to increase use of these modes of transportation, enable active travel as part of daily activities

Objective C1.1: Integrate Complete Streets infrastructure and design features into street design and construction to create safe and inviting environments for people to walk, bicycle, and use public transportation.
"The City will promote context-sensitive streets (i.e., by designing transportation projects within the context of adjacent land uses to improve safety and neighborhood livability, promote transportation choices and meet land use objectives), consistent with the City's Urban Street Design Guidelines." – City of Charlotte

Implementing Policies:

C1.1.1. In planning, designing, and constructing Complete Streets:
o Reference existing planning documents such as the Monterey Bay Area Complete Streets Guidebook and Checklist, local bicycle and pedestrian master plans, specific plans, transit master plans and neighborhood traffic calming plans.
o Include infrastructure that promotes a safe means of travel for all users along the right of way, such as sidewalks, shared use paths, bicycle lanes, and paved shoulders.
o Include infrastructure that facilitates safe crossing of the right of way, such as accessible curb ramps, crosswalks, refuge islands, and pedestrian signals; such infrastructure must meet the needs of people with different types of disabilities and people of different ages.

o Ensure that sidewalks, crosswalks, public transportation stops and facilities, and other aspects of the transportation right of way are compliant with the Americans with Disabilities Act and meet the needs of people with different types of disabilities, including mobility impairments, vision impairments, hearing impairments, and others. Ensure that the [Jurisdiction] ADA Transition Plan includes a prioritization method for enhancements and revise if necessary.

o Prioritize incorporation of street design features and techniques that promote safe and comfortable travel by pedestrians, bicyclists, and users of public transportation, such as traffic calming circles, additional traffic calming mechanisms, narrow vehicle lanes, raised medians, dedicated transit lanes, transit priority signalization, transit bulb outs, road diets, high street connectivity, and physical buffers and separations between vehicular traffic and other users.

o Ensure use of additional features that improve the comfort and safety of users:

Provide pedestrian-oriented signs, pedestrian-scale lighting, benches and other street furniture, bicycle parking facilities, and comfortable and attractive public transportation stops and facilities.

Encourage street trees, landscaping, and planting strips, including native plants where possible, in order to buffer traffic noise and protect and shade pedestrians and bicyclists.

Reduce surface water runoff by reducing the amount of impervious surfaces on the streets.

C1.1.2. In all street projects, include infrastructure that improves transportation options for pedestrians, bicyclists, and users of public transportation of all ages and abilities.

COMMENT: This provision, which requires that all street projects on new or existing streets create complete streets, is a fundamental component of a commitment to complete streets.

o Ensure that this infrastructure is included in planning, design, approval, construction, operations, and maintenance phases of street projects.
o Incorporate this infrastructure into all construction, reconstruction, retrofit, maintenance, alteration, and repair of streets, bridges, and other portions of the transportation network.
o Incorporate multimodal improvements into pavement resurfacing, restriping, and signalization operations where the safety and convenience of users can be improved within the scope of the work.
o Develop systems to implement and monitor incorporation of such infrastructure into construction and reconstruction of private streets.
o Allow exclusion of such infrastructure from street projects only upon written approval by [the City Manager or a senior manager of an appropriate agency, such as the Department of Public Works], and only where documentation and supporting data indicate one of the following bases for the exemption: (a) use by a specific category of users is prohibited by law; (b) the cost would be excessively disproportionate to the need or probable future use over the long term; (c) there is an absence of current and future need; or (d) significant adverse impacts outweigh the positive effects of the infrastructure.

> COMMENTS: This provision provides crucial accountability in the exceptions process by requiring documentation, a transparent decision-making process, and written approval by a specified official. Other exceptions can also be included in this list.
>
> In evaluating whether the conditions of (b) and (c) are met, a jurisdiction may need to conduct latent demand studies, which measure the potential level of use by bicyclists, pedestrians, and others should appropriate infrastructure be provided. Such projections should be based on demographic, school, employment, and public transportation route data, not on extrapolations from current low mode use.

o Provide an annual report to the [City Council/Board of Supervisors] listing the street projects undertaken in the past year and briefly summarizing the complete streets infrastructure used in those projects and, if applicable, the basis for excluding complete streets infrastructure from those projects.

C1.1.3. Develop policies and tools to improve [Jurisdiction]'s Complete Streets practices:

- Develop a pedestrian crossings policy, addressing matters such as where to place crosswalks and when to use enhanced crossing treatments.
- Develop policies to improve the safety of crossings and travel in the vicinity of schools and parks.
- Consider developing a transportation demand management/commuter benefits ordinance to encourage residents and employees to walk, bicycle, use public transportation, or carpool.
- Develop a checklist for [Jurisdiction]'s development and redevelopment projects, to ensure the inclusion of infrastructure providing for safe travel for all users and enhance project outcomes and community impact.
- As feasible, [Jurisdiction] shall incorporate Complete Streets infrastructure into existing public [and private] streets to improve the safety and convenience of Users, construct and enhance the transportation network for each category of Users, and create employment.

C1.1.4. Encourage transit-oriented development that provides public transportation in close proximity to employment, housing, schools, retailers, and other services and amenities.

C1.1.5. Change transportation investment criteria to ensure that existing transportation funds are available for Complete Streets infrastructure.

C1.1.6. Identify additional funding streams and implementation strategies to retrofit existing streets to include Complete Streets infrastructure.

Objective C1.2: Make Complete Streets practices a routine part of [Jurisdiction]'s everyday operations.

Implementing Policies:

C1.2.1. As necessary, restructure and revise the zoning, subdivision, and [insert by name references to other relevant chapters of the city or county code such as "Streets and Sidewalks" or "Motor Vehicles and Traffic"] codes, and other plans, laws, procedures, rules, regulations, guidelines, programs, templates, and design manuals, including [insert references to all other key documents by name], in order to integrate, accommodate, and balance the needs of all users in all street projects on public [and private] streets.

C1.2.2. Develop or revise street standards and design manuals, including cross-section templates and design treatment details, to ensure that standards support and do not impede Complete Streets; coordinate with related policy documents [such as Pedestrian/Bicycle Plans, insert other relevant documents].

Assess current requirements with regard to road width and turning radii in order to determine the narrowest vehicle lane width and tightest corner radii that safely balance other needs; adjust design guidelines and templates to reflect ideal widths and radii.

C1.2.3. Make training available to planning and public works personnel and consultants on the importance of Complete Streets and on implementation and integration of multimodal infrastructure and techniques.

C1.2.4. Encourage coordination among agencies and departments to develop joint prioritization, capital planning and programming, and implementation of street improvement projects and programs.

C1.2.5. Encourage targeted outreach and public participation in community decisions concerning street design and use.

C1.2.6. Establish performance standards with measurable outcomes to assess safety, functionality, and actual use by each category of users; include goals such as:

- By [2020], facilitate a transportation mode shift so that [20] % of trips occur by bicycling or walking.
- By [2015], reduce the number of injuries and fatalities to bicyclists and pedestrians by [__]%.
- Reduce per capita vehicle miles traveled by [__]% by [insert year].
- Provide a high proportion of streets ([__]%) with sidewalks, low design speeds, tree canopy, and street furnishings.
- Increase the miles of bicycle lanes and other bikeways by [__]% by [insert year].
- Increase the miles of sidewalks by [__]% by [insert year]

COMMENT: Other standards could include user satisfaction, percentage reductions in greenhouse gas emissions, and reduction in gaps in the sidewalk network.

C1.2.7. Establish measures of effectiveness for the performance of the circulation system and the effects of new projects on the system, taking into account all modes of transportation including walking, bicycling, and public transportation. Ensure that measures address relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and public transportation; use these measures for planning and in lieu of automobile level of service standards for environmental review.

C1.2.8. Collect baseline data and regularly gather follow-up data in order to assess impact of policies.

- Collect data for each category of users regarding the safety, functionality, and actual use of the neighborhoods and areas within [Jurisdiction].
- Track public transportation ridership numbers.
- Track performance standards and goals.
- Track other performance measures such as number of new curb ramps and new street trees or plantings.
- Require major employers to monitor how employees commute to work.
- All initial planning and design studies, health impact assessments, environmental reviews, and other project reviews for projects requiring funding or approval by [Jurisdiction] shall: (1) evaluate the effect of the proposed project on safe, comfortable, and convenient travel by bicyclists, children, persons with disabilities, pedestrians, users of public transportation, seniors, youth, and families, and (2) identify measures to mitigate any adverse impacts on such travel that are identified.

Objective C1.3: Plan and develop a comprehensive and convenient bicycle and pedestrian transportation network.

COMMENTS: Jurisdictions with existing bicycle or pedestrian plans may have already addressed the policy/action items under this objective. In such jurisdictions, it is not necessary to restate these policy and action items verbatim. Such plans should be reviewed, and, if necessary, revised to complement the complete streets approach. If existing plans address this objective sufficiently, a jurisdiction may incorporate its bicycle and pedestrian plans with language such as: “The provisions set forth in the [Pedestrian/Bicycle Plan] are incorporated into this plan.” If this approach is used, be sure that the incorporated plan is internally consistent with the remainder of the general plan.

For jurisdictions that have not developed a detailed bicycle or pedestrian plan, the policies and actions in this section provide a good way to begin addressing those needs in an integrated fashion.

Implementing Policies:

C1.3.1. Develop a long-term plan for a bicycle and pedestrian network that meets the needs of users, including bicyclists, children, persons with disabilities, pedestrians, users of public transportation, seniors, youth, and families.

- Conduct a demand analysis for each category of user, mapping locations that are already oriented to each mode of travel and type of user and those for which there is latent demand.
- For each category of user, map out a preferred transportation network with routes that will enable safe, interconnected, direct, continuous, and efficient travel from each major origination area to each major destination area.
- Encourage public participation in community decisions concerning the demand analysis, preferred route network, and street design and use to ensure that such decisions: (a) result in streets that meet the needs of all users, and (b) are responsive to needs of individuals and groups that traditionally have not participated in public infrastructure design. Include bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, seniors, youth, families, low-income communities, communities of color, and other distinct social groups, and their advocates. Establish ongoing advisory committees and public feedback mechanisms.
- Identify and prioritize necessary changes in order to implement the preferred network; prioritize neighborhoods with the greatest need and projects that significantly alleviate economic, social, racial, or ethnic inequities.
- Ensure that the networks provide ready access to healthy sources of nutrition.
- Explore the use of non-standard locations and connections for bicycle, pedestrian, and public transportation facilities, such as easements, restored stream corridors, and railroad rights-of way.

C1.3.2. Evaluate timeline and funding of the plan.

- Assess the degree to which implementation of the plan can be coordinated with planned reconstruction of streets, development projects, utility projects, and other existing funding streams.
- Develop funding strategies for addressing additional needs; actively pursue funding from state, federal, and other sources.
- Explore imposing development impact fees and dedication requirements on new development to create paths and other Complete Streets infrastructure.

C1.3.3. In collaboration with [appropriate local agencies and regional transportation planning agencies/metropolitan planning organizations], integrate bicycle, pedestrian, and public transportation facility planning into regional and local transportation planning programs and agencies to encourage connectivity between jurisdictions.

C1.3.4. Develop programs to encourage bicycle use, such as enacting indoor bicycle parking policies to encourage bicycle commuting, or testing innovative bicycle facility design.

Objective C1.4: Promote safety of bicyclists, pedestrians, and public transportation.

> COMMENT: As noted for the previous objective, jurisdictions with existing bicycle or pedestrian plans may also choose to omit these items if already addressed in those plans and instead reference those plans.

Implementing Policies:

C1.4.1. Identify physical improvements that would make bicycle and pedestrian travel safer along current major bicycling and walking routes and the proposed future network, prioritizing routes to and from schools.

C1.4.2. Identify safety improvements to pedestrian and bicycle routes used to access public transportation stops; collaborate with [public and private transit agencies operating within Jurisdiction] to relocate stops where advisable.

C1.4.3. Identify intersections and other locations where collisions have occurred or that present safety challenges for pedestrians, bicyclists, or other users; consider gathering additional data through methods such as walkability/ bikeability audits; analyze data; and develop solutions to safety issues.

C1.4.4. Prioritize modifications to the identified locations and identify funding streams and implementation strategies, including which features can be constructed as part of routine street projects.

C1.4.5. Collaborate with schools, senior centers, advocacy groups, and public safety departments [insert additional specific departments as appropriate] to provide community education about safe travel for pedestrians, bicyclists, users of public transportation, and others.

C1.4.6. Use crime prevention through environmental design strategies to increase safety for pedestrians, bicyclists, and other users.

C1.4.7. As necessary, public safety departments should engage in additional enforcement actions in strategic locations.

Objective C1.5: Make public transportation an interconnected part of the transportation network.

Implementing Policies:

C1.5.1. Partner with [public and private transit agencies operating within Jurisdiction] to enhance and expand public transportation services and infrastructure throughout [Jurisdiction] and the surrounding region; encourage the development of a public transportation system that increases personal mobility and travel choices, conserves energy resources, preserves air quality, and fosters economic growth.

C1.5.2. Work jointly with [public and private transit agencies operating within Jurisdiction] to provide destinations and activities that can be reached by public transportation and are of interest to public transportation-dependent populations, including youth, seniors, and persons with disabilities.

C1.5.3. Collaborate with [public and private transit agencies operating within Jurisdiction] to incorporate infrastructure to assist users in employing multiple means of transportation in a single trip in order to increase transportation access and flexibility; examples include, but are not limited to, provisions for bicycle access on public transportation, secure bicycle racks at transit stops, access via public transportation to trails and recreational locations, and so on.

C1.5.4. Ensure safe and accessible pedestrian routes to public transportation stops; relocate stops if safe routes are not feasible at current location.

C1.5.5. Work with [public and private transit agencies operating within Jurisdiction] to ensure that public transportation facilities and vehicles are fully accessible to persons with disabilities.

C1.5.6. Explore working with [public and private transit agencies operating within Jurisdiction] to provide travel training programs for seniors and persons with disabilities, and awareness training for vehicle operators.

C1.5.7. Explore creation of public transportation priority lanes to improve travel time.

C1.5.8. Partner with [public and private transit agencies operating within Jurisdiction] to collect data and establish performance standards related to these steps.

i. Note that many types of accommodations for people with disabilities are mandated by federal law under the Americans with Disabilities Act.

ii. A road diet is a transportation technique in which the number or width of lanes dedicated to motor vehicle traffic is decreased, often by combining the two central lanes into a single two-way turn lane, in order to create additional space within the right of way for features such as bicycle lanes, sidewalks, or buffer zones.

iii. Connectivity describes the directness of routes and density of connections in a street network. A street network with high connectivity has many short links, numerous intersections, and few dead-end streets. As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations.

iv. Crime prevention through environmental design (CPTED) involves designing the built environment to deter criminal behavior. CPTED aims to create environments that discourage the commission of crimes by influencing offenders to not commit a contemplated crime, usually due to increased fear of detection.

APPENDIX C: Multimodal Network Quality Analysis

MULTIMODAL NETWORK QUALITY ANALYSIS

Some communities are not pursing new Multimodal Level of Service measures as defined in the Highway Capacity manual because collecting the new data required can be resource intensive. Instead, some communities are choosing more qualitative measures of multimodal effectiveness. The Santa Cruz County Regional Transportation Commission rested tested a Multimodal Network Quality of Service measure to evaluate how transportation investment affected the quality and convenience of bicycle, and pedestrian trips. The methodology used was developed as a cooperative effort with the Sustainable Transportation Council, the agency responsible for developing the Sustainable Transportation Analysis and Rating System. The analysis methods used are based on the multimodal network quality of service measures applied in Burien, Washington.

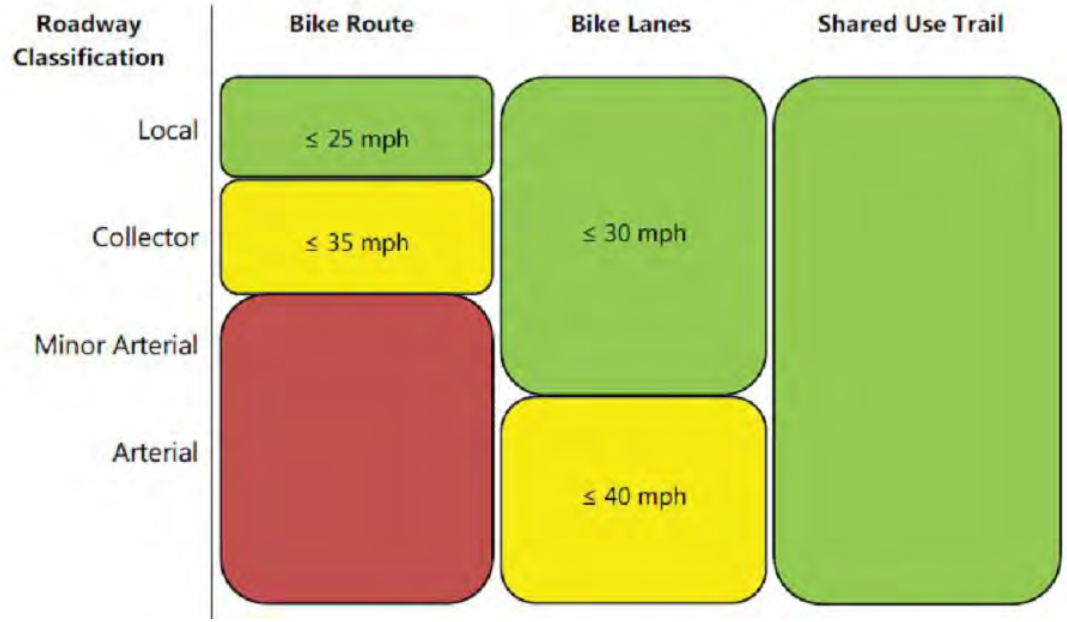
PEDESTRIAN SYSTEM SCORE METHODOLOGY

Pedestrian network quality standards utilize scoring criteria for sidewalks/paths. The criteria focus on the factors that make a good pedestrian environment based on the character of the street. Therefore there are different thresholds for arterials/collectors and local roads. The service score designations are show as green, yellow, and red. A green score is defined as a high quality pedestrian route. A yellow score indicates acceptable conditions, while a red score would not be attractive to many potential pedestrians (Table 1).

Table 1. Pedestrian MMNQ Score

Network Score	Along Arterials and Collectors	Local Roads
	6′ Sidewalk and 3′ buffer or tree wells on both sides	Sidewalks on both sides
	Sidewalk on both sides	Sidewalk on one side
	No Sidewalk on one or both sides	No Sidewalk

Table 2. Bicycle MMNQ Score



The scoring system for the bicycle network depends on the type of bicycle facility provided: bike route, bike lane, or shared use trail. As shown in Table 2, roadway classification and speed are intended to guide the determination of which bicycle facility type is most appropriate for a given roadway. Unlike with the pedestrian MMNQ analysis, bicycle MMNQ analysis is not performed on every street. Only the streets identified as having a facility are included in this analysis, since some streets may not be appropriate for cycling.

DATA REQUIREMENTS

Data related to roadway functional class, sidewalk width, presence of buffer, bicycle facility type (route, lane, path) and roadway speed were all taken into account when evaluating the MMNQ score.

APPENDIX D: Complete Streets Action Plan Template

NAME: [Jurisdiction] DATE:

COMPLETE STREET ACTION PLAN				
IMPLEMENTATION ACTION*	TIMELINE			LEAD DEPARTMENT
	Short	Long	Ongoing	
General Plan Vision				
General Plan Policy & Goals				
Transportation Plan Policy & Goals				
Performance Measures				
Planning Guidance Manual				
Street Design Standards & Specifications				
Transportation Analysis/ Impact Guidelines				
Maintenance Manuals				
Funding Guidelines				
Training Standards				

*Titles and actions may vary by jurisdiction. This list is meant to serve as an example only.

APPENDIX E: Legal Standing of Street Manual

Note: The discussion included in this Appendix was adopted from the Los Angeles County Model Design Manual for Living Streets, 2011.

Local jurisdictions generally follow some established standards for designing streets. Much confusion exists as to what they must follow, what is merely guidance, when they can adopt their own standards, and when they can use designs that differ from existing standards. The text below untangles the myriad of accepted design documents. It is critical for cities and counties to understand how adopting this manual meshes with other standards and guides. The most important of those standards and guides are the following:

- The American Association of State Highway and Transportation Officials' (AASHTO) A Policy on Geometric Design of Highways and Streets (the "Green Book")
- The California Highway Design Manual
- Local manuals or street design standards
- The Manual on Uniform Traffic Control Devices (MUTCD)
- The California Fire Code
- The California Streets and Highways Code and California Vehicle Code

A discussion of the federal-aid roadway classification system helps to frame the requirements of each of these documents. Local governments that wish to use certain federal funds must use a street classification system based on arterials, collectors, and local streets. These funds are for streets and roads that are on the federal-aid system. Only arterials and certain collector streets are on this system. In Chapter 3, "Street Networks and Classifications," this manual recommends an alternative system. To maintain access to these federal funds, local jurisdictions can use both systems. The federal aid system encourages cities to designate more of these larger streets, and to concentrate modifications along these larger streets. Nevertheless, for the purposes of understanding design standards and guides, this is the existing system of street classification for federal funding.

AASHTO GREEN BOOK

The Green Book provides guidance for designing geometric alignment, street width, lane width, shoulder width, medians, and other street features. The Green Book applies only to streets and roads that are part of the National Highway System (NHS). These are Interstate Freeways, principal routes connecting to them, and roads important to strategic defense. These streets and roads comprise about 14 percent of all federal-aid roadway miles in California, and about 4 percent of all roadway miles (Urgo, J., Wilensky, M., and Weissman, S., Moving Beyond Prevailing Street Design Standards, The Center for Law, Energy, and the Environment at the Berkeley Law School, 2010). Although the Green Book's application is limited to these streets, some cities apply its recommendations to all streets.

Further, the Green Book provides guidance that cities often unnecessarily treat as standards. The Green Book encourages flexibility in design within certain parameters, as evidenced by the AASHTO publication A Guide to Achieving Flexibility in Highway Design. For example, 10-foot lanes, which cities often shun out of concerns of deviating from standards, are well within AASHTO guidelines.

CALIFORNIA HIGHWAY DESIGN MANUAL

The California Highway Design Manual (HDM) applies only to State Highways and bikeways within local jurisdictions. If cities deviate from the minimum widths and geometric criteria for bikeways spelled out in Chapter 1000 they are advised to follow the exemption process or experimental process as applicable. The HDM does not establish legal standards for designing local streets. However, like the Green Book, some cities apply HDM guidance to all streets.

As of the writing of this manual, Caltrans is in the process of revising the HDM to meet Caltrans' commitment to Complete Streets in Deputy Directive 64-R1.

LOCAL STREET MANUALS

Local jurisdictions follow the Green Book, the HDM, or design guidance from organizations such as the Institute of Transportation Engineers (ITE) out of liability concerns. Neither federal nor state law mandates adoption or adherence to these guides. However, municipalities often adopt them to protect themselves from lawsuits. Further, many don't have the resources to develop their own standards and practices, so they adopt those in the Green Book, the HDM, or another previously adopted manual, or those of other cities,

A question often posed by plaintiffs' attorneys in traffic-related crashes is, "Did they follow established or prevailing designs, standards, and guidance?" If the attorneys can prove that the local jurisdiction deviated from these, they enhance their chances of winning a judgment against the jurisdiction. Therefore, protection from liability is paramount.

Cities are authorized to adopt or modify their own practices, standards, and guidelines that may reflect differences from the Green Book and the HDM. If these changes generally fall within the range of acceptable practice allowed by nationally recognized design standards, the adopting agencies are protected from liability to the same extent they would be if they applied the Green Book or the HDM. Most changes to streets discussed in this manual fall within the range of the guidelines or recommended practices of nationally recognized organizations such as AASHTO, ITE, Urban Land Institute (ULI), and Congress for the New Urbanism (CNU).

Working within previously established regional guidelines generally should result in a design that is protected from liability. The Green Book and the HDM are silent on many design features, and do not consider the needs within unique contexts. In these cases, cities can develop their own guidelines and standards and incorporate international equivalents or practices from other cities. Cities may adopt the guidance in this manual, which compiles best practices in creating living streets. This manual could, in effect, become the legal prevailing standard by which liability would be assessed.

Cities can also utilize designs that fall outside the ranges specified by nationally accepted guidelines and standards, but these practices can potentially increase liability unless done with great care. When agencies elect to utilize designs that fall outside the guidelines of nationally recognized documents, they need to use additional care to ensure they do not expose themselves to liability.

To minimize liability, local jurisdictions either need to adopt their own standards (which should be based on rationale or evidence of reasonableness), or they can conduct an experimental project. When conducting an experimental project, agencies need to show that they are using the best information that is reasonably available to them at the time, document why they are doing what they are doing, use a logical process, and monitor the results and modify accordingly. This is because the agency may be required in the future to show that its design is reasonable, and the agency may not be able to cite a nationally published guideline or recommendation to support its local action. Often, these experimental projects are conducted because the design engineer has reason to believe that the new or evolved design will be safer or otherwise more effective for some purpose than if the project had prevailing standards and guides been used. These reasons or rationales are based on engineering judgment and should be documented to further minimize exposure to liability.

Unless otherwise noted, everything in this manual can readily be adopted and incorporated without fear of increased liability. In addition, this manual carries the credibility of the many top-level experts who produced it.

In some cases, AASHTO design guidelines may not provide information on innovative or experimental treatments that have shown great promise in early experiments and applications. Since AASHTO is a design guide, agencies have some flexibility to use designs that fall outside the boundaries of the AASHTO guide. Deviation from the range of designs provided in the AASHTO guide requires agencies to use greater care and diligence to document their justification, precautions, and determination to deviate from the guidelines. In California, the precautions to establish

"design immunity" should be followed. These include consideration/analysis and approval by a registered engineer qualified to sign the plans, and certification by the city council or reviewing body clearly indicating the agency's intent. This process documents the engineering judgment that went into the design.

Many cities today use various traffic calming measures to slow traffic and to improve neighborhood livability. Traffic calming measures are not traffic control devices and therefore the state exercises no jurisdiction over them.

Local agencies may currently use many other reports and documents to guide their roadway design and transportation planning. Other documents provide valuable procedure and reference data, but they do not set standards. They can be referred to and defined as standards by local agencies, but the local authority often has the flexibility to selectively endorse, modify, or define how these informational documents can be used or incorporated into its engineering and planning processes. Also, newer versions of these documents have additional information that can conflict with the local historical approach.

The expected results of the design approaches presented in this document are generally intended to improve safety and/or livability. As a result, implementation of these features should generally reduce liability and lawsuits. There is no way to prevent all collisions or lawsuits, but adopting policies, guidelines, and standards and doing experimental projects with reasonable precautions is a defensible approach.

MUTCD

The MUTCD provides standards and guidance for the application of all allowed traffic control devices including roadway markings, traffic signs, and signals. The Federal Highway Administration oversees application of the MUTCD. California cities must follow the California MUTCD, which generally mirrors the federal MUTCD, but not always.

The rules and requirements for the use of traffic control devices are different than for street design criteria. Local agencies have limited flexibility to deviate from the provisions of the California MUTCD in the use of traffic control devices due to the relationship between the MUTCD and state law. The California MUTCD does provide flexibility within its general provisions for items such as application of standard traffic control devices, use of custom signs for unique situations, traffic sign sizes, and sign placement specifics. In contrast, agencies do not generally have the flexibility to

develop signs that are similar in purpose to signs within the manual while using different colors, shapes, or legends. Agencies are also not authorized to establish traffic regulations that are not specifically allowed or are in conflict with state law. The provisions of the California MUTCD and related state laws thus make it difficult to deploy new traffic control devices in California. This can result in complications, especially in the areas of speed management, pedestrian crossings, and bikeway treatments.

The State of California and the Federal Highway Administration have procedures that allow local agencies to experiment with traffic control devices that are not included in the current MUTCD. Such demonstrations are not difficult to obtain from the Federal Highway Administration for testing of new devices, especially as they relate to pedestrian and bicycle facilities, but the requesting agency must agree to conduct adequate before-and-after studies, submit frequent reports on the performance of the experimental device, and remove the device if early results are not promising. The State process can be more difficult for obtaining approval. Federal approval must be obtained first. The California Traffic Control Devices Committee advises Caltrans, which must then agree to allow the experiment to be conducted and determine that the experiment is not in conflict with State law. Once approval is granted for the experiment, the city has been given some legal immunity from liability suits. Since the California Vehicle Code is written to mirror the MUTCD, provisions within the Vehicle Code may not allow the experiment to proceed. The need to modify the Vehicle Code can complicate obtaining State permission to experiment.

Both the federal and California MUTCD are amended through experimentation. After one or more experiments have shown benefit, the new devices are sometimes adopted into these manuals. In California, the Vehicle Code must be changed first if the Vehicle Code prevents use of the new device.

The federal MUTCD and California MUTCD establish warrants for the use of some traffic control devices. For example, stop signs, traffic signals, and flashing beacons are expected to meet minimum thresholds before application. These thresholds include such criteria as number of vehicles, number of pedestrians or other uses, distance to other devices, crash history, and more. These warrants often prevent local engineers from applying devices that, in their opinion, may improve safety. For example, trail and/or pedestrian crossings of busy, high-speed, wide arterial streets may need signals for user safety, but they may not meet the warrants.

As with street design guidelines, cities may establish their own warrants or modify those suggested by the California MUTCD to suit their context in order to use some traffic control devices. In special circumstances that deviate from their own warrants, cities need to document their reasons for the exception. For example, they may say the trail crossings or school crossings qualify for certain traffic control devices.

CALIFORNIA FIRE CODE

The California Fire Code can impede street design in limited circumstances. The state legislature has adopted the National Fire Code. The National Fire Code is written by a private agency and has no official legal standing unless states or municipalities adopt it, as has been done in California. The primary barrier caused by this adoption is the requirement for a minimum of 20 feet of an unobstructed clear path on streets. To comply with this, streets with on-street parking on both sides must be at least 34 feet wide. This prevents municipalities from designing “skinny” and “yield” streets to slow cars and to make the streets safer, less land consumptive and more hospitable to pedestrians and bicyclists.

There are ways around this requirement. If the local jurisdiction takes measures such as installing sprinklers and adding extra fire hydrants, or the adjacent buildings are built with fire retardant materials, it may be able to get the local fire department to agree to the exception.

Alternatively, the state legislature could repeal its adoption of the 20-foot clear path requirement due to

- The arbitrary and unresearched nature of the provision
- The safety problems associated with the resulting excessively wide streets
- The contradiction that this provision causes with properly researched guidelines and standards by ITE, CNU, AASHTO, and others for streets under 34 feet wide
- The potential liability that the 20-foot clear provision creates for designers who maintain, modify, or design streets that do not provide 20-foot clear paths

It is likely that the state legislature was unaware of these issues when it adopted the code in its entirety.

CALIFORNIA STREETS AND HIGHWAYS CODE AND CALIFORNIA VEHICLE CODE

The California Streets and Highways Code and the California Vehicle Code include laws that must be followed in street design. These are embodied in the California MUTCD. Changes to the Streets and Highways Code and the Vehicle Code may cause the California MUTCD to change.

APPENDIX F: Land Use Place Type Matrix

Urban Place Types

	Intensity	General Characteristics		Examples
		Land Use	Transportation	
U-1 Urban Single-Family Residential 	Low to Medium Intensity (6 to 18 units per acre)	Single-family homes in close proximity to urban centers, typically laid out in a grid block pattern. Includes occasional duplexes, accessory units, and/or small multi-unit buildings. Compact development pattern with small lots, limited setbacks, and close proximity of structures.	Short blocks, grid street pattern, and proximity to destinations support non-motorized modes of transportation. Complete sidewalks and bicycle infrastructure typically present. Neighborhoods served by bus service with typical 30-minute headways; occasional proximity to multi-modal, regional, or intercity transit stations.	Chestnut Street, Santa Cruz Hellam Street, Monterey
U-2 Urban Multi-Family Residential 	Medium Intensity (12 to 30 units per acre)	Small and large apartment buildings, duplexes, accessory units, and limited single-family homes in close proximity to urban centers. Well-integrated into the surrounding urban fabric. One- to five-story residential buildings on small to medium lots with minimal setbacks from property lines and adjacent structures. Building entrances typically oriented to the street.	Short blocks, grid street pattern, land-use diversity, and proximity of destinations support non-motorized modes of transportation. Complete sidewalks and bicycle infrastructure typically present. Neighborhoods served by bus service with typical 30-minute headways; occasional proximity to multi-modal, regional or intercity transit stations.	Clay Street, Monterey 3rd Street, Santa Cruz
U-3 Urban Commercial 	Low Intensity (FAR 1.0 or less)	A high concentration of retail, service, and office uses organized in a grid block pattern. A pedestrian-friendly environment supported by active ground floor building frontages, entrances oriented to the street, parking located to the rear of lots, and buildings placed at or near property lines.	Short blocks, grid street pattern, land-use diversity, and proximity of destinations support non-motorized modes of transportation. Wide sidewalks support pedestrian circulation; motorists frequently park once to visit multiple destinations. Multiple bus routes typically with 30-minute headways; occasional presence of multi-modal, regional or intercity transit stations.	Downtown Santa Cruz Downtown Monterey

U-4 Urban Mixed Use 	Medium to High Intensity (FAR greater than 2.0)	Commercial, office, and residential uses in medium- to large-scale buildings. Vertical mixed use with residential or office above ground floor retail is typical. A pedestrian-friendly environment supported by active ground floor building frontages, entrances oriented to the street, parking located to the rear of lots, and buildings placed at or near property lines.	High-quality pedestrian infrastructure supports pedestrian circulation. Short blocks, grid street pattern, land-use diversity, and proximity of destinations support non-motorized modes of transportation; motorists frequently park once to visit multiple destinations. Transit typically includes modest to robust bus service, with headways averaging 15 to 30 minutes.	Downtown Santa Cruz Downtown Monterey

Suburban Place Types				
	Intensity	General Characteristics		Examples
		Land Use	Transportation	
S-1 Single-Family Residential 	Low intensity (3 to 8 units per acre)	Single-family homes in self-contained residential neighborhoods. One- to two-story buildings typically on 5,000 to 15,000 square foot lots with moderate to large setbacks.	Automobile-oriented with resident-serving local, collector, and occasionally arterial streets. Limited local transit service and park-and-ride lots. Sidewalks and bicycle facilities for recreational use.	Cliffwood Heights neighborhood, Capitola Deer Flats neighborhood, Monterey Hillcrest neighborhood, Hollister
S-2 Multi-Family Residential 	Low to Medium Intensity (10 to 25 units per acre)	Duplexes, apartment complexes, subdivided houses, and mobile home parks in a generally low-density setting. Generally one- to four-story buildings on lots of varying sizes, often inward-oriented.	Automobile-oriented, most often found along collector or arterial streets. Limited local transit service and park-and-ride lots. Sidewalks and bicycle facilities for recreational use.	Bay Tree Apartments, Scotts Valley Capato Court, Hollister Footprints on the Bay, Monterey

S-3 Neighborhood Commercial 	Low Intensity (FAR less than 0.5)	Stand-alone retail buildings, strip malls, local-serving big-box stores, and smaller-scale offices or office parks. Usually one story buildings occupying low proportion of total lot area; offices in some instances are multi-story. Typically set far back from street.	Automobile-oriented with large parking areas and limited pedestrian access; usually found along arterial streets. Limited local or, in rare instances, intercity transit service. Sidewalks and bicycle facilities usually absent or limited.	Forest Ave-Fairway Shopping Center, Pacific Grove McCray-Meridian Shopping Center, Hollister Kings Village Shopping Center, Scotts Valley
S-4 Regional Commercial 	Low Intensity (FAR less than 0.5) or occasionally Moderate Intensity (FAR 1.0 to 2.0)	Large-scale retail or entertainment uses with a regional draw, including shopping malls, national-chain big-box stores, and tourist destinations. Most frequently occurs as large retail stores with substantial surrounding parking areas, but may also include more pedestrian-oriented or urban forms, especially for tourist destinations.	Automobile oriented, with most shoppers or visitors arriving by car; usually found along arterial streets or in core commercial areas. Transit access varies by setting, but in most instances includes only limited local or, in rare instances, intercity transit service. Except when located in core commercial areas, pedestrian and bicycle access and amenities tend to be limited or absent.	Capitola Mall Cannery Row, Monterey Airline Highway Shopping Center, Hollister Sand Dollar Shopping Center, Sand City
S-5 Employment Center 	Low to Medium Intensity (FAR from less than 1.0 to 2.0)	Office and research-oriented industrial land uses with medium to high employment densities. Buildings typically have low to moderate lot coverage; may have multiple stories or higher lot coverage. Suburban-style office parks, with multi-story office buildings and large parking lots are typical, as are stand-alone office buildings with surrounding parking.	Usually auto-oriented with large areas of surface parking, or occasionally parking garages. May in limited instances include internal pedestrian-oriented features. Transit service is reflective of surrounding place types, but is typically similar to other suburban place types, with limited service and frequency. Larger employment centers may feature private shuttle services.	Tres Pinos Road and Rancho Drive, Hollister Ryan Ranch Office Park, Monterey
S-6 Neighborhood Mixed Use 	Medium Intensity (25 or more units per acre; FAR usually 2.0 or greater)	Multi-family, mixed-use developments with ground-floor, neighborhood-serving retail or office uses. Usually found in newly built traditional neighborhood developments or as infill along existing commercial corridors. Buildings usually have high lot-coverage, with no setbacks and pedestrian-oriented entrances directly fronting the street.	Pedestrian, bicycle, and transit oriented with bicycle parking, limited or tucked-away car parking, and pedestrian amenities. Transit service typically similar to other suburban place types, but with greater potential for increased transit service and facilities.	Capitola Beach Villas Greenfield Village

Town Place Types

	Intensity	General Characteristics		Examples
		Land Use	Transportation	
T-1 Town Single-Family Residential 	Low to Medium Intensity (6 to 15 units per acre)	Single-family homes in close proximity to town centers or pedestrian-oriented commercial corridors, typically laid out in a grid block pattern. Includes some duplexes, accessory units, or small multi-unit buildings. Compact development pattern with small lots, limited setbacks, and close proximity of structures.	Short blocks, grid street pattern, and proximity to destinations support non-motorized modes of transportation. Complete sidewalks often present; bicycle infrastructure typically limited. Neighborhoods served by bus service with 30-minute or more headways; occasional proximity to regional or intercity transit service.	Jewel Box, Capitola Maple Street, Salinas 6th Street, Hollister
T-2 Town Multi-Family Residential 	Medium Intensity (12 to 30 units per acre)	Combination of apartment buildings, duplexes, accessory units, and some single-family homes. Usually located in areas with traditional street patterns. One- to three-story residential buildings, typically with small setbacks from the street and property lines.	Short blocks, grid street pattern, and proximity to destinations support non-motorized modes of transportation. Complete sidewalks often present; bicycle infrastructure typically limited. Neighborhoods served by bus service with 30-minute or more headways; occasional proximity to regional or intercity transit service.	Laine Street, New Monterey Neighborhood East Riverside Drive, Watsonville
T-3 Town Commercial 	Low Intensity (FAR 1.0 or less)	Pedestrian-oriented commercial uses in town core commercial areas or along commercial corridors. Usually in areas with traditional street patterns. One-story buildings, often with no setbacks and sometimes with full lot coverage. Entrances usually face the street. Lots occasionally include parking, usually located at rear.	Short blocks, grid street pattern, and nearby residential uses support non-motorized modes of transportation. Complete sidewalks often present; bicycle infrastructure typically limited. Transit typically includes limited local service, with headways as short as 30 minutes. Many visitors arrive by car, particularly when traveling long distances.	Bay and Mission Street, Santa Cruz Downtown Carmel

T-4 Town Mixed Use 	Low to Medium Intensity (FAR 1.0 to 3.0)	Small-scale, mixed-use buildings typically in core commercial areas or along commercial corridors. Usually in areas with traditional street patterns. Vertical mixed use buildings common with residential and office above ground-floor commercial. Buildings typically built to property lines, parking may be included, usually to the rear of buildings.	Short blocks, grid street pattern, and nearby residential uses support non-motorized modes of transportation. Complete sidewalks often present; bicycle infrastructure typically limited. Transit typically includes limited local service, with headways as short as 30 minutes. Many visitors arrive by car, particularly when traveling long distances.	Capitola Village 5th Street, Hollister Lighthouse Avenue, Pacific Grove

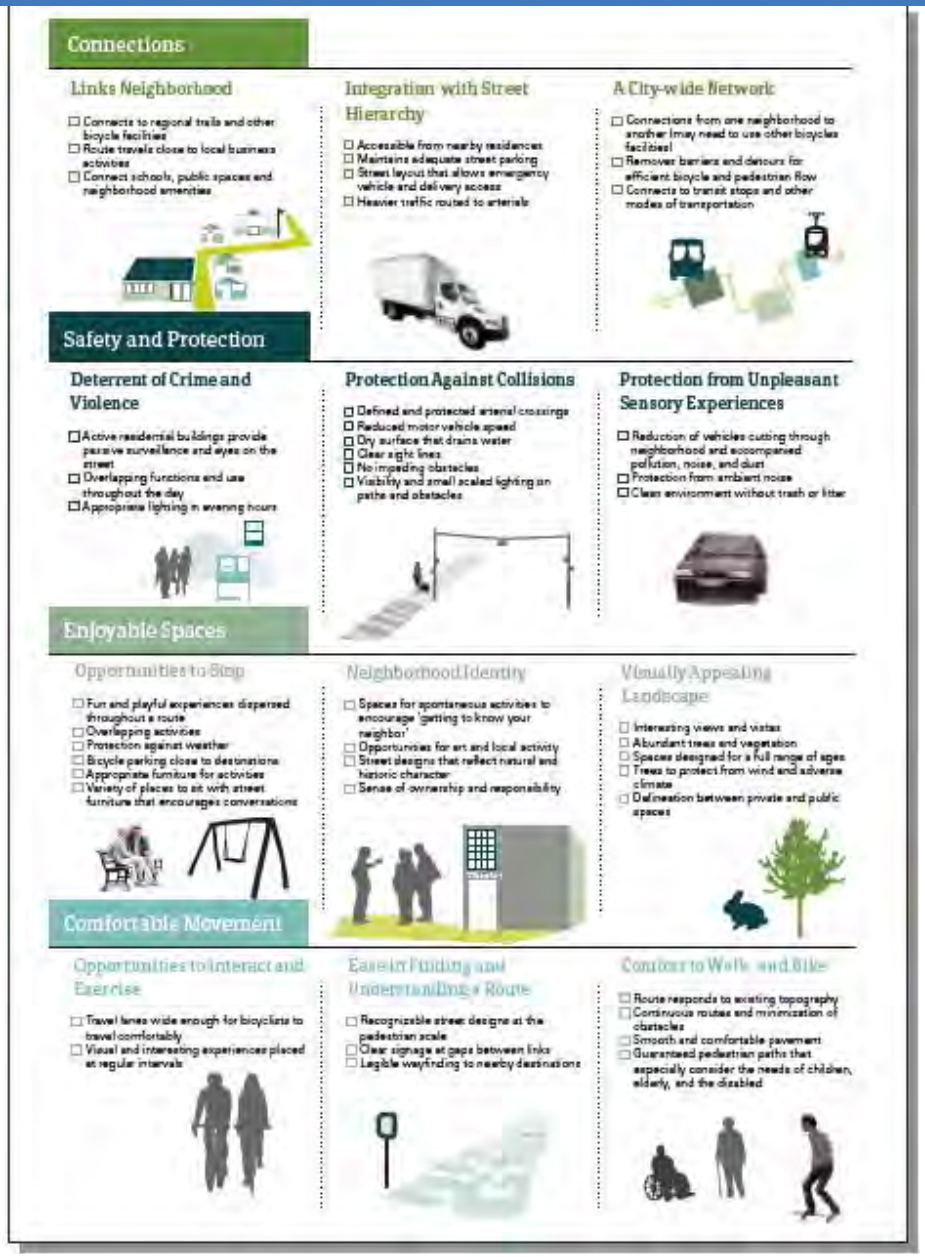
Non-Urban Place Types				
	Intensity	General Characteristics		Examples
		Land Use	Transportation	
NU-1 Agriculture and Rural Residential 	Very Low Intensity (1 unit per acre or less)	Isolated single-family homes, farm houses, and other agriculture-related structures in an agricultural or rural setting. Various building heights and sizes, frequently 2-stories or less, often with expansive setbacks from roads and property lines.	Automobile dependant with widely-spaced, generally rectilinear road patterns. Transit absent or restricted to limited and infrequent regional or inter-city service. Sidewalks and other pedestrian/bicycle infrastructure usually absent.	Outlying portions of Greenfield Outlying portions of San Juan Bautista
NU-2 Rural-Town Commercial 	Low Intensity (FAR usually less than 1.0, up to 2.0 in rare instances)	Variety of small commercial buildings usually located in centers of compact, rural towns. Buildings usually one-story with parking at front or rear. In some cases may not include parking and may include second story with upstairs use.	Mixture of pedestrian- and automobile-oriented. Short blocks, grid street pattern, and nearby residential uses support non-motorized modes of transportation; however, cars may be more commonly used, especially by visitors traveling regionally. Transit absent or restricted to limited and/or infrequent regional or inter-city service. Sidewalks generally present, but may be absent in some cases. Dedicated bicycle infrastructure usually absent.	3rd Street, San Juan Bautista Merritt Street, Castroville Alta Street, Gonzales

NU-3 Rural-Town Residential 	Low Intensity (3 to 8 units per acre)	Single-family homes in areas with grid street patterns; close proximity to central areas of compact, rural towns. May include small multi-family buildings such as duplexes or homes with accessory units. One- or two-story buildings on small- to medium-sized lots. Homes have variable setbacks from property lines and other buildings.	Short blocks, grid street pattern, and proximity to local destinations support non-motorized modes of transportation for intracity trips; however, cars may be more commonly used, especially for regional trips. Transit absent or restricted to limited and infrequent regional or inter-city service. Sidewalks may be absent, but generally low traffic may promote non-motorized transportation. Dedicated bicycle infrastructure usually absent.	6th Street, San Juan Bautista Scott Street, Chualar 9th Street, Gonzales
NU-4 Exurban Residential 	Very Low to Low Intensity (usually 1 unit per acre or less, on rare occasions up to 6 units per acre)	Single-family homes located in neighborhoods on urban fringe. Usually characterized by non-grid street patterns and relatively long distances to noncontiguous urban or town centers. One or two story buildings on large lots with deep setbacks. In rare instances may include smaller "suburban" style lots located far from central areas of towns or cities.	Automobile oriented, often with long distances separating different land uses. Non-grid, typically low-connectivity street patterns discourage non-motorized transportation for non-recreational trips. Transit absent or restricted to limited and infrequent express or regional service; park-and-rides occasionally present. Sidewalks and dedicated bike paths typically for recreational use.	Pasadera Neighborhood, Monterey Fairview Road, Hollister Crescent Drive, Scotts Valley

Other Place Types				
	Intensity	General Characteristics		Examples
		Land Use	Transportation	
IND Industrial and Manufacturing 	Various Intensities (FAR from less than 1.0 to 4.0 or higher)	Various industrial and manufacturing uses, including factories, storage facilities, industrial and commercial suppliers, and some research and development uses. Street patterns and building forms vary, ranging from traditional blocks and pedestrian-oriented configurations to isolated facilities inaccessible by non-motorized transportation.	Transportation characteristics vary, with both pedestrian- and auto-oriented development patterns. Availability of transit, pedestrian access, and bicycle infrastructure vary depending upon setting.	Industrial Drive, Hollister Los Coches Road, Soledad Estates Drive, Aptos

AT Airport 	N/A	Airports.	Transportation characteristics vary.	Monterey Peninsula Airport Hollister Municipal Airport
INS Institutional 	Various intensities (FAR from less than 1.0 to 4.0 or higher) Built forms vary by specific use and location.	Various institutional, civic, public, educational, hospital, and utilities uses located in various settings.	Transportation characteristics vary, with both pedestrian- and auto-oriented development patterns Availability of transit, pedestrian access, and bicycle infrastructure are all variable, depending upon setting.	UC Santa Cruz Salinas High School Public Libraries Wastewater Treatment Plants
OSR Open Space / Recreation 	N/A	Open space and recreational uses, including local and regional parks, nature preserves, and beaches.	Transit characteristics highly variable. Isolated regional parks or wilderness areas may lack transit connections and pedestrian/bicycle access. Parks in urban centers may have frequent transit service and complete bicycle/ pedestrian infrastructure.	Village Green, Greenfield Ramsay Park, Watsonville Calaveras Park, Hollister

APPENDIX G: Greenway Quality Criteria



Green Futures: Research and Design Lab, Scan Design Foundation ,GEHL Architects. *Seattle Neighborhood Greenways: Seattle Tool Kit 2012*

COMPLETE STREETS PROJECT REVIEW CHECKLIST

Purpose

This checklist was developed to assist project sponsors in defining and developing projects and local plans using the Monterey Bay Area Complete Streets Guidebook. The checklist is a mechanism for incorporating the perspectives of all stakeholders into the planning and design process for projects. Use of the checklist will result in projects that are consistent with local, regional and state complete street policies, consider adjacent land uses and meet the needs of all users of the roadway.

How to Use the Checklist

The checklist enables project sponsors to document how each existing and future roadway user was considered and accomodated throughout the project development process. Project sponsers are encouraged to reference the Monterey Bay Area Complete Streets Guidebook while going through the checklist for complete streets applications and roadway design ideas.

Public Works and Planning departments should use the checklist to review projects within or affecting the public right-of-way. If projects do not incorporate complete streets design treatments, project sponsors should document why not and what accomodations will be provided for pedestrians, bicyclists and/or transit users unless the project is exempt.

Threshold Requirements

The Complete Streets Project Review Checklist should be used to review the following types of projects:

1. Street improvements requiring permits or approvals by the Department of Planning and/or Public Works which requests a change of the public right of way ; or

2. Public Works Department capital projects that alter or maintain the public right of way prior to the issuance of any permit or approval

Such that any one or more of the following apply:

- A traffic study is required
- A signalized intersection is affected
- Repaving/restriping needed
- Rehab/maintenance needed

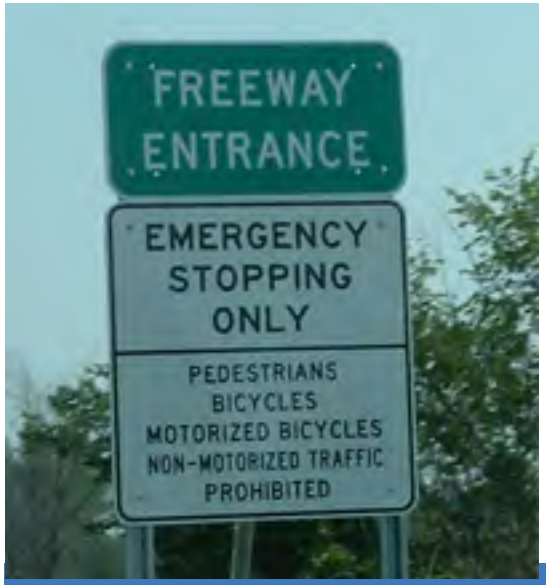
CHECKLIST - Exemptions

Projects Exempt from Using the Complete Streets Project Review Checklist

* Roadways that restrict bicycle and pedestrian access (ex//Freeways)

* Documented absence of current and future need

Projects in which it is not appropriate to accomodate all users but may be appropriate to accomodate more than one user group should use the checklist to identify which users should be considered in the project design.



Projects Exempt from CEQA

Some complete streets projects may be exempt from the provisions of the California Environmental Quality Act. The following exemptions may apply:

**** Projects that are built within the existing right-of-way 15301(c)***

**** Re-striping projects (per Section 15282(j))***

If the project is exempt from CEQA further explaination and documentation is needed to comply with California law. The project sponsor should draft a memo describing why the project is exempt and file a notice of exemption.

CHECKLIST - General Project Information

Date

1. Project Title

Project Description

Project Location

Department Review Only

Project #:

2. Contact Information

Implementing Agency

Contact Person

Phone

Fax

Email

3. Project Schedule (**Circle** Current Project Phase)

Project Milestone	Date Started/Anticipated End Date
Planning	
Preliminary Design	
Final Design	
Construction	

PHOTO

CHECKLIST - Existing Conditions

4. Existing Land Uses (check all that apply)

Residential	☐	Park/Open Space	☐
Mixed Use	☐	Visitor-Serving/Commercial	☐
Institutional/School	☐	Senior Housing	☐
Civic/Public Facilities	☐	Rural/Agricultural	☐

5. Safety (***See Complete Streets Needs Assessment Matrix & http://tims.berkeley.edu/***)

Are there percieved safety/speeding issues in the project area? ☐ Yes ☐ No

Is there a history of collisions in the project area?

☐ Pedestrian ☐ Bicyclist ☐ Motorist

6. Congestion

Does the roadway experience congestion? ☐ Yes ☐ No

If so, at what time(s) is it congested? ☐ AM Peak ☐ PM Peak

7. Existing Roadway Conditions/Context

Functional Classification	
ROW Width	Ft
Roadway Pavement Width	Ft
# of Lanes	NB/EB: SB/WB:
2-Way Center Turn lane	☐ Yes ☐ No
Sidewalk Width	Ft
Landscaping/Parking	☐ Yes ☐ No
Shoulder Width	Ft
Bike Lane Width (<5')	☐ Yes ☐ No
Intersection(s)	☐ Signalized ☐ Unsignalized
Pavement Condition	Poor Fair Good
Posted Speed Limit	
Traffic Volumes (AADT)	
Transit Route/Stops	☐ Yes ☐ No
Truck Route	☐ Yes ☐ No

CHECKLIST - Future Conditions

8. Future Roadway Conditions

Are there planned transportation & land use projects that could affect circulation in the project area? ☐ Yes ☐ No

If so, please list the project(s)

Are planned projects anticipated to increase travel demand in the area? (mark yes or no for each mode)

	Car		Transit		Bicycle	Pedestrian
	☐ Yes	☐ No	☐ Yes	☐ No		

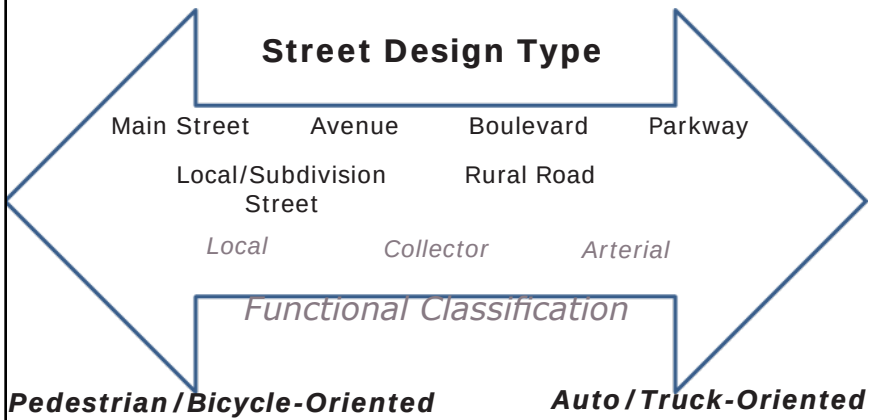
9. Stakeholder Outreach (check all that apply)

Please indicate which stakeholder groups provided input on project scope and design:

Neighborhood Group	☐	Bicycle Committees	☐
Business Association	☐	Pedestrian Committee	☐
School	☐	Senior Group	☐
Property Owners	☐	Transit Agency	☐
Environmental Group	☐	Transportation Disadvantaged	☐

Specific changes requested by stakeholders? ☐ Yes ☐ No

10. **Circle** the Complete Street Design Type - (***See Table 2 of Guidebook***)



11. Transportation Network Deficiencies (Refer to Existing Conditions)

Lacking/Insufficient Bicycle Facilities	Lacking/Insufficient Transit Facilities	Lacking/Insufficient Transit Service
Lacking/Insufficient Pedestrian Facilities	Insufficient accomodations for seniors	Insufficient accomodations for disabled
Bicycle/Pedestrian Connectivity	Insufficient accomodations for students/youth	

Given the Existing and Future Conditions the project area is a candidate for:

Road Diet (3 or more lanes; AADT<20,000; bicycle collisions)	Yes	No
Traffic Calming	Yes	No
Roundabout	Yes	No
Transit-Oriented Development/Transit Corridor (15 min headway)	Yes	No
Neighborhood Shared Street	Yes	No
Pedestrian Place	Yes	No
Transit/Bicycle/Pedestrian Prioritization at Intersections	Yes	No

CHECKLIST - Design

The purpose of this section is to ensure all users have been considered in the design of the project. Complete street design is context-sensitive and a complete street in a rural area may look different than one in an urban area. Refer to safety and special user needs identified in the existing and future conditions sections. The Monterey Bay Area Complete Streets Guidebook Chapter 5 contains design best-practices and sample accomodations for these users.

12. Pedestrian Design

Which, if any, of the following is provided or improved through the project design?

Minimize Driveways	☐ Yes	☐ Existing
Sidewalk/Path	☐ Yes	☐ Existing
Landscaping/Parking Buffer	☐ Yes	☐ Existing
ADA Access	☐ Yes	☐ Existing
Street Trees	☐ Yes	☐ Existing
Crossing Treatments	☐ Yes	☐ Existing
Traffic Calming	☐ Yes	☐ Existing
Wayfinding Signage	☐ Yes	☐ Existing
Audible Countdown	☐ Yes	☐ Existing
Other (Describe)		

13. Bicycle Design

Which, if any, of the following is provided or improved through the project design?

Bicycle Lanes	☐ Yes	☐ Existing
Shared-Lane Markings	☐ Yes	☐ Existing
Multiuse Path	☐ Yes	☐ Existing
Route/Wayfinding Signs	☐ Yes	☐ Existing
Bicycle Parking	☐ Yes	☐ Existing
Bicycle Detection	☐ Yes	☐ Existing
Bicycle Box	☐ Yes	☐ Existing
Color-Treated Bike	☐ Yes	☐ Existing
Floating Bike Lanes	☐ Yes	☐ Existing
Other (Describe)		

14. Transit Design

Which, if any, of the following is provided or improved through the project design?

Priority Bus Lane	☐ Yes	☐ Existing
Bus Bulbs / Pull-Outs	☐ Yes	☐ Existing
Shelter	☐ Yes	☐ Existing
Real Time Bus Arrival Info	☐ Yes	☐ Existing
ITS / Signal Priority	☐ Yes	☐ Existing
Transit Service (15 min headways)	☐ Yes	☐ Existing
Wi-Fi	☐ Yes	☐ Existing
Stop / Station Amenities*	☐ Yes	☐ Existing
Other (Describe)		

*** Transit Amenities include: Bench, lighting, trash can, route information / maps, concessions, music, and public art.**

CHECKLIST - Trade-Offs & Exemptions

15. Project Trade-Offs

Is the recommeneded complete street cross section/design supportable? ☐ Yes ☐ No

If not, explain why:

☐ Lack of ROW width ☐ Existing Structures ☐ Other_____

☐ Trees/Environmental Features ☐ Insufficient Funding ☐ Other_____

Have alternative designs been considered? ☐ Yes ☐ No

What refinements to the cross section/needed were needed?

Removed/partial zones (Ch. 5) for : ☐ Pedestrians ☐ Bicyclists ☐ Landscaping ☐ Vehicles ☐ Parking

Considered alternative routes/locations for ☐ Pedestrians ☐ Bicyclists ☐ Landscaping ☐ Vehicles ☐ Parking

16. Exemptions (Refer to Ch. 6 of the Guidebook)

Is the project exempt from accomodating certain users? ☐ Yes ☐ No

Cost of accomodation is excessively disproportionate to the need or probably use? ☐ Yes ☐ No

Documented absence of current and future need? ☐ Yes ☐ No

Other_____

APPENDIX I: Questions to Support Six-Step Process

APPENDIX- QUESTIONS FOR SUPPORTING SIX-STEP PROCESS

Si x Steps

Step 1: Define the Existing and Future Land Use and Urban Design Context

- What does the area look like today?
- What are today's land use mixtures and densities?
- What are the typical building types, their scale, setbacks, urban design characteristics, relation to street, any special amenities, etc...?
- Are there any particular development pressures on the area (the nature of this may vary
- according to whether the area is a "greenfield" versus an infill area and this type of information
- is particularly important in the absence of an area plan)?
- What are the "functions" and the general circulation framework of the neighborhood and adjacent areas?
- Is there a detailed plan for the area?
- If so, what does the adopted, detailed plan envision for the future of the area?
- Does the plan make specific recommendations regarding densities, setbacks, urban design, etc.?
- Are there any other adopted development policies for the area?
- If so, what do those policies imply for the area?

Step 2: Define the Existing and Future Transportation Context

- What is the character of the existing street? How does the street currently relate to the adjacent land uses?
- How does the street currently function? What are the daily and hourly traffic volumes? Operating and posted speeds? What is the experience for pedestrians? Cyclists? Motorists?
- What are the current design features, including number of lanes, sidewalk availability, bicycle facilities, traffic control features, street trees, etc.?
- What, if any, transit services are provided? Where are the transit stops?
- What is the relationship between the street segment being analyzed and the surrounding network (streets, side walks, transit, and bicycle connections)?
- Are there any programmed or planned transportation projects in the area that would affect the street segment?
- Are there any other adopted transportation policies that would aff ect the classifi cation of the street segment?

Step 3: Identify Deficiencies

- Gaps in the bicycle or pedestrian network near or along the street segment;
- Gaps in the bicycle or pedestrian network in the area (which may increase the need for facilities on the segment, because of the lack of alternative routes);
- Insufficient pedestrian or bicycle facilities (in poor repair, poorly lighted, or not well buffered from traffic, e.g.);
- Gaps in the overall street network (this includes the amount of connectivity in the area, as well as any obvious capacity issues on other segments in the area);
- Inconsistencies between the amount or type of transit service provided along the street segment and the types of facilities and/or land uses adjacent to the street;
- Inconsistencies between the existing land uses and the features of the existing or planned street network.

Step 4: Describe Future Objectives

- What existing policies might or should influence the specific objectives for the street?
- What conditions are expected to stay the same (or, more importantly, what conditions should stay the same)?
- Would the community and the stakeholders like the street and the neighborhood to stay the same or to change?
- Why and how would the community and the stakeholders like the street and the neighborhood to change?
- Given this, what conditions are likely to change as a result of classifying the street (exactly how will the street classification and design support the stakeholders' expectations)?

Step 5: Recommend Street Classification and Test Initial Cross-Section

- What is the recommended cross section?
- Is the cross section supportable considering:

    * right-of way,
    * Existing structures,
    * Existing trees or other environmental features,
    * Topography, and
    * Location and number of driveways.

Step 6: Describe Tradeoffs and Select Cross-Section

- Where alternative design scenarios considered?
- What refinements to the cross section were needed ?
- What was the justification for selecting the final design scenario?

APPENDIX J: Economics of Complete Streets

Summary of Economics of Complete Streets

An important question about complete streets is, Are the benefits greater than the costs; are complete streets a good investment? The economic impact of transportation project is particularly important in an environment where regions are pursuing a variety of economic development strategies to improve the quality of life for residents and resources for transportation investments are scarce.

Careful evaluation of the benefits of costs can reveal some of the downstream effects complete streets have on economic activity. However, isolating the economic impacts of a concept as broad and indefinite as complete street makes simple conclusions difficult. The diversity of complete street types and specific implementations suggests a diversity of effects. Moreover, the effects depend on the development, market, and socioeconomic environment in which a complete street is implementing.

The White Paper on the Economics of Complete Streets presents a framework for evaluating the economic impacts of complete streets. The paper was prepared by ECONorthwest, a consulting firm specializing in economics, finance, and planning. ECONorthwest's findings recognize that complete streets are a relatively new concept and that attempts to rigorously evaluate their economic impacts are limited. ECONorthwest's research relies heavily on case studies rather than controlled time-series or cross-section studies. While case studies are excellent tools to confirm or challenge theory, to generalize their results into implementable policies comes with risk because one case study's conditions may or may not be comparable to another.

Approach to Evaluating Economic Benefits of Complete Streets

Transportation systems should aim to do an efficient job of getting people and goods to many desired places safely and quickly. The efficiency of the system is typically evaluated in terms of congestion. Although complete streets investments may address congestion, through managing demand and better use of the existing system, determining the economic impacts of complete streets must go beyond looking at its impacts on congestion. Furthermore, secondary economic impacts can result from transportation investments.

ECONorthwest groups complete street impacts by direct transportation impacts including: trip volume, trip duration, trip quality, safety and construction and maintenance cost, and indirect transportation impacts including: access to amenities, health, and transportation costs, in additional to congestion. ECONorthwest then evaluates the economic effect of the impacts relative to investments, business activity, property values, and government fiscal health.

The white paper notes several points important to the interpretation of its findings. Factors such as existing conditions, transportation geography, time period, perspectives, distribution of impacts, and exogenous trends should be considered when applying the economic framework. The transportation and non-transportation effects of complete streets depend on the details of how complete streets are designed and implemented and on the modes they attempt to influence.

Economic effects of Complete Streets

Given the transportation effects and the non-transportation effects of complete streets, what are the likely effects on economic activity (employment, output, value added, sales, payroll/income, and property values) when measured through investment, business activity, property values and fiscal impacts?

There are some good theoretical reasons for believing that complete streets can have positive effects on the regional or local economy. The limited literature suggests that, in some instances, measures of economic activity have changed with implementation of complete streets. Because the literature is limited, due to the limited empirical work on the

topic, the anecdotal nature of the work, little known about the distributional impacts it does not support unambiguous statements like, “If complete streets are built, the net economic effects will be x.”

Investment

Do the levels and composition of public and private investment change with the introduction of complete street?

Transportation investments play an important role in the redevelopment of a center or corridor. Some research suggests that complete street accompany increases in investment for an area. It is reasonable to presume that as a street’s safety, health, and amenities improve, private and public entities will be more willing to invest in the area. But complete street may be part of broader redevelopment efforts that included other public investments. Such investment makes it difficult to separate out the unique effects of complete streets. For instance, it is possible that decisions to invest in complete streets makes areas more competitive for the awarding of such development funds. On the other hand it may be true for any type of transportation project. Theory and case studies support the conclusion that complete street can be an important part of a public investment policy that can change the distribution of economic activity within a region.

Business Activity

Do measures of business activity (e.g., business creation, employments, wages/income, sales, revenues) change around complete streets? Do consumes spending patterns change because of complete streets?

Some instances of complete streets have led to more business activity around them. However, an increase of jobs and businesses after the implementation of complete streets does not, by itself, give any indication of how much of that increase is attributable to complete streets. For example, other market forces and location, the amount of new public investment, or pre-development losses such that any new development would have increased measures of business activity.

Consumption patterns could be impacted by a change in the total number of consumers, the cost of goods to consumers, and a change in land values as a result of complete streets. One should expect more economic activity the greater the density and better access. The number of consumers could increase due to potential growth in trip volumes and proximity. Although the number of consumers may increase due to a potential for a growth in trip volumes and proximity, cost of goods may decrease because the transportation cost to the consumer may decrease,

and the higher densities and land values may result in higher rents and higher prices, none of these factors are expected to be affected in a big way. It is unlikely that complete streets decrease consumption. Research reveals that non-motorized consumers are competitive consumers. Although case studies suggest that complete street-type policies may improve bottom lines, it is possible that these kinds of changes will be primarily distributional. A possible exception to the distribution issues is the case where more isolated cities in recreational areas could increase the regional economic activity if they can create “Main Street” environments that are attractive to tourists.

Property Values

Do property values change with the introduction of complete streets?

People choose to live in a certain area, in part, because of the amenities it offers. If people value the effects of complete streets they are more likely to choose to live in or near complete street areas. In the event that complete streets increase amenity and travel by non-auto modes, and do not decrease the effectivess of the automobile too much, complete streets could be correlated with increased property values. However, even if traffic calming features reduce vehicle volume, several studies show property values still increase. The role of improving walkability on increasing property values is depending upon densities and destinations. For example, making a five-lane road servicing commercial strip complete and walkable may have little effect on walking, transit and auto travel, while making a desirable shopping district more walkable cold raise property values.

Social engagement would also be increased if complete streets lead to more people use alternative modes of transportation and allowing users to interact more, which may also affect property values.

Increased property values would likely be a benefit to landowners, as their incomes would increase. Increased property values could be a cost to businesses and residents already operating and living there, as the increase could make the area unaffordable to them.

Government Fiscal Health

What is the net fiscal effect of complete streets on local governments and agencies?

In terms of revenues, while there are solid theoretical arguments and some empirical work for specific cases which explain why complete streets as a type of smart growth policy, could improve fiscal health due to increase sales tax, there is no way to tell that other factors aren't responsible for the increase in tax revenue and sales tax alone do not tell the story of fiscal health.

As a type of transportation investments, complete streets will involve expenditures in public and private funds. Complete streets may increase the up-from implementation costs since they may be above and beyond existing project design improvements. In a 2012 analysis, City of Charlotte Department of Transportation staff found that complete street components, specifically bike lanes and sidewalks, only slightly increase the cost of a project (on the order of 3-5%). In cases where complete street design elements replace larger automotive infrastructure requires, the cost may remain constant or decrease.

If complete streets cause users to shift away from cars, then complete streets could have some maintenance cost savings. However the savings may be minimal because heavy vehicles cause a disproportionate share of road ware. On the other hand, complete street may create a more complicated environment to maintain and higher standards for maintenance, which would generate a higher maintenance cost.

Effects of Health on Economic Growth

Complete streets design frequently incorporates some element of traffic calming which can reduce the number of collisions. Though the safety impacts are worth pursing for their moral merits alone, reducing the number of deaths and injuries has tangible economic benefits. Given the documented potential for complete streets improvements to reduce the number and severity of crashes, it is possible that the safety benefits alone justify complete streets as a policy.

Beyond gains in safety, complete street could facilitate health improvements by increasing activity levels, and reducing noise. If complete streets contribute to healthier people, the economic benefits of that improved health could be measured as longer life expectancy, improved productivity and reduced costs for health care. Although, complete streets could improve health outcomes for some, it could worsen health outcomes for those who remain automotive uses and are whose trip times could increase and for those who experience injuries, such as a sprained ankle from switching to other modes.

Economic Framework for Evaluating Complete Streets

Categories of Economic Activity	Direct and Non-Direct Transportation Impacts	Effect on Economic Activity			
		Possibly Negative	Possibly None	Possibly Positive	Possibly Very Positive
Business Activity	Access[1]			●	●
Business Activity	Trip Volume		●	●	
Business Activity/ Investment	Trips Duration[2]	●	●	●	
Fiscal Impact	Construction[3]	●	●	●	●
Fiscal Impact	Maintenance		●	●	
Property Values/ Investment	Amenities		●	●	
Economic Growth	Health[4]			●	●

Notes:

[1] New facilities for non-automobiles are likely to have a larger positive impact on economic activity than improving existing facilities.

[2] An increase in trip duration for automobiles may negatively impact economic activity, while a reduction in trip duration for non-automobiles may result in a positive impact on economic activity.

[3] Construction of new facilities may have significant economic impacts, while adding new elements may have no to little economic impacts.

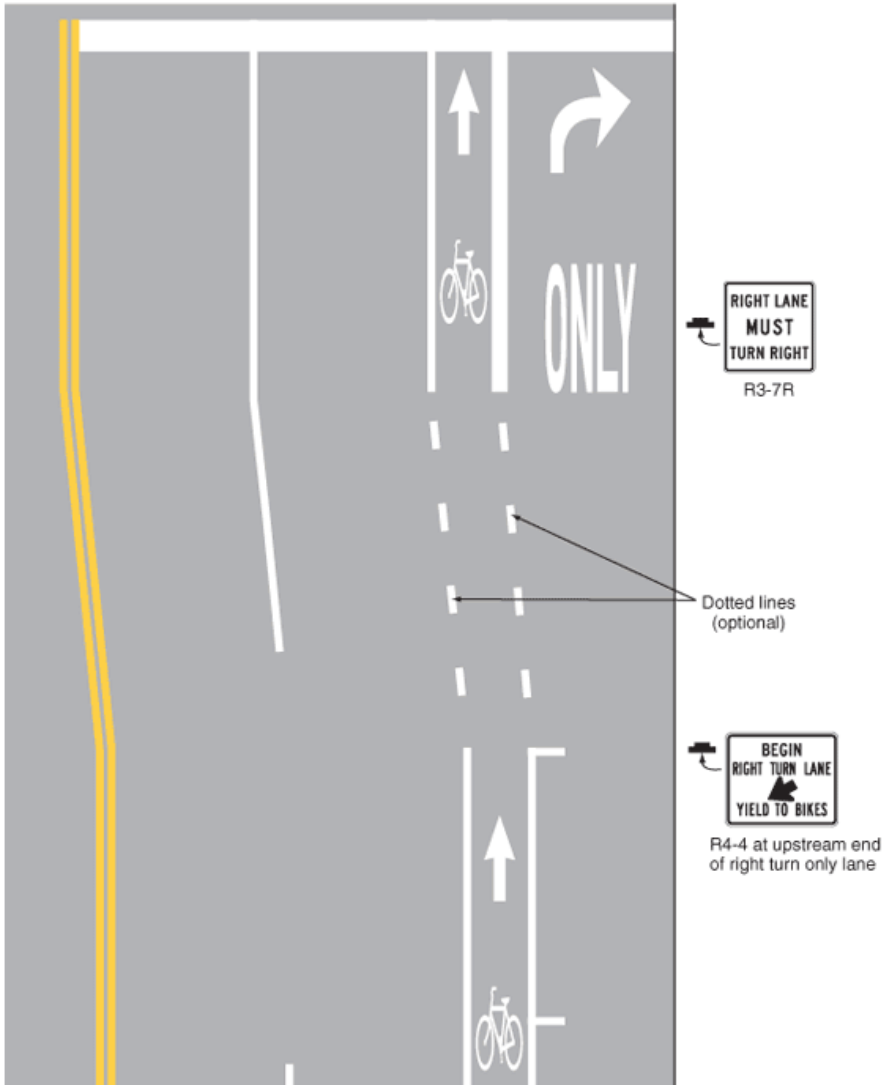
[4] If complete streets contribute to healthier people by encouraging regular physical activity, Complete Streets could positively impact the economic activity by

INTERSECTION TREATMENTS

Bike Box

Bike Signal

Figure 9C-5. Example of Bicycle Lane Treatment at Parking Lane into a Right Turn Only Lane



Right Turn Lane Treatment, MUTCD

BICYCLE DETECTION

Video Camera

Inductive Loop

ROADWAY TREATMENTS

Green Lane

Buffered Bike Lane

Cycle Track

Floating Bike Lane

BICYCLE AMENITIES

Wayfinding Signage

Fix-it Station

Angled Parking

Racks on Transit

Comments on Draft

Introduction

The 2035 MTP/SCS is the blueprint for a regional transportation system that further enhances our quality of life, promotes sustainability, and offers more mobility options for people and goods. The 2035 MTP/SCS is built on an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system so it meets the diverse needs of our changing region through 2035.

On February 12, 2014, the AMBAG Board of Directors released the Draft 2035 MTP/SCS and the Draft Environmental Impact Report (EIR) for public review and comment. Six public workshops and seven public hearings were held in March to facilitate public comment on the Draft 2035 MTP/SCS and Draft EIR.

Generally, the comments received to date on the Draft 2035 MTP/SCS covered the following broad issues:

- Comments on the SCS, Senate Bill 375 (SB 375), and Greenhouse Gases
- Support for/Opposition to Transportation Modes and Specific Projects
- Modeling and Other Technical Issues
- Public Participation
- Funding

The close of the public comment period for the Draft 2035 MTP/SCS and Draft EIR was April 8, 2014. Staff has compiled the comments received on the Draft 2035 MTP/SCS and prepared written responses, which are included as an attachment to this Appendix.

I Attachments

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
1	Public	Gomez	Juan	Public Participation	Thank you for putting on this workshop and Maura's involvement in the HiAP team and incorporating components into the Plan. This material is really heavy and really complicated. If there is any way to further engage the community, perhaps having it in east Salinas, perhaps at Cesar Chavez library and in Spanish it would be a fair and democratic process and I think it would make it more authentic. If you could make that type of process possible that would be great. Translate these metrics into common citizens.	AMBAG staff has made available a Spanish version of the public outreach materials including the online MetroQuest surveys. The online MetroQuest surveys are intended to be user friendly and provide a condensed version of the information contained in the 2035 MTP/SCS. Additionally, interpretation services have been provided at many of the meetings so that staff can communicate with Spanish speaking participants. AMBAG will continue to work with its community partners to expand its outreach efforts to Spanish speaking communities. Staff has made note of the preferred location for meetings in Salinas, the Cesar Chavez Library, and has obtained the necessary information to book that location for future meetings.	Public Hearing	3/3/2014
2	Building Healthy Communities in East Salinas	Manzo	Andrea	Performance Measures/ Public Participation	I spent some time at the Performance Measures table and I want to commend for having different categories particularly the low income levels and the $75,000 for low income isn't really that low income. I like how it's being incorporated, the minority and the poverty areas because that's a lot of the population that we work with is in those areas and I like that it was actually thought of. We maybe would have had a better turn out if it was more accessible, particularly by public transportation, it'd be great to go to them if they can't get here to get their feedback.	The preference for a more centralized accessible meeting location in Salinas has been noted and AMBAG staff has obtained the necessary information to book the community room at the Cesar Chavez Library for future meetings. AMBAG has two thresholds for low income, both of which are set for a family, not an individual. The first threshold is for poverty level and is the same standard used by the Department of Housing and Urban Development for the nation - $25,000 for a family of 3-4. The second threshold is low income and is $75,000 for a family of 3-4. Given the much higher cost of living in this state as compared to other parts of the nation, particularly for housing, a second threshold was warranted in order to capture families who might make more than national poverty standards, but still struggle to make ends meet. Both thresholds were used when examining the distribution of transportation investments and transit access.	Public Hearing	3/3/2014
3	California Rural Legal Assistance	Acevedo	Kenia	Performance Measures/ Public Participation	Thank you for hosting this meeting and inviting the community to participate. I have a couple of positive comments and one concern. Primarily, I'm very pleased with the Environmental Justice considerations that are part of the performance measures. I think it's very important to understand and to which the planning process can affect low income communities and communities of color and I was pleased to see the potential of Plan for these communities and I am somewhat concerned as to the $75,000 cap to define the poverty rate. I think that's not reflective and doesn't encompass smaller communities and farm working communities that dominate certain parts of our region including Salinas with a high concentration of farm workers. Additional considerations would improve that. I understand that those numbers were generate based on Census tracks and its been my experience that whenever we conduct a MHI survey in smaller communities the numbers are usually dramatically lower and so any more detail as to communities that are not only disadvantaged but extremely disadvantaged would be valuable. Secondly, I'd like to commend staff and everyone for the dedication of funds to transit and active transportation. I work in an area there is high obesity rates and a lot of health issues that are due primarily to lack of greenspace and inaccessibility for recreation and so I think promoting active transportation and transit in this region is really valuable and I think it's very important and in alignment with SB 375. It's not only important to host but to go to a place like Cesar Chavez library because it's an alternative venue but it's a different way to engage the community and to have them be really receptive and part of that process needs to be making product a lot more digestible. It's a 200 page document with hundreds of pages of attachments and a 500 page EIR. I think if you can provide condensed versions that are very digestible at a 5th grade level it would facilitate organizations that are interested in educating the community to provide trainings and to the extent that you're available that we could send people your way, that's wonderful.	AMBAG has two thresholds for low income, both of which are set for a family, not an individual. The first threshold is for poverty level and is the same standard used by the Department of Housing and Urban Development for the nation - $25,000 for a family of 3-4. The second threshold is low income and is $75,000 for a family of 3-4. Given the much higher cost of living in this state as compared to other parts of the nation, particularly for housing, a second threshold was warranted in order to capture families who might make more than national poverty standards, but still struggle to make ends meet. Both thresholds were used when examining the distribution of transportation investments and transit access. AMBAG staff has made available a Spanish version of the public outreach materials including the online MetroQuest surveys. The online MetroQuest surveys are intended to be much more user friendly and provide a condensed version of the information contained in the 2035 MTP/SCS. Additionally, interpretation services have been provided at many of the meetings so that staff can communicate with Spanish speaking participants. AMBAG will continue to work with its community partners to expand its outreach efforts to Spanish speaking communities. The preference for a more centralized accessible meeting location in Salinas has been noted and AMBAG staff has obtained the necessary information to book the community room at the Cesar Chavez Library for future meetings.	Public Hearing	3/3/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
4	Motivating Individuals for Leadership in Public Advancement (MILPA)	Tapia	Raul Damien	Public Participation	I want to thank you guys for having this meeting and allowing us to come and voice some of the concerns also of the community. We're stating here that this is something for the future but yet none of our youth have been actually engaged and I think that's very important. Being a senator and actually moving on to being the VP for the student senate at Hartnell College, I think that it would be important to even involve them as well, maybe have an informational forum there that actually explains some of this detailed information. I looked at the actual monster of a book back there and I thought I was in my Physics class and I forgot my homework, what do I do, what am I doing here? Not only that the actual trip down here was a little scary. Once I passed the railroad tracks on Harkins, I thought where are we going? Make it more accessible and friendly for the individuals who live in this community for a lot of us who are being affected by this expansion of the roads and stuff like that. Just involving them very simply more of the people would be more informed and would be able to digest this information much more easier without them having to not understand what is going on. So instead of creating confusion maybe allowing the individuals/organizations, like ourselves, to be able to pass the information in a more simpler form.	AMBAG staff has made available a Spanish version of the public outreach materials including the online MetroQuest surveys. The online MetroQuest surveys are intended to be user friendly and provide a condensed version of the information contained in the 2035 MTP/SCS. Additionally, interpretation services have been provided at many of the meetings so that staff can communicate with Spanish speaking participants. AMBAG will continue to work with its community partners to expand its outreach efforts to Spanish speaking communities and organizations including schools such as Hartnell. Staff has made note of the preferred location for meetings in Salinas, the Cesar Chavez Library, and has obtained the necessary information to book that location for future meetings.	Public Hearing	3/3/2014
5	Public	Salazar	Jorge	Transportation Investments	I am a resident of Salinas and I use public transportation and it's difficult. I take the bus from east Salinas to downtown daily. In my car it takes me 12-15 minutes and on the bus between 45-55 minutes. Because I know a little bit more about the bus, I know which bus I have to take on Saturday and Sunday but people that are not familiar with the bus I don't recommend taking the bus because it's just one bus every hour from east Salinas to downtown. Maybe we can work together to improve in the short term the bus service. I ride my bike for work and it's really dangerous to ride on the street and I know it's against the law to ride the bike on the sidewalks but is more safer.	The 2035 MTP/SCS includes many transit service enhancements including increased service and new Bus Rapid Transit service to downtown Salinas. Additionally, the Plan contains more investment in bicycle and pedestrian facilities than previous plans to improve the safety and accessibility of the bicycle and pedestrian networks.	Public Hearing	3/3/2014
6	Building Healthy Communities in East Salinas	Valdez	Manuel	Transportation Investments/ Sustainable Communities Strategy	My interest would be in knowing what are we doing to raise awareness for low income communities/groups of the need to change from the mentality where the car is king to alternative uses to work because I live in Gonzales and people rely heavily on their cars to go to the post office and it's really walkable. I think that since the Plan's to be implemented in 2035, hosting some classes/seminars on how to change the narrative from the situation where the car is king to maybe bike or other methods and also looking into how we can improve the design of sidewalks/streets to encourage more people to walk.	The 2035 MTP/SCS has opened the door for outreach and education throughout the region about the benefits of alternative modes of transportation. One of the implementation strategies listed in the 2035 MTP/SCS is to improve the public perception of alternative modes of transportation. Another strategy includes creating a rural task force so that the needs and preferences of rural communities are better represented at the regional level. Between these two strategies AMBAG plans to reach a wider audience to create a more robust dialogue around the variety of co-benefits that can be achieved by using cars less. AMBAG staff is in the process of applying for grants to fund this type of work.	Public Hearing	3/3/2014
7	Center for Community Advocacy/ Building Healthy Communities in East Salinas	Lopez	Sabino	Transportation Investments	One of my big concerns as a resident is transportation in Salinas. It's a big issue because of cutting services for the community. Less services for Salinas. The most affected people are the residents who cannot drive or who cannot afford to have a car. Every time that you make cuts, it will affect the working community because there's a lot of people who use the bus to work. I know people that go to work in Toro Park and there used to be a bus to Toro Park and now there's not a bus. There's no transportation to Toro Park anymore. Also, they announced that they're going to cut service to west Salinas. Every time it's cutting services. East Salinas is the same. There's only one way to connect to different routes to get to your doctor appointments. People are sick they don't have a chance to get to an appointment because they don't have a ride with somebody. I encourage to set a priority to not affect the low income community because Salinas Valley is a farm worker community and a big percentage of low income people make less than $25,000 sometimes a family so they can't afford to have a car so there needs to be a good transportation system to be affordable. People are ready to pay their dues but you need to provide the resources. Of course, open green spaces and more parking to be available in Salinas. East Salinas is a big need so hopefully Salinas or the County can do something to set some really good resources in east Salinas. Advance and change the bad image that developed over the years.	Much of the region's revenue has restrictions limiting it's use for certain types of projects, such as highway projects or transit projects. Only a small portion of the region's funding is discretionary. Unfortunately the current state of funding is a shrinking pot of funding dedicated to transit, particularly operations, which means that transit providers like Monterey-Salinas Transit have had to cut transit operations. In order to balance out the continued shrinking resources provided by the state and federal governments, regional agencies have started to turn towards local sources of funding. In this region two of the three counties are looking towards a sales tax measure for this reason. Local funding sources typically have more flexibility and can be used for projects that are prioritized by the community. The 2035 MTP/SCS includes many transit service enhancements including increased service and new Bus Rapid Transit service to downtown Salinas because members of the community have expressed a need for this type of service. The 2035 MTP/SCS projects revenue out to 2035. This includes a forecasted increase in revenue to be used for transit.	Public Hearing	3/3/2014

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8	County of Monterey - Public Health	Padilla-Chavez	Erica	Transportation Investments/ Sustainable Communities Strategy	I enjoyed the comments of all these residents who have come out to voice their opinions on a holistic and diverse Plan but I want to from a health perspective make a comment about the importance of transportation to the health and well-being of our communities. As a public health practioner it's a fact that we have communities that are struggling with chronic diseases such as obesity and overweight. Sometimes we think about transportation as an automobile but transportation as we know is more than that. It is also the development of plans that can promote public health benefits so there could be co-benefits. I'm here really to offer some assistance in figuring out how we can change the narrative. It is really about changing the culture of this auto dependent society to one that is really reliant on physical activity to get to and from and of course that comes all the land use issues that we need to factor in to achieve that. However, as a public health department, we are in constant communication with the public so it there's a way for us to link education around transportation and its connection to the public health benefits and the importance of walking to the store that's two blocks away and if we can quantify that calorically that's even better. But there are ways, so I do want to commend AMBAG because AMBAG's been a critical player in this movement to create a health in all places/policies. But in this particularly implementation of this Plan if we can systematize public health component as we think about moving forward with the recommendations, that would be great and I can offer my assistance in that regard.	The 2035 MTP/SCS has opened the door for outreach and education throughout the region about the benefits of alternative modes of transportation. One of the implementation strategies listed in the 2035 MTP/SCS is to improve the public perception of alternative modes of transportation. AMBAG plans to reach a wider audience to create a more robust dialogue around the variety of co-benefits that can be achieved by using cars less. AMBAG staff is in the process of applying for grants to fund this type of work and looks forward to working with community partners to create a broader dialogue about the connection between health, transportation, and land use.	Public Hearing	3/3/2014
9	Motivating Individuals for Leadership in Public Advancement (MILPA)	Casas	Rene	Transportation Investments	Have you thought about any incentives to give to people that are on transportation to relieve congestion during the peak periods?	AMBAG is a regional agency that has state and federal mandates to meet with limited funding resources. While the agency cannot afford to provide financial incentives directly to people to relieve congestion, the 2035 MTP/SCS commits to continuing the transportation demand management programs around the region which provide resources, education and sometimes promotional incentives to get people to consider alternative options such as telecommuting, shared rides, transit, bicycling or walking options. Additionally, the Plan provides $886 million in investments towards pedestrian and bicycle facilities and $2.6 billion towards transit.	Public Hearing	3/3/2014
10	Public	Piercy	Steve	Transportation Investments	My comments are mostly about what I could not find in the MTP. First I notice that there's a greenhouse gas reduction target of 5% reduction by 2035, however, with an Executive Order for Governor Schwarzenegger, the total amount of greenhouse gas emissions reduction by 2050 is supposed to be 80%. Back to that 5% target, that target is only per capita, that's per person, that doesn't take into account that there will be a population increase and therefore more greenhouse gas emissions will be produced due to the increase in people. One thing that I wanted to make sure is that the MTP even though it states yes that greenhouse gas reductions, it's really only per capita and not for total. The other comments are more on prioritizing projects that would save lives and reduce injuries of people and citizens in Santa Cruz County and this would apply for the other two counties as well. Right now we're spending a vastly disproportionate amount of funding toward the development of motorized infrastructure and unfortunately not spending as much to produce equity for people who either cannot drive or do not want to drive or want to improve their health, keep money locally in the economy instead of spending it off to gasoline and oil refineries and car manufacturers. So if we are spending more money towards improving bicycle and pedestrian infrastructure, we'll be able to retain more of that money for our local businesses and have a stronger economy locally. At the same time that will benefit greenhouse gas reductions total amount. It will improve the health of individuals and because they wouldn't be hit by cars or get into accidents as much that would definitely improve the health a lot more. I would really strongly urge that the MTP prioritize their projects and their spending towards improving safety for pedestrians and bicyclists in the tri-county region.	California Senate Bill 375, enacted in 2008, promotes efforts to reduce regional greenhouse gas emissions from passenger vehicles and light duty trucks through changes in land use and transportation development patterns. To achieve these changes, the law encourages Metropolitan Planning Organizations (MPOs) like AMBAG to think differently about how communities are designed. As a result, MPOs, in partnership other regional agencies and local governments are now required to develop a Sustainable Communities Strategy (SCS) as part of the transportation planning process for inclusion in their plan. The SCS should demonstrate the land use and transportation measures that will be used to meet the region's greenhouse gas emission reduction target established by the California Air Resources Board, that is to reduce greenhouse gas emissions by 5% per capita by 2035 from the use of automobiles. At the same time, Executive Order S-3-05 signed by Governor Schwarzenegger includes a target of reducing greenhouse gas emissions (GHG) from all sectors, not just transportation, by 80% by 2050. While transportation represents a significant portion of overall GHG emissions in California, the transportation sector alone will not meet the Governor's Order. There are many other activities being undertaken by the State of California to meet this goal. Additionally, the greenhouse gas emission target set by the California Air Resources Board for the Monterey Bay Area does not include GHG reductions achieved by clean fuel standards and improved technologies to increase fuel efficiency in vehicles. It should also be emphasized that the 2035 MTP/SCS does not go out to the year 2050. As more direction from the State is developed and the next series of MTP/SCS plans are put together with timelines extending beyond 2035 AMBAG will examine additional ways to achieve greater reductions in GHGs in the future.	Public Hearing	3/4/2014

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						The 2035 MTP/SCS included a multi-year forecasting effort that included numerous meetings with local agencies to best predict the growth this region will see in population, jobs and housing. That forecast has been used in the regional travel demand model to project the travel patterns in the region. In this regard population increases have been taken into account. In order to see greater reductions in VMT and subsequently GHGs, AMBAG would have to make assumptions about increased mode shares for non-automobile transportation and land use distribution that are not consistent with the transportation network contained in the MTP and local jurisdictions' general plans. AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be prioritized others feel that we need to invest in maintaining and operating our current network of highways and roads. The tri-county area is investing more than in the past in Active Transportation (bicycle and pedestrian) facilities in response to heightened interest in this mode of transportation. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system including automobiles. Therefore investment continues to be made in highways and roads that will improve both congestion and safety for all users.		
11	Public	Stanger	Peter	Transportation Investments	I would like to see bike lanes and bike projects prioritized by all agencies. Projects like the Salinas overpass cost millions of dollars but then dump bikes onto Salinas Road where they must fight for placement on the traffic lane. The long planned Mar Vista Ped/Bike overpass still isn't built. The SCCRTC just recently planned a separate route for segment 17 of the rail trail that has no facilities for pedestrians or disabled. Now really, what kind of sensible planning is going on here?	AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be given a higher priority, others feel that transportation agencies need to invest in maintaining and operating the current network of highways and roads. Under the proposed MTP/SCS, the tri-county area is investing more than in the past in Active Transportation (bicycle and pedestrian) facilities in response to heightened interest in this mode of transportation. The Mar Vista bike/pedestrian overpass is on the list of projects to be prioritized for funding through 2035. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system. Therefore investment continues to be made in highways and roads that will reduce congestion and increase safety for all users. Regarding Segment 17 of the Monterey Bay Sanctuary Scenic Trail, the RTC recently revised the Master Plan to consider an additional on-road alignment for Segment 17 that will be evaluated along with the alignment along the rail line when funding becomes available. This revision was due to concerns of the farming community that the rail trail in segment 17 will affect the agricultural operations in this area.	Comment Card	3/4/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
12	Public	Ashurst	Brian	Transportation Investments	Thank you very much. This has been a great meeting so far. I signed my name about 20 million times tonight. I refer to page 11 of the report (TAMC 2014 RTP) and letter E, it says US 101/Gloria Road Interchange. I understand from this that there will be improvements made to that particular interchange but I would ask that the improvements do not stop with the interchange because we need the whole of Gloria Road to be upgraded so that it becomes a year round road linking the two ends of the Pinnacles National Park and also providing better access between Hollister and Soledad and South County. I know that money is a problem here so I am suggesting that we perhaps get together and as much influence as we can and try to get some of the money out of the National Parks Service because it's to do with access to the Pinnacles National Park. I think this would give us a tremendous boost to the economy of both San Benito and Monterey Counties. That's my main point. I have two other points. On page 13, letter K, it's says Amtrak Coast Daylight. I think that's a mistake and it should be the Pacific Surfliner and that is a great service. And I'm wondering now that we've agreed to improve Gloria Road, we can use the Soledad station as a place for a shuttle bus to go to Hollister. Thereby we can get more people from Hollister over to the right side of the hills and they could spend money on our side of the hills instead of on their side. So that's another way that we can improve the use of the train. I think it's a great idea but let's make it the fullest use that we can. And finally, I have one more point. This is on page 16, letter B, and it's talking about the Monterey Branch Line Rail, which has been proposed ever since I came to Monterey County 35 years ago and I hope I'll live to see it. It talks about reconstruction of the Salinas River railroad bridge. We are talking about light rail here not heavy rail and so the existing bridge is much too over built for the purpose that we have in mind. So is will probably be too expensive to rebuild that bridge for this particular type of rail service. I'm not an engineer but we already have three bridges over the Salinas River and two of them are the freeway and one is the road that goes between the railroad and the freeway; could we not make use that little bridge, maybe strengthen it so it could carry the track. I'm guessing we'd only have a single track at that point but that would be a much more economical way of bridging the Salinas River.	The need for a new route connecting San Benito County and Monterey County through the Pinnacles National Park has not been identified based on regional traffic projections used to develop the long range Monterey County Regional Transportation Plan. No facility to connect roads that access the park is planned by the National Park Service. The Planned US 101/Gloria Road Interchange is designed to upgrade this facility to current standards and accommodate projected traffic levels at this location. State Route 146 and planned interchanges in Soledad are expected to provide regional vehicle access to the Pinnacles National Park. The planned Coast Daylight Project will extend the Amtrak Pacific Surfliner service from its existing northern terminus at San Luis Obispo to San Francisco, with the new stops planned in King City, Soledad and Salinas. Connections for travelers to Hollister can be made by other services; a need for shuttle or bus service between Soledad and Hollister has not been identified by the Transportation Agency for Monterey County in its long range plans. Finally, analysis of alternatives for constructing improvements on the Monterey Branch Line for future light rail service concluded that rehabilitation and seismic retrofitting of the of the existing Salinas River Railroad Bridge would be the least expensive means of providing a Salinas River rail crossing. The Transportation Agency for Monterey County's alternatives analysis for the project concluded that constructing a new alignment over the River would be more costly. The Agency will continue to consider Salinas River crossings for the Monterey Branch Line as the project is further developed.	Public Hearing	3/5/2014
13	Public	Martinez de Jesus	Antonio	Transportation Investments	First thing first, we would like to have headphones for simultaneous translation/interpretation because there's three languages here. I understand that this is going to be a project to improve the highway system to make the highways more efficient and better but something's that needs to be addressed is the bus system and to have a bus that runs more frequently like every 15 minutes. This is what I have to say to everybody. Thank you.	The request for headphones and microphones has been noted. AMBAG will investigate the cost of having this equipment at future meetings and consider hiring an interpreter that provides such equipment if its deemed affordable. The 2035 MTP/SCS invests in all modes of transportation including transit. AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that transit infrastructure should be prioritized others feel that we need to invest in maintaining and operating our current network of highways and roads. The tri-county area is investing more than in the past in transit service in Monterey County in response to heightened needs for this mode of transportation. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system including automobiles. Therefore investment continues to be made in highways and roads that will also benefit transit service which uses those same highways and roads.	Public Hearing	3/5/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
14	Public	Alvarez	Mariamo	Transportation Investments	Sorry I haven't been able to hear everything that's been going on/being said. I understand that everybody will not understand what I'm about to say but I hope through the translator that I will be able to share the information that I has. I understand that there will be improvements made within the County but I would like to know what type of improvements will be made to the City of Greenfield. Thank you for coming and your comments are very important. It is very important for the City to know what our needs are and what is it that we would like to see in our community. We would like to know more in terms of transportation for the buses, if there are bus stops that will take us near the hospital in Salinas and would like to know more about the schedules, and the frequencies of the bus routes/stops near those facilities. Thank you. That's the end of my comments and I'd also like to encourage to get up and share their concerns.	Effective April 28, 2014, Monterey-Salinas Transit's (MST) Greenfield OnCall service will have extended hours to 5:30 p.m. weekdays, instead of to only 4 p.m. as it is now. There will also be an additional Line 23 trip in the morning rush hour serving Greenfield. For additional details on future transportation projects, AMBAG encourages the public to review the Transportation Agency for Monterey County's (TAMC's) Regional Transportation Plan (RTP) or contact MST. The projects contained in the project list were developed based on public feedback and include projects in all cities, including Greenfield.	Public Hearing	3/5/2014
15	Public	Lopez	Catalino Martinez	Transportation Investments	Good evening everyone. My comments are directed towards the buses. Sometimes when we pay we understand that we get a transfer back however because we don't understand it's in English it makes it difficult to understand that process. I also know that there will be some projects that take a long time to come to fruition and I would like to know if there is an initiative to make those projects be completed a lot sooner. That concludes my comments and thank you.	Please contact MST for more information on how transfers work throughout the County of Monterey. Information is available in both Spanish and English at 1-888-MST-BUS1 and at http://www.mst.org/. Additionally, the farebox change cards have been modified to print out English and Spanish where possible, for example "Change/Cambio." Much of the region's revenue has restrictions limiting it's use for certain types of projects, such as highway projects or transit projects. Only a small portion of the region's funding is discretionary. Therefore a project is built only when funding becomes available that can be used for that type of project. Initiatives at the state and national level to provide more funding for transit operations and transportation in general are ongoing. One such national initiative is "Transportation for America." More information can be found at http://t4america.org/.	Public Hearing	3/5/2014
16	Public	Vasquez	Juan Martinez	Transportation Investments	Good evening everyone and since we have here three languages being spoken, English, Spanish, and Triqui, my comments will be related to that subject. Again my comments are directed to the buses and transit. Here in Greenfield we need more buses to provide transportation to Salinas or to the hospital. So again, more transportation and more bus service here in Greenfield. Improvements to the roads need to be made also there are some areas where there are no lights and it's very dark and also police services. There seems to be not sufficient police services in our community. Thank you. Those are my comments and thank you for coming and since there are three languages spoken it's a challenge but thank you.	The new Line 23 trip in the morning (beginning April 28, 2014) will end at Natividad Hospital after making all of its regular stops along its route, including those in Greenfield. In the afternoon, a bus will leave Natividad Hospital at 4:20 pm making a stop in Salinas as well as Chualar, Gonzales, Soledad, Greenfield and King City on an "Express" routing to get people home quicker. For additional project specific details, AMBAG encourages the public to review the Transportation Agency for Monterey County's (TAMC's) Regional Transportation Plan (RTP). The projects contained in the project list were developed based on public feedback and include projects in all cities, including Greenfield. The 2035 MTP/SCS and the TAMC RTP show increased investment and commitment to transit.	Public Hearing	3/5/2014
17	Public	Horton Ramirez	Marty	Transportation Investments	For those of us that can't walk a great distance, extended hours on the local city bus that takes you to the 23 that takes you out of town would be really helpful. Later evening hours so once you take the 23 back home you can catch the local bus home and weekend hours would be really helpful.	The 2035 MTP/SCS and the TAMC RTP show increased investment and commitment to transit in South County, however the specific alignment of the transit routes and transit stops has not been finalized yet. Additionally, Greenfield OnCall is being extended to 5:30 p.m. effective April 28, 2014. AMBAG encourages the public to provide comments to Monterey-Salinas Transit (MST) as MST will ultimately determine the alignment of the transit routes and location of stops for transit service.	Public Hearing	3/5/2014
18	California Rural Legal Assistance	Pantoja	Jeanette	Transportation Investments	I was just wondering if you were going to respond to some of the questions/comments and I'm curious about the phasing of the implementation of the projects because there's some really good ideas out there including one that a lot of people here are excited about...increase service on Line 23. So how is the agency planning to phase in those sort of projects? What can we see sooner, rather than later? And it might be helpful to add how community members can be involved in the prioritization of those projects and how can I look at the list of projects to see if something really excites me and communicate back to TAMC or to AMBAG that I really want to see that build now rather than later.	Response to questions and comments are being provided in written form as noted here. Effective April 28, 2014 an additional morning rush hour trip was added to Line 23. Generally speaking projects are implemented as funding becomes available. While the 2035 MTP/SCS has over $7.5 billion dollars projected revenue for the region, this revenue will come incrementally. Much of the region's revenue has restrictions limiting it's use for certain types of projects, such as highway projects or transit projects. Only a small portion of the region's funding is discretionary. Therefore a project is built only when funding becomes available that can be used for that type of project.	Public Hearing	3/5/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
19	Public	Miquel	Luis	Transportation Investments	I am a 5th grader at El Camino Real Academy School in Greenfield. I have a simple request to be able to cross the street with enough time at the light or have someone out there to help him so he can get across the street.	Some schools are able to provide crossing guards with volunteer labor. If there is an interested parent who can provide this service that would be the most cost effective and quick way of addressing the problem in the short term. For a more permanent solution AMBAG suggests contacting the City so that they can adjust the timing in their light system software to allow for more time to cross the street.	Public Hearing	3/5/2014
20	Public	Meriuo	Eloyna	Transportation Investments	My comment is directed to the bus driver. We put the money in the money box and the bus drivers sometimes doesn't wait for folks to sit down and they feel they're being rushed especially when they have children and its very dangerous. I am a very avid user of the bus system and this is what I see time and time again and especially when moms get on the bus and they have their children and the children are sometimes prone to falling and so again this is really dangerous. There's also several of the women who speak Triqui and Mixteco who have actually had reunions/gatherings to talk about this very important issue and concern but there's no where they can actually take their comments. Once again thank you and those are my comments.	These comments have been provided to MST so that they can improve their customer user experience. MST posted a memo to drivers regarding this safety issue and the safety and training manager has been counseling drivers on this issue.	Public Hearing	3/5/2014
21	Public			Transportation Investments	Is it possible to have a bus from Salinas to San Jose because many people leave the County and/or other methods of transportation to extend upon existing bus systems (vans, shuttles).	Effective April 26, 2014 MST inaugurated Line 81 Fort Hunter Liggett San Jose Express with service from select cities in the Salinas Valley to San Jose Airport, downtown San Jose and the Diridon Train Station/Greyhound Bus station. Additionally, the 2035 MTP/SCS includes the extension of rail service from San Jose to Salinas so that people can connect to the San Francisco Bay Area and even to Sacramento.	Comment Card	3/5/2014
22	Public			Transportation Investments	Kids need bikes to get to school.	The Regional Transportation Planning Agencies (RTPAs) in the tri-county area implement a Safe-Routes-to-School program to help fund alternative modes of getting children to school safely. However, the region is limited in how it can use it funding for capital purchases and would not be able to actually purchase bicycles for children through this program. AMBAG encourages youth and their parents to work with their school districts on potential fund raising efforts for purchase of bicycles.	Comment Card	3/5/2014
23	Public			Transportation Investments	Need long time to cross the street at the light. Need a crossing guard at the school.	Some schools are able to provide crossing guards with volunteer labor. If there is an interested parent who can provide this service that would be the most cost effective and quick way of addressing the problem in the short term. For a more permanent solution AMBAG suggests contacting the City so that they can adjust the timing in their light system software to allow for more time to cross the street.	Comment Card	3/5/2014
24	Public			Transportation Investments	Need street markings, road repairs (pavement), more and/or stronger street lights in the City of Greenfield and near schools.	For project specific details AMBAG encourages the public to review the Transportation Agency for Monterey County's (TAMC's) Regional Transportation Plan (RTP). The projects contained in the project list were developed based on public feedback and include projects in all cities, including Greenfield.	Comment Card	3/5/2014
25	Public			Transportation Investments	More accessibility. More frequent (15 mins) buses now. Need more lanes on the freeway between Soledad and Gonzales and between Salinas and Gonzales. Need more transportation options (transit, bus, train, vanpool) to go south from King City to San Lucas and San Ardo for work.	The projects contained in the 2035 MTP/SCS were developed based on public feedback. The 2035 MTP/SCS and the TAMC RTP show increased investment and commitment to transit, however because transit is not a profitable service it must run on cost-efficient routes. Operating a bus is very expensive and so transit agencies such as MST must seek out cost-effective means of serving the most people with the lowest amount of cost. The more dispersed a population is, the more costly and less feasible it is to serve the area with a bus. However, the 2035 MTP/SCS commits to filling this gap with continued investment in vanpool service. For more information on vanpools, call Calvans at (866) 655-5444 or visit their website at http://www.calvans.org/.	Comment Card	3/5/2014
26	Public			Transportation Investments	Re: Gloria Road. Because this is tied to access to both side of the Pinnacles, can AMBAG and other cities and agencies put pressure on the National Parks Service to help fund improvements to Gloria Road so that it opens up the area to more tourism. Gloria Road should be a paved, open road accessible all year - will be a big economic boost to our area and benefit both Monterey and SB counties.	The Park Roads and Parkway Programs (PRP) program is the primary funding source provided by the Federal Highway Trust Fund for the road network serving the National Park System. PRP program funds are distributed on a regional basis, using program and project priorities determined by the National Park Service (NPS). AMBAG, SBtCOG, and TAMC will work with local cities and counties to determine the feasibility of attracting interest from NPS on prioritizing better access to Pinnacles National Park. An implementation strategy has been added to the Sustainable Communities Strategy addressing this issue.	Comment Card	3/5/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
27	Public			Transportation Investments	Increase daily hours of bus within in the City of Greenfield. Also increase City of Greenfield door to door bus service to 7 days a week. Weekend service would be very helpful and the ability to take the Greenfield bus to get to the InterCity (23) buses and back home would be great.	The projects contained in the 2035 MTP/SCS were developed based on public feedback. The 2035 MTP/SCS and the TAMC RTP show increased investment and commitment to transit, however because transit is not a profitable service it must run on cost-efficient routes. Operating a bus is very expensive and so transit agencies such as MST must seek out cost-effective means of serving the most people with the lowest amount of cost. It is not feasible for the transit agency to run door to door service 7 days a week to all members of the public who wish to take transit. However, AMBAG and MST are aware of the need for bridging the gap between where transit routes run and people's trip origins and destinations. This predicament, often referred to as "the first/last mile", can be resolved by providing better access to transit via pedestrian and bicycle facilities. In the 2035 MTP/SCS there is increased investment in these types of facilities with the idea that people may be able to have healthier transportation options to access destination points, including transit stops. Additionally the Sustainable Communities Strategy now includes an implementation strategy that commits to providing solutions for bridging this gap.	Comment Card	3/5/2014
28	Public			Transportation Investments	1993 build electric car. Worked with engineers at HP and electric auto association. Get people out of cars more important. I think that the bicycle lane avenue/allocations/safety is far too small. We could get more people out of their cars and using bicycles if the routes, access, and safety for bicycles was given a higher priority and funding.	AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be given a higher priority, others feel that transportation agencies need to invest in maintaining and operating the current network of highways and roads. Under the proposed MTP/SCS, the tri-county area is investing more than in the past in Active Transportation (bicycle and pedestrian) facilities in response to heightened interest in this mode of transportation. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system. Therefore investment continues to be made in highways and roads that will reduce congestion and increase safety for all users.	Comment Card	3/6/2014
29	Public			Transportation Investments/ Sustainable Communities Strategy	Please fully or nearly fully fund the rail trail. It is absurd that such a large (2/3 of the money) proportion of the money is allocated for highways when clearly this only increases our GHG when we also very clearly need to reduce these emission 80% by 2050. What is the plan doing only projecting a 5% reduction when we are needed much more aggressive action?	California Senate Bill 375, enacted in 2008, promotes efforts to reduce regional greenhouse gas emissions from passenger vehicles and light duty trucks through changes in land use and transportation development patterns. To achieve these changes, the law encourages Metropolitan Planning Organizations (MPOs) like AMBAG to think differently about how communities are designed. As a result, MPOs, in partnership other regional agencies and local governments are now required to develop a Sustainable Communities Strategy (SCS) as part of the transportation planning process for inclusion in their plan. The SCS should demonstrate the land use and transportation measures that will be used to meet the region's greenhouse gas emission reduction target established by the State Air Resources Board, that is to reduce greenhouse gas emissions by 5% per capita by 2035 from the use of automobiles. At the same time, Executive Order S-3-05 signed by Governor Schwarzenegger includes a target of reducing greenhouse gas emissions (GHG) from all sectors, not just transportation, by 80% by 2050. While transportation represents a significant portion of overall GHG emissions in California, the transportation sector alone will not meet the Governor's Order. There are many other activities being undertaken by the State of California to meet this goal. Additionally, the greenhouse gas emission target set by the California Air Resources Board for the Monterey Bay Area does not include GHG reductions achieved by clean fuel standards and improved technologies to increase fuel efficiency in vehicles. It should also be emphasized that the 2035 MTP/SCS does not go out to the year 2050. As more direction from the State is developed and the next series of MTP/SCS plans are put together with timelines extending beyond 2035 AMBAG will examine additional ways to achieve greater reductions in GHGs in the future.	Comment Card	3/6/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
						AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be prioritized others feel that we need to invest in maintaining and operating our current network of highways and roads. The tri-county area is investing more than in the past in Active Transportation (bicycle and pedestrian) facilities in response to heightened interest in this mode of transportation. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system including automobiles. Therefore investment continues to be made in highways and roads that will improve both congestion and safety for all users.		
30	Public			Sustainable Communities Strategy	While I understand there are business and economic development needs for our community and I appreciate many aspects of the plan including public transportation, given that transportation causes 40% of our GHG emissions, it seems prudent to be much more aggressive in our transportation goals with respect to GHG reduction.	California Senate Bill 375, enacted in 2008, promotes efforts to reduce regional greenhouse gas emissions from passenger vehicles and light duty trucks through changes in land use and transportation development patterns. To achieve these changes, the law encourages Metropolitan Planning Organizations (MPOs) like AMBAG to think differently about how communities are designed. As a result, MPOs, in partnership other regional agencies and local governments are now required to develop a Sustainable Communities Strategy (SCS) as part of the transportation planning process for inclusion in their plan. The SCS should demonstrate the land use and transportation measures that will be used to meet the region's greenhouse gas emission reduction target established by the State Air Resources Board, that is to reduce greenhouse gas emissions by 5% per capita by 2035 from the use of automobiles. At the same time, Executive Order S-3-05 signed by Governor Schwarzenegger includes a target of reducing greenhouse gas emissions (GHG) from all sectors, not just transportation, by 80% by 2050. While transportation represents a significant portion of overall GHG emissions in California, the transportation sector alone will not meet the Governor's Order. There are many other activities being undertaken by the State of California to meet this goal. Additionally, the greenhouse gas emission target set by the California Air Resources Board for the Monterey Bay Area does not include GHG reductions achieved by clean fuel standards and improved technologies to increase fuel efficiency in vehicles. It should also be emphasized that the 2035 MTP/SCS does not go out to the year 2050. As more direction from the State is developed and the next series of MTP/SCS plans are put together with timelines extending beyond 2035 AMBAG will examine additional ways to achieve greater reductions in GHGs in the future. AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be prioritized others feel that we need to invest in maintaining and operating our current network of highways and roads. The tri-county area is investing more than in the past in Active Transportation (bicycle and pedestrian) facilities in response to heightened interest in this mode of transportation. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system including automobiles. Therefore investment continues to be made in highways and roads that will improve both congestion and safety for all users.	Comment Card	3/6/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
31	Public			Transportation Investments/ Sustainable Communities Strategy	I love the goals & aspirations, but how realistic are they in our car/vehicle oriented world. Infill housing, being able to live in the community one works in is a crucial aspect. Safety is a huge too. Any way to improve bike/ped safety is critical. Today as I biked in Santa Cruz and mid-County, I personally had too many near misses, even following the rules of the road and in the bike lane, cars and trucks crossed over the bike lane. Scary and too many in a hurry distracted drivers cut me off twice on the way to this meeting. Alternative transit (bus, train) improvements are a must. Why is this taking so long to connect/interconnect all systems. As we age the transit system allows more accessibility for all, young ones too. Any attempt sooner than later will be appreciated. So looking forward to the rail trail. More funding to get the rail trail completed. Move money from highways/streets to ped/bike. It does not need to be a lot but definitely more is needed if we truly want a change.	AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be prioritized others feel that we need to invest in maintaining and operating our current network of highways and roads. The tri-county area is investing more than in the past in Active Transportation (bicycle and pedestrian) facilities in response to heightened interest in this mode of transportation. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system including automobiles. Therefore investment continues to be made in highways and roads that will improve both congestion and safety for all users. While improvements to the transportation network may seem slow this is in large part a reflection of the overall lack of funding for transportation. States and regions are seeing less and less funding support for transportation. Generally speaking projects are implemented as funding becomes available. While the 2035 MTP/SCS has over $7.5 billion in projected revenue for the region, this revenue will come to the region incrementally. Also, much of the region's revenues is restricted to certain types of projects, such as highway projects or transit projects. Only a small portion of the region's funding is discretionary. Therefore a project is built only when funding becomes available that can be used for that type of project.	Comment Card	3/6/2014
32	Public	Beckett	Daniel	Sustainable Communities Strategy	Actually, I had a question regarding this Plan. Is there anybody here that can answer it tonight? That's really why I came here. The question I have is in the FAQs in the fourth paragraph, there's a part that says according to state law this Plan needs to identify an area where all the residents of the area can live regardless of income type. I'd like to know what they mean by that. I really need that question answered. It sounds very odd to me why a transportation plan would have something like that in it. Can anybody answer that question for me?	This requirement is referring to the coordination of what were previously two separate state mandates: the Regional Housing Needs Allocation (RHNA) and the Metropolitan Transportation Plan (MTP). Before Senate Bill (SB) 375 was enacted, the basic premise of State Housing Law pertaining to RHNA was that each city in a region would be expected to absorb its “fair share” of the region’s projected housing need at all income levels. The share of each city's housing units was determined by a regional entity called the Council of Governments (COG) based on a regional allocation determined by the California Department of Housing and Community Development. In the Monterey Bay Area AMBAG is the COG for Monterey and Santa Cruz Counties and the San Benito County Council of Governments is the COG for San Benito County. Each city would undertake a planning process to ensure that it could accommodate its assigned number of units. The principal goal of the RHNA was to ensure that each region accounted for its total housing need, as determined by the State, at different income levels such that no single region or city would accommodate only higher priced homes and thereby exclude low income or moderate income households. With the passage of SB 375 in 2008, state law was modified to coordinate the RHNA process with the planning process for the MTP. The reason for coordination of these planning processes was to better integrate land use planning with transportation planning. Now, when a region plans for its transportation infrastructure it must consider where people are going to live and work. The intent of integrating land use and transportation planning is ensure that people are able to gain access to basic needs and services from where they live and work.	Public Hearing	3/6/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
33	Public	Tanner	Bruce	Public Participation/ Sustainable Communities Strategy	Good evening. My name is Bruce Tanner. I live in Santa Cruz. I just briefly want to say that this whole Plan to me seems like we're being treated like mushrooms. That it's kept in the dark and fed BS. Look at the turnout here. The last meeting we had here, the room was filled and there were a lot of people who were well informed who came to speak to what's going on and they're not here tonight and have to speculate that's because however the notice was provided for this meeting it didn't get to them and it didn't get to very many people and I have the distinct feeling that there's a huge amount of the public in Santa Cruz and Santa Cruz County who have no idea what's going on with this transportation plan and they certainly have no idea about how this is designed to impact everybody's lives. The design for this in my opinion is being hidden behind the scenes and it comes directly from United Nations Agenda 21. This is a plan for completely remaking the nature of the society we live in. From a society based on freedoms that are unalienable as set out in the Declaration of Independence to one in which our rights are constrained in the interest of the greater good and the entire society is remade to be equitable for is going to be a peasant class living under surveillance with limited resources and limited means. In my opinion, in this transportation plan is integral to taking us in that direction and I just hope that people wake up to what's going on this.	The draft MTP / SCS was prepared in direct response to the laws and guidelines adopted by the State of California and the Federal Government pertaining to the preparation of long-range transportation plans. AMBAG and its member agencies are required to prepare such a plan, and update it periodically, in order for the region to qualify for federal and state funding for all types of transportation projects.	Public Hearing	3/6/2014
34	Public	Searle	Reed	Transportation Investments	I think this is an excellent plan. I know they've done an immense amount of work on it and by and large it's superb. I congratulate them on their work. There's one thing that I would like to see inserted in the Plan and that is some reference to automated public transport or PRT or you can call it pod cars. The requirements of 375 and the other legislation is to reduce the amount of traffic on the roads and that means that we have to reduce the greenhouse gases, etc. and this Plan does seem to throw a lot of reliance on continued use of the roads. I know there are efforts to have alternate transportation, bicycles, etc. That's not going to get many cars off the road. What would really get cars off the road is something like an ATN network and it would seem to me appropriate for and I know this is still in development in many areas but there are successful programs going. It seems to me that it would be appropriate for, I guess it would be in the Plan. I'm not sure. To at least contain some reference to the possibility of installing an ATN network or something similar to that where it is appropriate.	AMBAG welcomes new ideas for transport and will continue to follow the progression of ATN networks and other transportation technologies. AMBAG has included a section in the draft MTP / SCS on future transportation technologies (See Chapter 2, Section “Emerging Technologies”) and will update this section during the next update of the Plan. Therefore, we look forward to seeing the progression of the technology you have referenced in your testimony, and will report on it as appropriate in future plans.	Public Hearing	3/6/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
35	Public	Nelson	Jack	Sustainable Communities Strategy	I'm not sure if I'm speaking to the audience or you all. But I came to this meeting to make some comments on the Plan. I don't believe anybody is conspiring to take over the world with this Plan. I think it's designed for the transportation future of the three counties that it speaks to. As someone educated in science and having a background in studying climate science, I am very interested in the future of our climate and natural systems that allow us to eat and to live and to live next to sea level. So I'm very interested in greenhouse gas emissions and how that plays out in this Plan. Looking at Chapter 4 of the Plan that addresses greenhouse gas emissions. I think I'm looking at the EIR for it. The analysis of the Plan on greenhouse gases is that implementation of the Plan would have less than significant impacts on greenhouse gas emissions and that less than significant is kinda a technical term from the California Environmental Quality Act so I understand how that works. There may be some rationale for that but my observations are when AMBAG adopted a greenhouse gas emissions reduction target of 5% by 2035, my comment is that was not science based. That's not enough to prevent climate change by any stretch and so I would not want to hear self congratulatory comments that we're exceed that if it's 5.6%. So though even thought this Plan is identified by having a less than significant impact on greenhouse gas emissions, I'm not really seeing here a vehicle if you will for getting us where we need to be on greenhouse gas emissions. My own vision for that really starts with getting out of cars, not burning fossil fuels to get around, using people power, body power for bicycling and walking. Perhaps computer power to commute electronically and living near where you work so you don't have a long commute. Maybe I can refine those thoughts a little further in writing and submit them by the April 8th deadline for written comments. Thanks very much.	California Senate Bill 375, enacted in 2008, promotes efforts to reduce regional greenhouse gas emissions from passenger vehicles and light duty trucks through changes in land use and transportation development patterns. To achieve these changes, the law encourages Metropolitan Planning Organizations (MPOs) like AMBAG to think differently about how communities are designed. As a result, MPOs, in partnership other regional agencies and local governments are now required to develop a Sustainable Communities Strategy (SCS) as part of the transportation planning process for inclusion in their plan. The SCS should demonstrate the land use and transportation measures that will be used to meet the region's greenhouse gas emission reduction target established by the State Air Resources Board, that is to reduce greenhouse gas emissions by 5% per capita by 2035 from the use of automobiles. At the same time, Executive Order S-3-05 signed by Governor Schwarzenegger includes a target of reducing greenhouse gas emissions (GHG) from all sectors, not just transportation, by 80% by 2050. While transportation represents a significant portion of overall GHG emissions in California, the transportation sector alone will not meet the Governor's Order. There are many other activities being undertaken by the State of California to meet this goal. Additionally, the greenhouse gas emission target set by the California Air Resources Board for the Monterey Bay Area does not include GHG reductions achieved by clean fuel standards and improved technologies to increase fuel efficiency in vehicles. It should also be emphasized that the 2035 MTP/SCS does not go out to the year 2050. As more direction from the State is developed and the next series of MTP/SCS plans are put together with timelines extending beyond 2035 AMBAG will examine additional ways to achieve greater reductions in GHGs in the future. AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be prioritized others feel that we need to invest in maintaining and operating our current network of highways and roads. The tri-county area is investing more than in the past in Active Transportation (bicycle and pedestrian) facilities in response to heightened interest in this mode of transportation. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system including automobiles. Therefore investment continues to be made in highways and roads that will improve both congestion and safety for all users.	Public Hearing	3/6/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
36	Public	Porter	Ed	Sustainable Communities Strategy	Good evening everybody. My name is Ed Porter. I can't count on my fingers all the transportation meetings I've come to since about 1988 or something like that and this is not the first time we've had this conversation. It's not the first time we've had consultants come in and tell us what it was that we were thinking. I don't mean that insulting. I just mean that we're asking you to sum up everything we say and then you're going to tell it what it was that we said. That's how it works. And we've done the exercise many times. I'll just recall one of the most immediate ones that many of us remember called the TFTF (Transportation Task Force). Fred Keely spearheaded that effort. There were probably 100-120 regulars who came to a meeting a month for at least a couple years maybe longer. I can see a few faces who were at those meetings. It did sort of sort out into dividing that group into several factions, maybe 2 or 3 factions and there were big things that those factions wanted. I don't see any evidence why wouldn't a plan like this in the year 2014 look back to the most recent effort and say well they wanted all these things so let's pick up where we left off. That doesn't seem to happen. I'm not thrilled about that. The word sustainable, I want to thank Ron Swenson for telling me that the word sustainable is in the Plan 37 times. I looked, browsed through my reader to see what it was that sustainable meant and couldn't find that. For me, what needs to be in this Plan is what sustainable means to my city or to my County Board of Supervisors. What does that really mean and might it mean a little less consumption of fuel. That'd be nice. Or might it mean a little less greenhouse gases? Or might it mean that there's an economic factor. Are we planning on the cost of fuel being the same in the year 2035 that it is now when in fact that the supply is declining? I think that's a problem that we should address. So to me just scattering the word sustainable throughout the Plan just kinda makes it trendy but I didn't see how it was actually applied. I didn't see how this Plan is sustainable. Frankly it looks like business as usual to me and it looks like still rolling the buses down the roads and still rolling the cars down the roads. Other communities in this country are taking a serious look at automated transportation networks with solar power and other kinds of sustainable power and I would like to see that the references to use of energy in this Plan are very clear and give guidance to our City about how to implement our plan for addressing climate change. I think that would be really nice.	The Transportation Task Force that was held in 2006-2007 by the Santa Cruz County Regional Transportation Commission, made it clear that there is a diverse range of transportation needs and interests in the region. While some members of the community feel that bicycle infrastructure should be prioritized others feel that more frequent transit service should be the highest priority, and still others state the need to invest in maintaining and operating our current network of highways and roads. Transportation investments in the 2035 MTP represents this mix of interests that were ascertained through the TFTF. It is important to note that the projects in the plan represent those that might proceed with the federal, state and local funds specifically identified in Appendix D. New transportation technologies that may need time to develop and mature, such as Personal Rapid Transit, are considered higher risk and are generally not eligible for those funding sources and would have a challenging time competing for new local funding. 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 our 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 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. Additionally, the 2035 MTP/SCS supports job creation through economic development, ensures our region’s economic competitiveness through strategic investments in freight, and improves environmental outcomes for our region’s residents by 2035.	Public Hearing	3/6/2014
37	Public	Lewis	Drew	Transportation Investments	Good evening. My name is Drew Lewis and I live in Santa Cruz. Back in 1993, I joined the electric auto association and I build an electric car and I worked with engineers at Hewlett Packard and in the process I was talking with some of the engineers and they said well electric cars are really kind of interesting concept but what we really need to do is get people out of their cars and get on to more efficient transportation like they had in Los Angeles in the 1950s. They had the Red Car Line which was really one of the most efficient, cleanest forms of transportation. People could go from their home to work and read a book. It was actually a far superior form of transportation than what happened later when the automobile manufacturers and the oil companies conspired to buy up the controlling interest in the Red Car Line and destroy the Red Cars and replace them with dirty diesel polluting buses. But that's another story. What I wanted to speak about tonight is that I think bicycle lanes are really essential. The allocations that are spelled out that I saw in this presentation are really woefully inadequate. I think that we really need to increase allocations. Safety is the main factor to get people out of their cars and using the alternative routes to using bicycles. I think that has to be a much higher priority than what's given in the presentation I've seen here. If you go to other counties like in Switzerland or France, you see segregated avenues where you have bicycles that can be ridden safely and you see a lot of people with their children on bicycles and that's because they don't have to be worried about being hit by cars. We've had quite a few people in Santa Cruz are killed riding their bicycles so I think that's an important priority that needs to be addressed with this presentation. We really have to put more emphasis on safe access with bicycles. Thank you.	AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be given a higher priority, others feel that transportation agencies need to invest in maintaining and operating the current network of highways and roads. Under the proposed MTP/SCS, the tri-county area is investing more than in the past in Active Transportation (bicycle and pedestrian) facilities in response to heightened interest in this mode of transportation. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system. Therefore investment continues to be made in highways and roads that will reduce congestion and increase safety for all users.	Public Hearing	3/6/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
38	Public	Matejcek	Patricia	Transportation Investments	I'm Patricia Matejcek. I live in Freedom but because I had to miss the local meeting down there the other night because I was otherwise occupied so I drove up here in my car. I'd like to comment on the fact that this is a regional plan and encompassing the three counties that Congressman Farr was supporting the idea. There's a federal program called Historic Landscapes. He recently go an award for his work on the tourism. It's a federal committee. I want to make the point that primary sustaining industries, certainly in the two coastal counties, are tourism and agriculture. Neither of those are going to change. Climate change will bring some impacts to agriculture but the farmers will get more efficient. San Benito County legally has some rights to the Central Valley water project but there's not enough water in the project to fulfill those contracts. All those things will change but tourism is not going to change. Not given the beauty of this area and my concern about this Plan is that is does not in my opinion other than the rail trail really address the phenomenon of people are going to continue to come here. They've come here for a hundred years and we're happy to see them but we really don't want their cars. We don't want to continue to give us so much physical space for their cars to oxidize all day while they're at the beach or while they're hiking at Henry Cowell or now that we have a National Park out in San Benito County I think that AMBAG and the RTC and Salinas built a new multi-million dollar visitor center to pounce off people coming off of Highway 101 that we really need to recognize that aside from people who live here, have homes here, pay taxes here, have children in schools here, run for city council, who coach little league, and are den mothers for Boy Scouts, and who help the Girl Scouts and all the youth activities that really make a community we have great mobs of people as soon as its not snowing, they're here. Our tourism season really starts in February and it basically generally goes through October and how do we tell those people firmly we'd love to see you, leave your car there. Leave it at the margins and we have systems that will move you around efficiently and without all of their hardware.	Tourism is a growing industry and one of the building blocks of the economy in the region. However, we recognize the negative impact so many additional cars can have on our transportation network of highways and roads. AMBAG will continue to work with agencies that have Transportation Demand Management (TDM) programs in the region to provide more alternatives to people who come to the region so that they may consider alternative modes of transport while vacationing in the region. Strategies could include things such as shared parking lot usage for weekend visitors, bicycle rentals, downtown circulators that also serve major hotels and improved advertisement of these services at hotels.	Public Hearing	3/6/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
39	Public	Swenson	Ron	Transportation Investments	Good evening, my name is Ron Swenson and I'm a resident of Santa Cruz and as I look together with all of you at the prospects for our future. As you all know there's a great deal of concern about the continued use of petroleum coming from other countries. We've had 8 presidents in a row that say we must get off of imported oil and so knowing that and knowing the concerns about climate change. We have to I think consider the way that we are able to structure our dialogue about how we're going to go forward. Along with many of you I've been frustrated by the process that we've established for ourselves, which have been established to a considerable degree by people that are outside of this community. For example, Sacramento, Washington D.C., and for that matter Detroit or other places where people are developing transportation solutions and I think we're at an unique point of history where we can claim more of this for ourselves. The reason in particular is because the federal government does not have the funding that they had in the past. So as a consequence of these considerations, I have been working with a group of elected officials and staff people in the City of San Jose, Milpitas, Santa Cruz, Sunnyvale, Santa Clara, and so forth to examine and develop a plan for a transportation system based 100% on solar energy. Mind you in the nighttime, we'll draw from the grid during the daytime will provide a surplus to the grid. It comes out ahead and the way that works is because that transportation system is elevated and in so moving from the street we do one thing that's really interesting, we free the streets again for people. I heard a lot of talk about the bicycle and protecting people on bicycles. The possibility of doing that is not something that you can do with a piece of paint or stripe of paint. That won't cover it. So we need to find a way to liberate our streets from the machine to give it back to the people and my takeaway from my conversations with the folks who are involved with this process here is there are ways that we can do things locally that we can't do in the process that we're locked into here. The process doesn't necessarily hurt us but I think that we can find another way to go forward and work together as a community and so I'm inviting members of the AMBAG organization and the governmental organizations that are here to participate in the ATN. It stands for the Automated Transportation Network. Thank you.	AMBAG welcomes new ideas for transport and will continue to follow the progression of ATN networks and other transportation technologies. AMBAG has included a section in the draft MTP / SCS on future transportation technologies (See Chapter 2, Section "Emerging Technologies") and will update this section during the next update of the Plan. Therefore, we look forward to seeing the progression of the technology you have referenced in your testimony, and will report on it as appropriate in future plans.	Public Hearing	3/6/2014
40	Public	Gaskill	Dondi	Sustainable Communities Strategy	Hello, my name is Dondi Gaskill. I'm from Aptos. This whole plan is based on the premise that we need to prevent climate change. Now if you're honest you have to admit climate change has always been with us, it's always going to be with there. Climate naturally changes. It initially started as climate warming then the true data came out and we realized that we didn't have a global warming situation but we actually have a global cooling situation. Carbon dioxide is not dangerous it's healthy. Plants and trees need it to live. Everybody here is old enough back when we were taught science well in school and we know that that's a fact. We breathe out carbon dioxide and the plants and the trees breathe it in and then they give us oxygen back. So that's natural. What's not natural is the planes that are polluting the skies and sometimes I think they're just trying to change the weather. I don't know. Sometimes I just think they're polluting. There are so many chemicals that they are polluting the sky and it's falling to the earth. Now that's what needs fixing to stop that. The biggest transportation problem that I see is that my taxes are not being used to fix the roads. And now they want to collect more taxes just to do that. All this money spent on this could've been spent to fix the roads. I suggest if you have not already read "Behind the Green Mask" by Rosa Korie, take the time to do it. She exposed how this kind of planning ruined Santa Rosa. It is Agenda 21 so please do not let them do to our community what they did to Santa Rosa.	The draft 2035 MTP/SCS was prepared in direct response to the laws and guidelines adopted by the State of California and the Federal Government pertaining to the preparation of long-range transportation plans. AMBAG and its member agencies are required to prepare such a plan, and update it periodically, in order for the region to qualify for federal and state funding for all types of transportation projects.	Public Hearing	3/6/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
41	Public	Herndon	Katherine	Transportation Investments/ Sustainable Communities Strategy	Good evening, thank you. I was born in 1942 in the San Gabriel Valley which is 20 minutes east of the Civic Center in Los Angeles. In those days it was an absolutely beautiful place all of Los Angeles County, primarily because we didn't have the freeway until I was 10 years old. We had the Red Car and the streetcars. We had passenger rails all over America. My grandmother worked for Southern Pacific and used to take me on train trips. It was just fabulous. In 1952, the first freeway went in right next to my town, West Covina, and that was the beginning of the end of clean air and it was the beginning of the destruction of the land and of course the waterways because everything goes into the water as well as into the air. I want to recommend that you Google this documentary. It was a PBS special. It was made in 1996. The name of it is "Taken For A Ride." Put it in quotes and it should come up. It was made by New Day Films. It's about the destruction of America's railway systems and it shows the effects. Well you can see the effects everywhere. You can call it climate change. I believe there is climate change and it's caused by what man does but I called it smog when I was a kid. And I still see smog. Thank you. I love living in Santa Cruz but I have to admit I came here primarily because I had to get out of the smog. It was just horrible in Los Angeles County and of course I still see it here. It's everywhere. One of the saddest things about this area is the bi-section of this small strip of land between the ocean, the bay, and the mountains by the freeway. It just ruins the whole strip of land and you see that also in Santa Barbara. Places that should just be so beautiful and are, are pretty much ruined by the freeway. So if could bring back streetcars, put in the Rail Trail, put in safe bicycle lanes. We had a strand in Manhattan Beach that was just for bicycles. Thank you.	AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be given a higher priority, others feel that transportation agencies need to invest in maintaining and operating the current network of highways and roads. Under the proposed MTP/SCS, the tri-county area is investing more than in the past in Active Transportation (bicycle and pedestrian) facilities in response to heightened interest in this mode of transportation. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system. Therefore investment continues to be made in highways and roads that will reduce congestion and increase safety for all users.	Public Hearing	3/6/2014
42	Public	Webb	Lowell	Financial Plan	My name is Lowell Webb. I run a small organic farm on San Jose Road. I also sell outdoor power equipment out there. I've heard comments from different directions here and all have some merit but as I see it everything that we're talking about tonight is to tell you, you, and you, and you, and you, what can you do. No freedom. Do what you wish to do yourself but when we get down to the taxes we were talking about a little bit ago. Where do our taxes go? Realistically they actually go to the federal reserve but that's another story. It goes to the federal government, it goes to the state government. It comes back diminished by 90% or more, trickled in a little bit, probably going into what these people are paid by and what this plan is being made for. It's time to quit sending the money there and do our own thing here. Nothing goes there and comes back without heavy strings attached to it. You will do this and you will do that and maybe we'll give you a little money. Do you like the sound of that? That's the realism of what there is. I can go on for quite a while. I will briefly mention the federal reserve. We talked about the government doesn't have any funding. The government's just been allowed to have unlimited funding with the new lack of a top of the borrowing power. I don't recommend that we borrow all that money. That money comes from the federal reserve which is a private organization, not federal. It is given to us and we are told now we owe it and we owe interest for it forever. Your kids, your grandkids, their grandkids are going to be paying for this. This is not right. Let's see what we can do about that. Thank you.	Comment noted.	Public Hearing	3/6/2014
43	Public		Georgia	Sustainable Communities Strategy	My name is Georgia and I just want to tell you that heart is so heavy. As I look around and I see what is happening to our country and to this county. This is a microcosm of what's happening nationally. It is about our freedom. It is about our liberty and how dare any of you decide for us what our future is going to be. This is not what the founding fathers meant for us and I resent it and I will resist it as many of us in this room will because we do not want you planning our future. We want to plan our own future. This is still America the last time I looked.	The draft 2035 MTP/SCS was prepared in direct response to the laws and guidelines adopted by the State of California and the Federal Government pertaining to the preparation of long-range transportation plans. AMBAG and its member agencies are required to prepare such a plan, and update it periodically, in order for the region to qualify for federal and state funding for all types of transportation projects.	Public Hearing	3/6/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
44	Public		Linda	Sustainable Communities Strategy	Everybody had really good comments that came up here and they're all compassionate and they want the clean air and all that. I understand that but you got to understand that there's something real sinister behind this whole thing. It isn't as simple as you're thinking. What they want to do...they want to get everybody out the country, they want to pull people out of the country and they want everybody living in the city in dense housing. They want 30,000 more people in Santa Cruz. You guys are just looking at the clean air part and all that. There's more to this than you'll ever dream of. You got to look at Agenda 21. I don't have internet but it's there. They're whole goal is to get like Russia, communism. They want to put you all in the city, get everybody to move out of the country so you can use public transportation. You can laugh but that's what this is about. Bottom line, this whole thing. They have a sinister agenda. This country's been trying to take over by communists for 50 years. It's been going on forever. They have a plan and they keep doing it subtly, subtly. Yes we all want clean air. Yeah, we like no freeways. We like all that but this is way beyond that. The whole plan. Who are these people? How are they deciding what's going on in Santa Cruz here. How do they have any idea that they can come here and go to every city? Who are these people? Why don't just Santa Cruz people goes on in Santa Cruz? Do you want 30,000 more people living in the City and high rise buildings, that's what they want. That is the bottom line of this plan. 30,000 more people. They want to get them out of the country. They want everybody living in the cities. I don't think anybody here wants that. No we don't like pollution and no cars and all this, who doesn't? But this is freedom man.	The draft 2035 MTP/SCS was prepared in direct response to the laws and guidelines adopted by the State of California and the Federal Government pertaining to the preparation of long-range transportation plans. AMBAG and its member agencies are required to prepare such a plan, and update it periodically, in order for the region to qualify for federal and state funding for all types of transportation projects.	Public Hearing	3/6/2014
45	Public		Bruce	Sustainable Communities Strategy	Addressing the issue of climate change. We all like to have good air quality. But everyone here in America is getting duped. They're getting fooled because China is making a coal power plant, one a week. So it's estimated that just the pollution from China coming over will put us over these air quality limits. So our politicians are very wise people, they said these quality control limits. We will reduce our, get better cars, electricity, but our pollution will be coming from China. Ok, we will sacrifice, pay higher prices for gasoline, we'll pay more for our cars, and we'll pollute less but we will have more pollution. Our pollution will be China's pollution. I don't know what to tell you other than we'll spend all the money and do all this and it'll be worse than ever. But the money we spend. It's funny we have a couple of roads in Santa Cruz County. I guess I could find out the exact locations that haven't been fixed. We have potholes, landslides, and we pay from every gallon of gasoline, an exorbitant amount of money goes to the highway fund. But again we can't get our local roads fixed but we can afford a project like this. I like to only start one project when the other ones are all finished and completed but our government in their supreme wisdom has a lot of ideas and I think they ought to just get back to basics. Fix the roads that we have before they start this project. I'll leave with a joke. You have to pass the law to know what's in the law. So many times, yes we have something good for you, ok, then you get it and then you find out what it is going to be about.	As discussed in Chapter 3 of the Plan, federal revenue including proceeds from federal gasoline tax accounts for less than 15 percent of the funding in this region. More and more transportation projects, including operations and maintenance, have to rely on local revenues. The Plan includes various sources of potential new local revenues, details of which can be found in Appendix B or in the Regional Transportation Plans of our partner agencies. Also included in the Plan is funding to improve our local streets and roads. Including investments in active transportation, which by their very nature are improvements to local streets and roads, this Plan is actually proposing to spend more money on local streets and roads than it is on highways. Also, of the total revenues being allocated in this Plan, over half is going towards maintenance and operations projects rather than new capital projects.	Public Hearing	3/6/2014
46	Public	Barrett	Timothy	Transportation Investments	I guess I would just ask for some help with clarity around some of the issues I heard people here express tonight over maintenance of the track that would come from Marina into Monterey. What are the costs to the local municipalities and what are the projected revenues that the operation of that train would bring in to offset those costs so we can actually think about whether that's something that will be feasible in our economy? The second part of that would be what are the secondary benefits of having that rail to the local economy? Are there benefits to the local municipalities that wouldn't be figured into the direct costs in the maintenance of rail and the charges that would taken in for riders? How do those offset? How do those fit in?	No costs to operate or maintain light rail service on the Monterey Branch Line would be incurred by local jurisdictions. The financial plan developed by the Transportation Agency for Monterey County would fund operational and maintenance costs for light rail service through passenger fares, existing local and state fund sources designated for transit, and possible lease revenues from transit oriented development on parcels owned by the Transportation Agency adjacent to the planned 8th Street station in the City of Marina. The Community Impact Assessment completed by the Transportation Agency for the Draft Environmental Assessment/EIR for the light rail project concludes that the project will have a positive economic impact in the project area through direct and indirect job growth, increased local tax revenue, and monetary savings associated with a reliable and efficient alternative form of transportation in the area served by the project. Light rail transit can generate economic development around stations and residential and commercial development within 1/2 mile of stations are expected to command higher lease rates than development without this transportation access.	Public Hearing	3/10/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
47	Public	Sabo	Bill	Transportation Investments	I'm Bill Sabo and I'm a Monterey County resident. I have a strong interest in airports and aviation and I have a question of AMBAG and AMBAG staff. Why there isn't a greater identification of potential future for aviation in our airports in Monterey County, Santa Cruz County, and San Benito; but primarily Monterey where we have four airports? Why isn't there a little more of a picture of what the future could be. There is investment of $52 million going on at the Monterey Airport right now and it would be certainly beneficial to all the airports to show that the tri-county area is aware that we have airports and that they provide substantial economic benefit to the region, as well as, facilitating lowering gas emissions. Out of Monterey Airport they help 15,000 people a month at the airport that would normally have to travel to San Jose or San Francisco or somewhere else by car. So my question again isn't there greater identification of the future for planning for airports within the tri-county area? A follow-up question...I'm aware that they have master plans going on in Marina and Monterey. I guess because I'm a lay person and don't understand the planning process, you would think that they're master plan would somewhat follow the tri-county planning process to where you want to go or where you think you ought to go, rather than the County's or AMBAG's planning following the airport's developing in a vacuum. That's not a challenge, I'm just trying to get some clear understanding of that. In other words, you guys make the direction with the data and all that and they follow. Or am I incorrect?	AMBAG, along with the Regional Transportation Planning Agencies (RTPAs), coordinate with the local/regional airports in their planning processes. Currently, Monterey Regional Airport and City of Marina are undergoing Airport Master Plan updates. AMBAG serves on the Policy Advisory Committees for both efforts. AMBAG will continue to coordinate with the RTPAs and local/regional airports to include airport related improvements in the regional transportation planning process. Although there is no nexus between the Monterey County Regional Transportation Plan and funding for airports, airports do serve as a component of the regional transportation system. The plan is required to include a discussion of airport plans and growth forecasts to identify regional ground access needs for primary commercial service airports. Airport growth assumptions used by the Transportation Agency for Monterey County for the Draft 2014 Monterey County Regional Transportation conclude that existing airport capacity is sufficient to accommodate future demand and no specific ground access improvements have been identified for the Monterey Regional Airport to date. Regional improvements planned by the Transportation Agency between Salinas, Marina and Monterey are expected to improve regional access to the Monterey Regional Airport, however. Staff from AMBAG and TAMC are participating in the Monterey Regional Airport Master Plan update initiated by the Monterey Regional Airport District in 2014 and will to include assumptions and recommendations from the Master Plan in future updates to the Monterey County Regional Transportation Plan and the Monterey Bay Area Metropolitan Transportation Plan.	Public Hearing	3/10/2014
48	Public	Morton	Gail	Transportation Investments	I did notice in your maps that you have the layout of the multimodal corridor as going along Inter-Garrison Rd based on a MOU from 2010 and I know that TAMC is currently relooking at potentially realigning that multimodal corridor. The assumptions in 2010 & part of the reasons that was placed there was MST was looking at building its bus service area at the Inter-Garrison site which is the Whispering Oaks site in the province of our City and in Monterey County there was a memorandum that successfully defeated that and that will no longer be a hub for the service for the entire fleet of MST buses. So that multimodal corridor respectfully needs to be relooked at. The planning impetus is gone and in the Marina, our city has taken a position and the actual City Council has taken a position that the multimodal corridor has serviced our City much better by bringing the rapid bus/express bus system to come up from the MST and TAMC's land at 8th St bridge up through 2nd Ave and cross on Imjin out to Reservation Rd. The thinking behind that in our city is that would connect with the airport. Our focus in Marina is that the airport developing into an economic and innovation cluster. The seeds are out there and it hasn't happened but we're continuing to look at expanding the length of our runway so we can accommodate other aircraft, commercial aircraft be it freight, passenger or private aircraft, but bigger aircraft. And if the MST bus circumnavigates our airport and doesn't touch us, it's not tangential to it, it kinda defeats that purpose too. If you're creating these networks or clusters and places of employment and if you're coming up 2nd Ave and we're now putting in Marina, we've broken ground for the VA clinic and the DoD clinic. Not only will that be a huge place of employment, it is a place that many people will go for benefits and services. So putting the bus system up 2nd Ave connects the shopping mall, theater, Wellness Ctr. We have MPC, college campus, with low income housing incorporated into Abrams/Preston Park, which is this whole environmental justice concept. Who do you want to make sure you have access? I'm really concerned if this plan is going forward but I want that to be sure that the comments & direction take a look at realigning for the reasons stated about the airport connections. I know every jurisdiction has their own focus. I don't want to tell the County where to put it...if it should be on Alisal Rd or on Davis Rd but I don't want the County to tell Marina it has to be on Inter-Garrison Rd rather than Imjin Rd. But at least that discussion is happening and this plan needs to be cognitive that there are a lot of changes that happen since that green line that was placed on that map.	The Salinas - Marina multimodal corridor alignment is being reviewed by staff from the Transportation Agency for Monterey County (TAMC). The Transportation Agency for Monterey County is in the process of studying alignments for the planned Marina-Salinas Multi-Modal Corridor. The Transportation Agency is consulting with stakeholder jurisdictions, partner agencies and the public to identify a preferred alignment for multi-modal improvements in the corridor. The 2014 Monterey County Regional Transportation Plan and Monterey Bay Area Metropolitan Transportation Plan will be updated to identify the preferred alignment if one is selected prior to adoption of these plans.	Public Hearing	3/10/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
49	Public	Thole	Carol	Public Participation	I don't know where you people get off trying to control the people of this state with your Agenda 21 plans, but I vehemently oppose your disgusting plan. How dare you try to do this! You need to put this information out for all of the counties to review. I will be sure my thousands of students and clients are made aware of this ASAP. Your plan will hopefully go down in flames.	The draft MTP / SCS was prepared in direct response to the laws and guidelines adopted by the State of California and the Federal Government pertaining to the preparation of long-range transportation plans. AMBAG and its member agencies are required to prepare such a plan, and update it periodically, in order for the region to qualify for federal and state funding for all types of transportation projects.	Email	2/19/2014
50	California Rural Legal Assistance	Pantoja	Jeanette	General	This is Jeanette Pantoja with California Rural Legal Assistance in Salinas. Our formal comments will follow in writing by the comment deadline. But I just wanted to take this opportunity to thank the AMBAG staff for working closely with us over the last couple of months on the outreach that they have done and the outreach that our organization has done to ensure that community members, predominately Spanish speaking community members, can understand this process and participate. So thank you.	Thank you, comment noted.	Public Hearing	3/12/2014
51	Public	Krother	Ruth	Transportation Investments	Well thank you all for being here, it's a great day in Marina. Great day to be alive and well. Ruth Krother, nice to see everybody. Now, three questions if I may Mr. Salinas. Now on the serious side, I'm curious, since we already have a bicycle path do we really need to improve it? My husband has a recumbent, as in thank you Watsonville, Free Wheeling Cycles Manufacturing Company, to all the good people from Watsonville, fabulous company. And he rides his bicycle typically 100 miles a week on the rec trail, the bike trail, so my question is what's the problem? He loves it. My second question, we currently have good driving availability, roads, I don't feel there are traffic problems in Monterey County. And third, but not inconsequential, how is expanding Highway 156 not going to impact private land? Viable question, sir.	With regard to the question on bicycle path improvements, AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be given a higher priority, others feel that transportation agencies need to invest in maintaining and operating the current network of highways and roads. With regard to your second question, there are many areas in the County that currently operate with heavy levels of congestion. However, the 2035 MTP/SCS addresses many aspects of transportation, not just those traditionally thought of as relating to traffic. For example the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system. With regard to the last comment, the 2035 MTP/SCS is making no claims about the impacts of specific projects.	Public Hearing	3/12/2014
52	Public	Trainor	Dana	Transportation Investments	My name is Dana Trainor and I noticed that they wanted to put a train in, which I'm all for, but I'm wondering where the funding is going to come from, how they are going to maintain it, what's the revenue going to be, who's going to use it? Because we are upgrading a bike path and changing the freeways, who is going to ride the train? That's my question. And where are we going to have the train station stops at and how frequent are they going to be? (Clarification: Marina light rail)	See comment #46 above for information about the financial plan for light rail service on the Monterey Branch Line. Responsibility for maintaining the Monterey Branch Line will fall to the Transportation Agency for Monterey County as the owner of the right of way. Light rail service on the Branch Line is expected to provide new transportation capacity in the State Route 1 Corridor over the life of the Monterey County Regional Transportation Plan to accommodate growth. Ridership forecasts developed by the Transportation Agency conclude that 85% of the trips made will be by local riders in the corridor. The remaining riders are expected to be interegional/visitor riders. The planned Castroville connection between the Monterey Branch Line light rail service with the planned Amtrak Capitol Corridor rail service extension to Salinas is expected to generate ridership through connections between those services.	Public Hearing	3/12/2014
53	Public	Searle	Reed	Transportation Investments	The draft EIR and the proposed plan emphasize sustainability and describe programs which may improve traffic circulation and possibly reduce SOV travel. There is discussion of alternative transportation methodologies. I suggest that the possibility of off-road public transportation be at least mentioned in the appropriate part of the reports. It is unlikely that there will be much road widening and the forecasts for increased population make it obvious that some off-load alternate transportation be considered. PRT, Podcars, ATN, (Personal Rapid Transit, Podcars, Automated Transit Network) —fully automated, non-stop, point-to-point , off road and elevated technologies now exist and will likely be a dominant form of new public transportation in future years. PRT systems are in operation at various parts of the world, including a 40 year old system at Morgantown, West Virginia. More are planned. I think we will be remiss if we fail to include in the plan some mention the potential that this methodology offers. A PRT line running in the middle of, say, highway 1 or 101 could move far more people far more efficiently than extra freeway lanes at a fraction of the long-term, cost. PRT on the rail-trail corridor would probably be less expensive, more efficient and far less environmentally damaging than a train. Solar energy could largely power a PRT system.	AMBAG welcomes new ideas for transport and will continue to follow the progression of ATN networks and other transportation technologies. AMBAG has included a section in the draft MTP / SCS on future transportation technologies (See Chapter 2, Section "Emerging Technologies") and will update this section during the next update of the Plan. Therefore, we look forward to seeing the progression of the technology you have referenced in your testimony, and will report on it as appropriate in future plans.	Email	3/18/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
54	San Benito County Business Council	Barr	Larry	Sustainable Communities Strategy	In your consideration of population growth, the AMBAG MTP and SCS must be consistent with other plans prepared by local, state and federal agencies and reflective of the dramatic economic recovery being experienced in neighboring regions, especially our immediate neighbor to the north, Santa Clara County. Since June 23, 2009 (nearly 5 years) all analyses of the County General Plan have been based on AMBAG's 2008 population forecast of 94,731 by 2035 based on numerous factors explained below. AMBAG's current growth forecasts of 81,000 population by 2035 for their MTP/SCS are too low and are inconsistent with County Board of Supervisors direction (June 23, 2009 and July 24, 2012) and growth factors available to AMBAG since 2009. For example, AMBAG has given insufficient consideration of the end of the Hollister sewer moratorium, elimination of growth control measures, a substantial uptick in the activity of private investment, current and active general plans in all jurisdictions especially in Hollister and San Benito County encouraging residential, commercial and industrial retention and expansion.	The 2008 Forecast used by the County of San Benito is not grounded in current 2010 Census data, nor does it make use of the most recently available data. In updating the MTP, AMBAG is required to "base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion and economic activity." (2010 California Regional Transportation Plan Guidelines, p. 41: Title 23 CFR Part 450.322(e).) By way of background, AMBAG staff met with staff from the County of San Benito on numerous occasions to discuss the updated forecast which has been in development since 2011. The County indicated they would use the prior 2008 forecast for the County General Plan since the updated forecast was not ready when the General Plan was first prepared. County staff was aware of the fact that the updated growth forecast would be lower for the County of San Benito and the region as a whole given that the 2008 forecast was prepared prior to the recession and the projections have not come to fruition in any of the three counties. In August 2012, AMBAG representatives for the County of San Benito and the City of Hollister voted to approve the updated forecast with these lower numbers. The forecast is high enough to accommodate a nearly doubling of the population within the County and therefore is consistent with Plans for increased growth in the County of San Benito. It should be noted that the forecast will be updated every four years and as such will be revised again after the MTP/SCS is adopted.	Letter	3/19/2014
55	San Benito County Business Council	Barr	Larry	Public Participation	The San Benito County Business Council further asks that you encourage the COG board to release a SBC RTP consistent with these growth projections and direct the RTP ad hoc committee to continue its work with AMBAG, Caltrans and the Federal Department of Transportation's Highway Administration to extend the timeline for consideration of a final EIR and adoption of the MTP and SCS that allows proper engagement with the San Benito County community and agencies and for full consideration of transportation funding. The overly aggressive timelines and current processes have simply not provided adequate time for our undercompensated elected officials and understaffed agencies to review and analyze the sheer volume of information contained in those plans as well as our own regional transportation plan. Finally, as reflected in the low participation rate of San Benito County residents in AMBAG workshops, the public participation plan and process is inadequate and insufficient to reach our diverse and commute-reliant population.	AMBAG continues to coordinate with state and federal agencies. The timeline for this MTP is legally mandated and is used by other regions. In 2009, AMBAG elected to move to a four year cycle for the MTP, as provided by law, to be consistent with SB 375 and the development of the Sustainable Communities Strategy. Despite the timeline, AMBAG has exceeded all public outreach requirements. There have been numerous opportunities for public and elected officials to comment during the development of this Plan. To date, AMBAG has conducted three series of public workshops, each of which included a workshop in Hollister. Staff has held over one hundred one-on-one meetings with local cities and counties planning staff which included discussions about the forecast, the Metropolitan Transportation Plan and local plans. In 2012, the Planning Directors Forum met on a regular basis and provided input on the planning process. The Planning Directors Forum includes representatives from all of the cities and counties in the region. AMBAG has given presentations to the Technical Advisory Committees of the San Benito Council of Governments in addition to its Board of Directors. Online surveys and telephone surveys were conducted in all three of the counties, including more than 300 individuals in San Benito County, in order to capture the audience that is not likely to attend a workshop. All public workshops were held in the evening to accommodate commuter travel. Email blasts, Facebook posts, newspaper ads, flyers, and website postings were used to notify people of events and opportunities to comment on the planning process.	Letter	3/19/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
56	San Benito Council of Governments	Gomez	Victor	General	COG has included important information in its draft RTP which it requests that AMBAG take into account in its development and evaluation of its lvfctropolitan Transportation Plan, including in particular the following: Regional Growth Estimates: In its draft RTP, the San Benito COG Board has adopted population, housing, and employment growth estimates. The County's estimates for Year 2035 are as follows: 94,731 residents, 33,830 dwelling units, and 27,000 jobs. It is essential that AMBAG include these estimates in their final documents. Constrained Transportation Project List: The draft RTP contains a Constrained Project List and an Unconstrained Project List in Appendix C. The Constrained Projects List includes the SR 25 Widening Project and other essential transportation projects. AMBAG documents should include and evaluate all the projects shown on the Constrained Project List. Transportation Funding: The draft RTP includes transportation funding from several sources, including a Traffic Impact Fee program. As the county with the least population and fewest resources in the Central Coast region, San Benito County surives to create a vibrant, healthy, sustainable community. We request the support and assistance of AMBAG to support the transportation planning basis for our future growth. Request for Time Extension: Furthermore, the Council of Governments requests that AMBAG work with Caltrans and FHWA to extend the timcline for consideration of the final EIR and adoption of the MTP and SCS that allows proper engagement with the San Benito County community and agencies for full consideration of transportation funding.	The 2008 Forecast used by the County of San Benito is not grounded in current 2010 Census data, nor does it make use of the most recently available data. In updating the MTP, AMBAG is required to "base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion and economic activity." (2010 California Regional Transportation Plan Guidelines, p. 41: Title 23 CFR Part 450.322(e).) By way of background, AMBAG staff met with staff from the County of San Benito on numerous occasions to discuss the updated forecast which has been in development since 2011. The County indicated they would use the prior 2008 forecast for the County General Plan since the updated forecast was not ready when the General Plan was first prepared. County staff was aware of the fact that the updated growth forecast would be lower for the County of San Benito and the region as a whole given that the 2008 forecast was prepared prior to the recession and the projections have not come to fruition in any of the three counties. In August 2012, AMBAG representatives for the County of San Benito and the City of Hollister voted to approve the updated forecast with these lower numbers. The forecast is high enough to accommodate a nearly doubling of the population within the County and therefore is consistent with Plans for increased growth in the County of San Benito. It should be noted that the forecast will be updated every four years and as such will be revised again after the MTP/SCS is adopted. AMBAG has included the approved constrained project list and revenue sources in the MTP/SCS as developed and submittede by the San Benito Council of Governments. The 2008 Forecast used by the County of San Benito is not grounded in current 2010 Census data, nor does it make use of the most recently available data. In updating the MTP, AMBAG is required to "base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion and economic activity." (2010 California Regional Transportation Plan Guidelines, p. 41: Title 23 CFR Part 450.322(e).) By way of background, AMBAG staff met with staff from the County of San Benito on numerous occasions to discuss the updated forecast which has been in development since 2011. The County indicated they would use the prior 2008 forecast for the County General Plan since the updated forecast was not ready when the General Plan was first prepared. County staff was aware of the fact that the updated growth forecast would be lower for the County of San Benito and the region as a whole given that the 2008 forecast was prepared prior to the recession and the projections have not come to fruition in any of the three counties. In August 2012, AMBAG representatives for the County of San Benito and the City of Hollister voted to approve the updated forecast with these lower numbers. The forecast is high enough to accommodate a nearly doubling of the population within the County and therefore is consistent with Plans for increased growth in the County of San Benito. It should be noted that the forecast will be updated every four years and as such will be revised again after the MTP/SCS is adopted.	Letter	3/21/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
57	San Benito Council of Governments	Gomez	Victor	General	In the past, the Transportation Agency for Monterey County (TAMC), Santa Cruz County Regional Transportation Commission (SCCRTC), and San Benito COG have experienced problems with traffic forecasts produced by earlier versions of AMBAG's RTDM and demographic data sets. In the case of San Benito County, these problems have nearly led to incorrect investment decisions related to the Highway 25 Widening Project, Airline Highway (SR 25) funding, and U.S. 101 widening and interchange improvements. San Benito County's recent efforts to update its general plan have also suffered from reliance on Version 1.5 of AMBAG's RTDM and associated demographic planning variables. Transportation system performance results provided by AMBAG to San Benito COG for its draft Regional Transportation Plan (RTP) projected 60,000 daily vehicle hours of delay on San Benito County roads and highways by 2035. By comparison, MTC projects 409,000 daily vehicle hours of delay in 2040 over the nine Bay Area counties, serving 9.2 million residents. While this may be a computational error by AMBAG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and draft Enviorunental Impact Report (EIR) consultants, the error plays a prominent role insofar as public perception of forecast traffic congestion. Demographic assumptions underlying the RTDM are of greater concern. We are specifically concerned that efforts to reduce vehicle miles of travel, and therefore, greenhouse gas emissions, may have impacted demographic assumptions and the allocation of population, housing and jobs among the three AMBAG counties and individual cities. Foremost among our concerns is the RTDM assumption that resident population per household will increase over time, rather than decrease or remain the same. AMBAG's 2008 Regional Growth Forecast projected decreasing population per household rates, whereas AMBAG's preliminary 2012 forecast assumes increasing household sizes. While a plausible explanation could be related to lingering effects of the "Great Recession," we suspect that the real driver is a staff effort to reduce the number of housing units resulting from population growth, with a commensurate reduction in vehicle trips and vehicle miles traveled (VMT). AMBAG's regional three-county preliminary forecast raises the average population per housing unit from 2.81 in 2005 and 2.80 in 2010 to 2.92 in 2035, a four percent increase. This assumption, by itself, should result in a measurable lowering in VMT per capita, absent any SCS strategy. On the other side of the coin, these assumptions may lead to undersizing future transportation investments.	The 2008 Forecast used by the County of San Benito is not grounded in current 2010 Census data, nor does it make use of the most recently available data. In updating the MTP, AMBAG is required to "base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion and economic activity." (2010 California Regional Transportation Plan Guidelines, p. 41: Title 23 CFR Part 450.322(e).) By way of background, AMBAG staff met with staff from the County of San Benito on numerous occasions to discuss the updated forecast which has been in development since 2011. The County indicated they would use the prior 2008 forecast for the County General Plan since the updated forecast was not ready when the General Plan was first prepared. County staff was aware of the fact that the updated growth forecast would be lower for the County of San Benito and the region as a whole given that the 2008 forecast was prepared prior to the recession and the projections have not come to fruition in any of the three counties. In August 2012, AMBAG representatives for the County of San Benito and the City of Hollister voted to approve the updated forecast with these lower numbers. The forecast is high enough to accommodate a nearly doubling of the population within the County and therefore is consistent with Plans for increased growth in the County of San Benito. It should be noted that the forecast will be updated every four years and as such will be revised again after the MTP/SCS is adopted.	Letter	3/26/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
58	San Benito Council of Governments	Gomez	Victor	General	We recognize that it is time to move forward as partners, and to fix problems rather than question forecasts which cannot be explained or supported. We must move beyond the one-way street where member entities and Caltrans are merely asked to rubber stamp AMBAG's work products without the provision of meaningful input and critique of RTDM output where such critique will benefit both model users and model keepers. Toward this objective, we request that AMBAG provide the complete 2012-2013 AMBAG RTDM to San Benito COG, including all data sets and all demographic files for 2010, 2020 and 2035, the model source code, and statistics for the 2010 base year to enable reproduction of reported results. While the current model may not be ready for "public release," San Benito COG has no confidence in AMBAG's RTDM based on past applications of the model in San Benito County. We are anxious to begin checking the validity of the 2010 base year forecasts and the growth assumed for each traffic analysis zone within San Benito County. We assume that AMBAG will update its population, housing, and employment forecasts for San Benito County consistent with our Board action on March 20, 2014, and will update the RTDM to reflect the constrained list of projects included in the San Benito County RTP. AMBAG's conveyance of its model to San Benito COG will help us help you to position growth correctly and to reflect funded transportation improvements.	The AMBAG model is available for use by its partners pending an executed model user agreement. AMBAG will begin the process to execute a model users agreement with the San Benito Council of Governments. The 2008 Forecast used by the County of San Benito is not grounded in current 2010 Census data, nor does it make use of the most recently available data. In updating the MTP, AMBAG is required to "base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion and economic activity." (2010 California Regional Transportation Plan Guidelines, p. 41: Title 23 CFR Part 450.322(e).) By way of background, AMBAG staff met with staff from the County of San Benito on numerous occasions to discuss the updated forecast which has been in development since 2011. The County indicated they would use the prior 2008 forecast for the County General Plan since the updated forecast was not ready when the General Plan was first prepared. County staff was aware of the fact that the updated growth forecast would be lower for the County of San Benito and the region as a whole given that the 2008 forecast was prepared prior to the recession and the projections have not come to fruition in any of the three counties. In August 2012, AMBAG representatives for the County of San Benito and the City of Hollister voted to approve the updated forecast with these lower numbers. The forecast is high enough to accommodate a nearly doubling of the population within the County and therefore is consistent with Plans for increased growth in the County of San Benito. It should be noted that the forecast will be updated every four years and as such will be revised again after the MTP/SCS is adopted.	Letter	3/26/2014
59	San Benito Council of Governments	Rheinheimer	Lisa	General	The Council of San Benito County Governments requests that the Association of Monterey Bay Area Governments (AMBAG) include San Benito County's population, employment and housing projections for 2035 in the 2012 Regional Growth Forecast and 2014 Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS). The Council of Governments Board of Directors has expressed concern about the AMBAG Growth Forecast on several occasions and this concern has been met with no change to the Forecast for San Benito County. The preliminaty 2012 Regional Growth Forecast developed by AMBAG fails to recognize a rebounding San Benito County economy and a draft San Benito County General Plan which close to completion. The draft San Benito County General Plan EIR update reflects higher population, employment, and housing growth for San Benito County and should be used as a basis for the AMBAG Growth Forecast and subsequent MTP/SCS. Additionally, at its March meeting, the Council of Governments Board adopted a growth forecast consistent with the draft San Benito County General Plan and the recent economic recovery. The Council of Governments requests that AMBAG use the following numbers for San Benito in its Regional Growth Forecast and 2014 Metropolitan Transportation Plan and Sustainable Communities Strategy for year 2035: Population - 94,731, Dwelling units- 33,830, Employment- 27,000.	The 2008 Forecast used by the County of San Benito is not grounded in current 2010 Census data, nor does it make use of the most recently available data. In updating the MTP, AMBAG is required to "base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion and economic activity." (2010 California Regional Transportation Plan Guidelines, p. 41: Title 23 CFR Part 450.322(e).) By way of background, AMBAG staff met with staff from the County of San Benito on numerous occasions to discuss the updated forecast which has been in development since 2011. The County indicated they would use the prior 2008 forecast for the County General Plan since the updated forecast was not ready when the General Plan was first prepared. County staff was aware of the fact that the updated growth forecast would be lower for the County of San Benito and the region as a whole given that the 2008 forecast was prepared prior to the recession and the projections have not come to fruition in any of the three counties. In August 2012, AMBAG representatives for the County of San Benito and the City of Hollister voted to approve the updated forecast with these lower numbers. The forecast is high enough to accommodate a nearly doubling of the population within the County and therefore is consistent with Plans for increased growth in the County of San Benito. It should be noted that the forecast will be updated every four years and as such will be revised again after the MTP/SCS is adopted.	Letter	3/28/2014

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60	Local Agency Formation Commission	Calcagno	Louis	Sustainable Communities Strategy	Senate Bill 375, the legislation directing preparation of a Sustainable Communities Strategy, requires that "In preparing a sustainable communities strategy, the metropolitan planning organization shall consider spheres of influence that have been adopted by the local agency formation commission within its region" [Government Code Section 65080(b)(2)(G)]. The February 2014 Draft SCS (page 4-3) states that "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 a MTP." LAFCO agrees with these listed requirements. However, this list is incomplete as it does not clearly identify cities' adopted spheres of influence as a factor that has been taken into consideration during development of the SCS scenario. The February 2014 Draft SCS appears to make no mention of spheres of influence anywhere in the document. In addition, the document's maps and figures (e.g. Figure 4-10:2035 Land Use Pattern Monterey County) do not show spheres of influence, and give no indication as to whether cities' adopted spheres of influence were taken into consideration when developing the forecasted amounts and types of development. LAFCO therefore reiterates its request, as expressed in our September 2013 comment letter, that the 2014 Final SCS "only include scenarios in which future development takes place wholly within the cities' adopted Spheres of Influence." The document should clearly demonstrate and explain how cities' adopted spheres of influence have been factored into the scenario planning process.	Additional language has been added to Chapter 4 to clarify that the spheres of influence were considered. Growth patterns have been identified in coordination with city and county planners and are consistent with the General Plan for Monterey County.	Letter	3/28/2014
61	Monterey Regional Storm Water Management Program	Harty	Tom	Sustainable Communities Strategy	The Monterey Regional Storm Water Management Program strongly encourages you to consider the inclusion of investment solutions to address recently enacted Post-Construction Stormwater Requirements that came into effect for the Monterey Bay region on March 6, 2014. These requirements are directly aligned with the goals and policies of Moving Forward Monterey Bay 2035, specifically with regard to economic vitality, environment, healthy communities, social equity, and system preservation and safety. The Post-Construction Stormwater Requirements represent an opportunity to complement the mandates of Senate Bill 375 and the Complete Streets Act of 2008 (AB 1358) by integrating green infrastructure into future transportation investments. This integration allows for the mitigation of water and air quality impacts from transportation infrastructure, while also addressing greenhouse gas emissions, the heat island effect, livable community needs, and more.	AMBAG has added an implementation strategy to address post-construction stormwater requirements and looks forward to working with the Monterey Regional Storm Water Management Program staff to help jurisdictions incorporate low impact design and other storm water management strategies into project designs and proposals.	Letter	4/8/2014
62	City of Marina	Long	Layne	Transportation Investments	The recreational trail and open space corridor, also called the Fort Ord Recreation Trail and Greenway (FORTAG), will assist in achieving the objective of SB 375 by reducing greenhouse gas emissions across jurisdictions. The corridor will expand opportunities for pedestrians, cyclists and equestrians as part of Marina's contribution to regional sustainability. The City of Marina requests your consideration to incorporate into the MTP/SCS plan this recreational trail and open space corridor and to consider opportunities for funding this trail corridor.	AMBAG coordinates with the Regional Transportation Planning Agencies in the region to receive project lists. In Monterey County, the Transportation Agency for Monterey County (TAMC) is the Regional Transportation Planning Agency. It is TAMC that is responsible for project prioritization and implementation. The process starts with a city's public works department. Once a public works department has identified a project that is needed, they must propose that project to TAMC, which then evaluates the project based on criteria set in the RTP planning process. Next, TAMC provides a project list including all projects in the County of Monterey to AMBAG. AMBAG will then evaluate that project list combined with the lists from San Benito and Santa Cruz Counties based on the performance measures adopted by the AMBAG Board of Directors. Throughout this process public input is solicited. Finally the Boards of Directors of the respective agencies adopt the project list and AMBAG moves forward with developing the draft MTP/SCS.	Letter	4/8/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
63	California Rural Legal Assistance	Pantoja	Jeanette	Public Participation	However, the public's ability to participate in decision-making processes and to review the MTP/SCS, particularly with regard to hearings and written comments is still stifled by institutional and systemic barriers that limit the participation of traditionally underserved communities such as low-income households, minority populations, persons with disabilities and tribal organizations. Despite staff's efforts, language barriers and access issues continue to be a problem. The Draft MTP/SCS for example was only available in English and only readily available online. Communities that do not speak English or own a computer are systematically disadvantaged in their ability to provide comment. In the spirit of Executive Order 13166, AMBAG must do more to identify and develop services to provide persons with limited English proficiency access to these planning processes. Similarly, when documents and materials are translated, efforts should be made to make those documents more accessible and digestible so that persons with limited education levels understand the content and are not mired by technical terms or the size of the document. Additionally, as has been articulated numerous times, hosting hearings (or TAMC Board Meetings) at the Salinas Agricultural Center on Abbott does not provide the public with a meaningful opportunity to participate. Located in an industrial area, that venue is not accessible by transit and is isolated and too far for pedestrians and cyclists. Venues such as the Cesar Chavez Library, located amidst a residential neighborhood, have rooms that can accommodate up to 100-120 people.	AMBAG staff has made available a Spanish version of the public outreach materials including the online MetroQuest surveys. The online MetroQuest surveys are intended to be much more user friendly and provide a condensed version of the information contained in the 2035 MTP/SCS. Additionally, interpretation services have been provided at many of the meetings so that staff can communicate with Spanish speaking participants. AMBAG realizes that online materials are not readily accessible to all members of the community and will continue to work with its community partners to expand its outreach efforts to Spanish speaking communities. While all of the public outreach materials have been translated into Spanish, it is not financially feasible for AMBAG to translate the entire 2035 MTP/SCS and DEIR. The outreach materials were developed with the intent of providing digestible summaries of a highly technical Plan and planning process. AMBAG will continue to work on providing materials that do a better job of describing the planning process, legal requirements and goals of the Plan. The preference for a more centralized accessible meeting location in Salinas has been noted and AMBAG staff has obtained the necessary information to book the community room at the Cesar Chavez Library for future meetings.	Letter	4/8/2014
64	California Rural Legal Assistance	Pantoja	Jeanette	Sustainable Communities Strategy	The economic development section proposes a strategy to create a Task Force on the economic development and transportation needs of rural areas. While we fully support the creation of a taskforce to understand and address the needs of rural areas, the topic areas to be explored by the taskforce appear have a narrow understanding of economic development and do not seem to incorporate the needs of low-income and working class communities in rural areas, including farmworkers. Even in their generic language, the areas of focus appear to be very ag-centric or industry focused. The topic areas to be explored should better reflect the needs of all communities in rural areas and employ a far more holistic understanding of what economic development entails.	The scope of the Rural Task Force is a suggested outline of topics to explore. Once the Task Force is convened there will be a facilitated dialogue about the role, responsibilities, and scope of the Task Force, at which point the topic areas can be better defined. The implementation strategy has been revised to be more flexible with regard to the scope of the Task Force.	Letter	4/8/2014
65	California Rural Legal Assistance	Pantoja	Jeanette	Sustainable Communities Strategy	In the context of rural, low-income communities, "Economic Opportunities" includes access to workforce development, educational resources, and healthcare services, not just new ways of growing revenue. Many of the residents CRLA engaged through the MTP/SCS planning process advocated for expanded public transit, specifically MST's Line 23, to access the sort of economic opportunities cited above. The economic development implementation strategies will also be more consistent if this expanded view of economic opportunity is integrated into the Task Force. For example, implementation of the strategy to, "[r]esearch ways to encourage vocational training facilities to educate the existing workforce as well as leverage existing educational institutions to attract more middle income jobs," would be more successful if integrated into the Task Force's mandate.	The scope of the Rural Task Force is a suggested outline of topics to explore. Once the Task Force is convened there will be a facilitated dialogue about the role, responsibilities, and scope of the Task Force, at which point the topic areas can be better defined. The implementation strategy has been revised to be more flexible with regard to the scope of the Task Force. Additionally, clarifying text has been added to the Economic Development portion of the Sustainable Communities Strategy.	Letter	4/8/2014
66	California Rural Legal Assistance	Pantoja	Jeanette	Sustainable Communities Strategy	Even the narrow objective of "Economic Opportunities" as increased revenue would be well served by the inclusion of rural, low-income community needs in the scope of the Task Force. Americans in the lowest 20 percent income bracket, many of whom live in rural settings, spend about 42 percent of their annual incomes on transportation. Individuals in neighborhoods with plentiful transit options spend just nine percent of their incomes on transportation. Income saved as a result of broadened access to alternative transportation options could have economic ripple effects throughout the rural economy in the form of greater purchasing power.	The scope of the Rural Task Force is a suggested outline of topics to explore. Once the Task Force is convened there will be a facilitated dialogue about the role, responsibilities, and scope of the Task Force, at which point the topic areas can be better defined. The implementation strategy has been revised to be more flexible with regard to the scope of the Task Force. Additionally, clarifying text has been added to the Economic Development portion of the Sustainable Communities Strategy regarding the potential economic gains of providing better access to alternative means of transportation.	Letter	4/8/2014
67	California Rural Legal Assistance	Pantoja	Jeanette	Sustainable Communities Strategy	Lastly, given the general tendency to associate economic development with large industry, there should be some requirement that the composition of the taskforce be well-balanced, such that no interest is overrepresented.	AMBAG will give careful consideration as to the composition of the Task Force.	Letter	4/8/2014

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68	California Rural Legal Assistance	Pantoja	Jeanette	Sustainable Communities Strategy	Public input can provide an important source of information to assess the effectiveness of project implementation, prioritize projects based on community need and, leverage community buy in where projects may be more controversial. This value is reflected in the implementation strategy to educate the public about the economic benefits of sustainable developments and the strategy to increasing public perception of the value, benefits and use of transit, vanpools, and rideshare. However, little to no information is provided as to what processes, resources or energy is or will be available to effectuate these strategies. To the extent that information is available now, it should be incorporated into the MPT/SCS. Apart from the two strategies cited above, the implementation strategies section (Table 4-3) does little to integrate public input in the implementation process. Given the value of public participation, AMBAG staff should consider finding more ways to incorporate public input. AMBAG staff can start this process by evaluating the effectiveness of community engagement actions employed through MTP/SCS planning process, with particular focus on the diversity of voices represented throughout this process. Resources and information on successful community engagement strategies abound. We recommend that AMBAG staff review the "Community Engagement Guide for Sustainable Communities" published by PolicyLink and the Kirwan Institute, which outlines many of the benefits of community engagement and provides various strategies that can be readily implemented into any agency outreach effort.	The implementation strategies are meant to begin after the Plan is adopted to ensure that the Plan's goals come to fruition. Therefore there has been no planning activity to date on the implementation strategies, particularly if they are not a part of the normal work program of the agency. For example, with regard to education of the economic benefits of sustainable development, an outreach program would begin once the Plan is adopted and the agency is able to identify the funding and staff resources sufficient for such a program. AMBAG staff will be evaluating the strengths and weaknesses of the planning process for the Metropolitan Transportation Plan including the public outreach components. Staff will use resources such as PolicyLink for ideas on how to improve the public outreach process.	Letter	4/8/2014
69	Caltrans	Loe	Aileen	Sustainable Communities Strategy	Policy statements (CA government code 65080). While these items appear to be covered in various sections of the document, a more in-depth discussion of how system needs influence the policy statements of the SCS would be beneficial.	Clarifying text has been added to Chapter 4.	Letter	4/8/2014
70	Caltrans	Loe	Aileen	General	Demographics - The MTP is missing key demographic data that would allow the reader to ascertain the social and ethnic makeup and geographic population of disadvantaged populations. While the EIR does contain detailed information on ethnicity, this information should appear in the body of the MTP.	Additional demographic information has been added to Appendix A and a reference to the Appendix was added in Chapter 1.	Letter	4/8/2014
71	Caltrans	Loe	Aileen	Transportation Investments	Bicycle and pedestrian facilities, pg. 2-11- this section should include a discussion of specific bike and pedestrian facilities that will be included in the MTP.	There are numerous bicycle and pedestrian facilities that have been identified on the constrained list of projects. Examples have been added to the text in Chapter 2 with a reference to the Appendix and the RTPs for a complete listing of projects.	Letter	4/8/2014
72	Caltrans	Loe	Aileen	Transportation Investments	Active Transportation: Safe Routes to School, pg. 2-12: Need to discuss how this program changed under MAP-21 and is now under the Active Transportation Program (ATP).	The text of Chapter 2 has been modified to reflect this change to the program.	Letter	4/8/2014
73	Caltrans	Loe	Aileen	Transportation Investments	California Coastal Trail, pg. 2-16- AMBAG is commended for its discussion of the Monterey Bay Sanctuary Scenic Trail (MBSST) Network; however, the discussion should include support for AMBAG' s compliance with Government Code Section 65080.1 requiring coordination with appropriate agencies, including the State Coastal Conservancy and the California Coastal Commission, regarding the development of the California Coastal Trail. Please consider expanding discussion in this section to include a description of which agencies were consulted with and how, or a reference to a relevant appendix.	Additional information on the California Coastal Trail has been added to Chapter 2.	Letter	4/8/2014
74	Caltrans	Loe	Aileen	Transportation Investments	Strategic System Expansion, pg. 2-16-2-20: Caltrans' has five modal plans (California Aviation System Plan, California Freight Mobility Plan, California State Rail Plan, Interregional Transportation Strategic Plan, and the California Statewide Transit Strategic Plan), but only two of them (Aviation and Freight) are mentioned in this section. At the very least the Rail Plan should be added since it identifies a potential Capitol Corridor Extension to Salinas, the new Coast Daylight and the State's High Speed Rail Project. This would help introduce the California Transportation Plan since it is not mentioned in the body of the document as details are noted below. Also, acknowledging these are interregional modes of travel and this may have been the reasoning why they were omitted, but land use within the AMBAG region will be affected.	Additional information on the California State Rail Plan and the California Transportation Plan has been added to Chapters 2 and 4 respectively.	Letter	4/8/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
75	Caltrans	Loe	Aileen	Transportation Investments	Aviation: California Aviation System Plan, pg. 2-16: a description of the plan needs to be given such as the California Aviation System Plan (CASP) 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. It is noted that an inventory of all the airport facilities, heliport locations and military facilities are identified. It is hopeful that AMBAG would include this inventory in any future emergency evacuation plans as well as any GIS mapping system. Primary Air-Carrier airports with annual enplanements over 10,000 are required to have an Airport Ground Access Improvement Program per Government Code 65081.1. The only airport within the AMBAG region with this designation is the Monterey Regional Airport. The only mention of 'primary ground access is on page 2-17, which simply explains that State Routes 1 and 68 provide the primary ground access to the airport. This does not qualify as an "Airport Ground Access Improvement Program." Caltrans requires this addition in all Regional Transportation Plans or Metropolitan Transportation Plans. Please review the requirements for completion of an Airport Ground Access Improvement Program at the following link: http://ntl.bts.gov/DOCS/AGAPP.html Page 2-17 regarding the King City Municipal Airport (Mesa Del Rey), the two names are confusing to those who are not accustomed to this title. The FAA has this airport listed as "Mesa Del Rey" located in King City, while the official Pilot's Guide shows "King City." Caltrans Aviation Safety Officers recommend an official name change, which would involve making modifications to the Airport Master Record. Additionally, there was no mention of the Sean D. Tucker, (in partnership with Tutima Instrument Watches), Academy that provides the most "in-depth study of aircraft control ever offered." 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.	The text of Chapter 2 has been modified to reflect the requirements for an Airport Ground Access Improvement Program as well as to reflect comments on the California Aviation System Plan and King City/Mesa Del Rey airport.	Letter	4/8/2014
76	Caltrans	Loe	Aileen	Transportation Investments	Goods Movement: Salinas Valley Truck-to-Rail Intermodal Facility Feasibility Study, pg. 2-20. Described the next steps of the Truck-to-Rail Intermodal Facility Feasibility Study and how this study and the Commercial Flows Study are incorporated into the US 101 Corridor Freight Study.	Text has been added to Chapter 2 to make a connection between previous freight planning and the current US 101 Corridor Freight Study.	Letter	4/8/2014
77	Caltrans	Loe	Aileen	Financial Plan	Local Transportation Sales Tax, pg. 3-10: There are two critical greenhouse gas emissions deadlines (2020 and 2035) and stating here a reasonably expected adoption year for the local transportation sales tax would be helpful in understanding how this pricing increase influences travel behavior. The expectation of new sales tax and toll revenue in the Monterey Bay Area region is not well supported, as there is no guarantee that the sales tax measure will be passed, and several other revenue sources are still under development. In addition to the information listed in the financial element, AMBAG must list strategies to ensure that new funding sources will be available at the time indicated (23 CFR 450.322 (lO)(iii)). If not, The RTP should include a funding scenario that does not include sales tax measure funding.	Additional clarifying text has been added to Chapter 5.	Letter	4/8/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
78	Caltrans	Loe	Aileen	Sustainable Communities Strategy	Assembly Bill (AB) 32 and Senate Bill (SB) 375, pg. 4-4: This is another location that Senate Bill (SB) 391 and the California Transportation Plan (CTP) could be presented or identified as it is currently not in the body of the document, yet it is in the glossary. This would be an effective location to add the CTP, as SB 375 addresses the regional greenhouse gas (GHG) emissions from the transportation sector and SB 391 addresses the statewide GHG emissions from the transportation sector of AB 32. The following is an example of what could be added: Senate Bill 391 (SB 391, 2009), the California Transportation Plan, requires the California Department of Transportation to prepare the California Transportation Plan (CTP), the long-range transportation plan, by December 2015, to reduce GHG emissions. 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. The upcoming CTP 2040 will demonstrate how major metropolitan areas, rural areas, and state agencies can coordinate planning efforts to achieve critical statewide goals.	The suggested text has been added to Chapter 4.	Letter	4/8/2014
79	Caltrans	Loe	Aileen	Sustainable Communities Strategy	Scenario Planning, pg. 4-5: This section talks about a preferred scenario was selected and it is talk about in pieces throughout, but a comprehensive summary or snapshot would be beneficial and useful. At the very least, a summary should be reference in the body here and included in the Appendix E.	Descriptive text of the scenario planning process has been added to Chapter 4.	Letter	4/8/2014
80	Caltrans	Loe	Aileen	Sustainable Communities Strategy	SCS maps, pg. 4-7, et al.- These maps are very well done, but the reader would benefit from accompanying maps or discussion identifying current conditions in addition to the figures that show how the region is anticipated to change.	Additional maps showing baseline conditions have been added to Chapter 4.	Letter	4/8/2014
81	Caltrans	Loe	Aileen	General	Environmental Mitigation: A discussion or summary of the potential environmental impacts of the plan and their mitigation should be included in the body of the MTP (23 CFR 450.322(±)(7)).	Clarifying text has been added to Chapter 4.	Letter	4/8/2014
82	Caltrans	Loe	Aileen	General	Natural Resources: The MTP should contain a discussion of construction aggregate as a natural resource. Aggregate development is an integral part of transportation construction and maintenance cost and feasibility, and often precludes other land uses.	Clarifying text has been added to Chapter 4.	Letter	4/8/2014
83	Caltrans	Loe	Aileen	Sustainable Communities Strategy	Sustainable Community Strategies Chapter- Figure 4-lOa: 2035 Land Use Pattern Monterey County Coast, Pg. 4-35: The map does not show any land use patterns along the SR 68 Corridor (between Monterey and Salinas), the former Fort Ord area, River Road area, Prunedale or Carmel Valley.	Land use patterns in Monterey County were only identified within cities' spheres of influence and the County's Community Plan Areas with the intent of only identifying areas that had the potential for growth.	Letter	4/8/2014
84	Caltrans	Loe	Aileen	Sustainable Communities Strategy	Sustainable Community Strategies Chapter- Figure 4-13: 2035 Transit Network, Pg. 4-43: Monterey-Salinas Transit is proposing a Bus Rapid Transit (BRT) project between Marina and Monterey on or along Highway 1. The green legend depicting BRT isn't shown for the Highway 1 Corridor between Marina and Monterey.	Text has been added to Chapter 2 to clarify the possibility of BRT along the light rail corridor as a precursor to passenger rail.	Letter	4/8/2014
85	Caltrans	Loe	Aileen	Sustainable Communities Strategy	Sustainable Community Strategies Chapter - Figure 4-14: 2035 Highway Network, Pg. 4-45: The map is inconsistent with Caltrans Transportation Concept Reports for the following roadways: US 101, SR 17, SR 1 (Santa Cruz to Watsonville). The legend is confusing and inconsistent not knowing if the highway network map is to be read for example as a two-lane facility or two lanes in each direction. Please be consistent throughout the highway network map.	The map has been revised.	Letter	4/8/2014
86	Caltrans	Loe	Aileen	Glossary	Glossary, pg. 7-8: The CTP is referenced and defined in the Glossary, yet it is not mentioned in the body of the document. Other essential modal components that will be integrated into the CTP are discussed in the document such as the CASP and California Freight Mobility Plan in which the CTP could be mentioned here as well.	Text describing the California Transportation Plan has been added to Chapter 4.	Letter	4/8/2014
87	Caltrans	Loe	Aileen	Transportation Investments	Errata, pg. 2-20: Under the heading "Salinas Valley Truck-to-rail Intermodal Facility Feasibility Study", the first sentence has no verb, and the second sentence is missing commas.	The text has been modified.	Letter	4/8/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
88	Caltrans	Loe	Aileen	Appendices	Appendix E, Introduction, pg. 2 and Hybrid SCS Scenarios, pg. 6: The introduction talks about a final preferred scenario was prepared and incorporated, yet there is not a preferred scenario described in the Initial and Hybrid SCS Scenarios section. A Preferred SCS Scenario describing the Land Use and Transportation strategies should be included in the Appendix E -similar to Initial Scenarios 1-5 and Hybrid Scenarios A and B. It is noted that the Airports Economic Impact Study was completed in 2003. It is always prudent to identify the economic value of the airports and actively promote this to the community. Caltrans would recommend updating the Economic Study based on more current statistics.	Text has been added to Appendix E to clarify that the preferred scenario is described in Chapter 4 of the main body of the document. AMBAG will work with the airports to explore the feasibility of updating the Airports Economic Impact Study. This has been added as an implementation strategy.	Letter	4/8/2014
89	Public	Nelson	Jack	Sustainable Communities Strategy	I'd like to focus on the greenhouse gas (GHG) reduction targets that the plan aims to meet. First, it is good that such targets exist, new as of only four years ago. It's truly fortunate, that the old "predict and provide" transportation planning approach, of predicting continued rapid growth in vehicle miles traveled, and then planning to provide infrastructure to accommodate (and encourage) that, has been set aside. Now the concept of sustainability has entered in. Good so far. On page 4-58, the Draft 2035 MTP/SCS explains that "On September 23, 2010, CARB set targets for lowering GHG in the Monterey Bay region. They call for a zero percent increase, in per capita GHG emissions from passenger vehicles by 2020 (compared with 2005); and a five percent per capita reduction by 2035 through land use and transportation planning." Unfortunately, these target levels are inadequate to respond to what climate scientists are saying is needed in actions now in order to have some chance of less disruption of civilization and natural systems due to climate change. As an example of a GHG reduction pace informed by climate science, a recent scientists' consensus report calls for GHG reductions of 5% per year, year after year, from now until 2050. This is in order to stabilize atmospheric CO2 at 450 ppm by 2050 and in so doing have a 50-50 chance of limiting global temperature rise to two degrees Celsius. This metric was presented in the May 2013 report, titled "Scientific Consensus on Maintaining Humanity's Life Support Systems in the 21st Century: Information for Policy Makers," signed by more than 500 scientists from 44 nations, which is available online at http://mahb.stanford.edu/wp-content/uploads/2013/05/Consensus-Statement-For-Web-6-02-13.pdf	California Senate Bill 375, enacted in 2008, promotes efforts to reduce regional greenhouse gas emissions from passenger vehicles and light duty trucks through changes in land use and transportation development patterns. To achieve these changes, the law encourages Metropolitan Planning Organizations (MPOs) like AMBAG to think differently about how communities are designed. As a result, MPOs, in partnership other regional agencies and local governments are now required to develop a Sustainable Communities Strategy (SCS) as part of the transportation planning process for inclusion in their plan. The SCS should demonstrate the land use and transportation measures that will be used to meet the region's greenhouse gas emission reduction target established by the State Air Resources Board, that is to reduce greenhouse gas emissions by 5% per capita by 2035 from the use of automobiles. At the same time, Executive Order S-3-05 signed by Governor Schwarzenegger includes a target of reducing greenhouse gas emissions (GHG) from all sectors, not just transportation, by 80% by 2050. While transportation represents a significant portion of overall GHG emissions in California, the transportation sector alone will not meet the Governor's Order. There are many other activities being undertaken by the State of California to meet this goal. Additionally, the greenhouse gas emission target set by the California Air Resources Board for the Monterey Bay Area does not include GHG reductions achieved by clean fuel standards and improved technologies to increase fuel efficiency in vehicles. It should also be emphasized that the 2035 MTP/SCS does not go out to the year 2050. As more direction from the State is developed and the next series of MTP/SCS plans are put together with timelines extending beyond 2035 AMBAG will examine additional ways to achieve greater reductions in GHGs in the future. In order to see greater reductions in VMT and subsequently GHGs, AMBAG would have to make assumptions about increased mode shares for non-automobile transportation and land use distribution that are not consistent with the transportation network contained in the MTP and local jurisdictions' general plans. AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be prioritized others feel that we need to invest in maintaining and operating our current network of highways and roads. The tri-county area is investing more than in the past in Active Transportation (bicycle and pedestrian) facilities in response to heightened interest in this mode of transportation. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system including automobiles. Therefore investment continues to be made in highways and roads that will improve both congestion and safety for all users.	Email	4/8/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
90	Public	Nelson	Jack	Sustainable Communities Strategy	I observe, also, that CEQA calls for adherence to science, not politics, in analyzing environmental impacts. So what went wrong? I was present at the August 23, 2010 special meeting of the AMBAG Board of Directors, at which the Board voted to propose to CARB the target levels now in place. This step was taken after the preceding target setting process between AMBAG staff and CARB went off track and failed to set any reduction at all. As I saw at the time, climate science was buckled in the back seat, with politics doing the driving. I was in the sad position of arguing (successfully, at least) to the Board that since these were referred to as "reduction targets," they should at least show some reduction, and not an increase. Following that Board action, CARB simply adopted the weak targets AMBAG submitted. To imply that the existing targets were the result of a rational process at CARB, or to celebrate a plan that just somewhat exceeds these underwhelming targets, is to overlook what's really needed to move to a sustainable future. The time is not too soon for AMBAG to begin a process of reviewing those targets, with an explicit goal of bringing them much closer to what the climate science calls for.	As more direction from the State is developed and the next series of MTP/SCS plans are put together with timelines extending beyond 2035 AMBAG will examine additional ways to achieve greater reductions in GHGs.	Email	4/8/2014
91	Monterey County Resource Management Agency	Novo	Mike	Sustainable Communities Strategy	The documents should be revised to clarify the relationship between the growth scenarios and the adopted Spheres of influence for each city. The adopted Spheres of influence should be a starting point for growth projections used in the development of the preferred scenarios. Any adjustments beyond that should be fully explained, as it's unclear that the adjustments followed a consistent methodology.	There were no adjustments made beyond spheres of influence or Community Plan Areas. All adjustments made were based on direction from city and county staff and are consistent with General Plans. Clarifying text has been added to Chapter 4.	Letter	4/7/2014
92	Monterey County Resource Management Agency	Novo	Mike	Sustainable Communities Strategy	The 2023 Land Use Pattern Maps seem to depict more future development than is planned in Castroville. The Castroville Community Plan is only adopted for the non Coastal Zone areas. The maps look like they include significant future development in the Coastal Zone. These areas of the Community Plan were never adopted and should not be part of the growth projections.	The map has been revised.	Letter	4/7/2014
93	Monterey County Resource Management Agency	Novo	Mike	Sustainable Communities Strategy	The 2023 Land Use Pattern Maps for Watsonville (Santa Cruz County) include Pajaro which is located in Monterey County. This may not be a problem if noted. The land use pattern for Pajaro, as depicted, looks correct.	A notation has been added to the map.	Letter	4/7/2014
94	Monterey County Resource Management Agency	Novo	Mike	Draft Environmental Impact Report	Section 4.9 Water Resources, page 7 states: "Due to the programmatic nature of the 2035 MTP/SCS, a precise, project-level analysis of the specific impacts of individual transportation and land use projects on water supply is not possible at this time" and then the Draft EIR describes the general impacts to water supply. The Monterey County Health Department, Environmental Health Bureau (EHB) concurs with the general description of potential impacts that may result from implementation of MTP/SCS and understands that individual transportation and land use projects discussed in the MTP/SCS will be specifically evaluated for impacts on water supply, water quality, water quantity, water recharge, and existing water system infrastructure during project-specific environmental review.	This comment has been responded to as part of the Final Environmental Impact Report.	Letter	4/7/2014
95	Monterey Regional Airport	Greer	Thomas	Transportation Investments	Thank you for the opportunity to comment on the Draft Metropolitan Transportation Plan/Sustainable Communities Plan (MTP). As you know, vehicle access to Monterey Regional Airport is critical to existing and future air carrier service. Highway 68 is the surface access to Monterey Regional Airport. Highway 68 currently does not meet level-of-service standards (City of Monterey General Plan). Over-capacity traffic flows are particularly acute adjacent to the Airport.	The text of Chapter 2 has been modified to reflect the requirements for an Airport Ground Access Improvement Program.	Letter	4/8/2014
96	Monterey Regional Airport	Greer	Thomas	Transportation Investments	The Draft 2035 MTP refers to the 2006 Monterey Bay Regional Airports System Plan (RASP). However, the MTP does not address existing constraints on surface access to Monterey Regional Airport, nor recommend improvements to relieve vehicle traffic congestion affecting the Airport, nor acknowledge the RASP's and AMBAG's support for improved Airport access.	The text of Chapter 2 has been modified to reflect the requirements for an Airport Ground Access Improvement Program.	Letter	4/8/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
97	Monterey Regional Airport	Greer	Thomas	Transportation Investments	In referring to the Regional Airports System Plan, the draft MTP states that commuter aircraft operations are forecasted to remain at current operating levels (P. 2-19). However, the Regional Airports System Plan identifies continued moderate growth in airline operations at Monterey Regional Airport (P. 5-7). The Regional Airports System Plan also endorses facilitating improved air carrier service at the Airport (Table 6-1) and indicates that AMBAG will support the Airport through studies of providing improved transportation and access (P.S-8). Additionally, projections recently prepared by Monterey Peninsula Airport District (MPAD) for the draft Monterey Regional Airport Master Plan forecast continued increasing passenger enplanements over the next 20 years.	The text of Chapter 2 has been updated to reflect these Plans.	Letter	4/8/2014
98	Monterey Regional Airport	Greer	Thomas	General	Under both the National Plan of Integrated Airport Systems and Caltrans standards, Monterey Regional Airport is a primary air carrier airport, the only one in the tri-county region. California Government Code §65081.1 states that primary air carrier airports are required to have an airport ground access improvement program prepared by the regional transportation planning agency. Neither the draft MTP, nor the draft Regional Transportation Plan being prepared by TAMC, appear to have such an element in them. We cannot find the Airport Ground Improvement Program to serve the regional access needs to and from Monterey Regional Airport, and one is needed. Perhaps you know where they can be found.	The text of Chapter 2 has been modified to reflect the requirements for an Airport Ground Access Improvement Program.	Letter	4/8/2014
99	Monterey Regional Airport	Greer	Thomas	Transportation Investments	MPAD agrees with City of Monterey General Plan Policy c.13 and Program c.B-2, which encourage widening of Highway 68 to four lanes of expressway. Please consider the inclusion of language in the MTP that acknowledges the existing and projected needs for this access in the regional transportation network.	The project to widen Highway 68 between between the existing four lane segment at Toro Park and Corral de Tierra Road is included in the MTP and TAMC's RTP. The project to construct a four lane bypass along the Fort Ord right of way or widen the existing roadway to four lanes does not have funding identified. Please review TAMC's Regional Transportation Plan for more information.	Letter	4/8/2014
100	Public			Transportation Investments	The commitment and investment in a seamless AND SAFE bicycle route in the Monterey Bay region needs to be placed as a priority for regional governments. Planning and construction of SAFE routes for adults and children as pedestrians and bicyclists would greatly reduce the need for more surface street and highway construction, and at a fraction of the costs. Yes, there's a need for vehicles to get people and products moved in our region. There has been too much commitment of resources to vehicles rather than pedestrians and bicycles. We need to close this gap, and allow for SAFE access to schools, businesses and workplaces by means other than individual cars.	AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be given a higher priority, others feel that transportation agencies need to invest in maintaining and operating the current network of highways and roads. Under the proposed MTP/SCS, the tri-county area is investing more than in the past in Active Transportation (bicycle and pedestrian) facilities in response to heightened interest in this mode of transportation. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system. Therefore investment continues to be made in highways and roads that will reduce congestion and increase safety for all users.	Online	3/3/2014
101	Public			Sustainable Communities Strategy	Appreciate the hard work that went into this plan. Think the GHG reduction goal should be even greater and more projects need to focus on reducing cars on road.	As more direction from the State is developed and the next series of MTP/SCS plans are put together with timelines extending beyond 2035, AMBAG will examine additional ways to achieve greater reductions in GHGs.	Online	3/31/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
102	Public			General	This is not a SURVEY as advertised. A survey would ask questions based on options apparent from research collected and presented. This makes it very difficult for all but the wonkiest transportation fan, and difficult for ordinary citizens to make an informed choice. On purpose? Underneath all of this are unsustainable projections of the addition of 150,000 people and 40,000 more houses which will completely break our infrastructure. Please read books such as THE END OF GROWTH, and inform your planning selves on a steady state economy and why we simply cannot continue to expect and plan for cancerous suicidal growth. We are close to making this globe incapable of supporting human life if we do not begin yesterday to do things very differently. One good start would be free and frequent busses. The cost should be completely subsidized by single passenger drivers. Where is our light rail? What century is this? Why are we moving at a glacial pace? Why are we even continuing to discuss cutting freeways through habitat such as for ill-placed environmentally destructive and taxpayer subsidized projects like East Garrison? We need a radical shift in our planning and economic expectations, immediately.	Comment noted.	Online	3/31/2014
103	Public			Transportation Investments	A lot more class 1 and 2 bike routes are needed to make biking a safe option. Biking in Salinas and Monterey County is risky and dangerous. We need more class 1 bike lanes. Class two and class three bike categories should only be in neighborhoods, or areas where cars drive 25mph or less. Way to many crazy, horrible, and distracted drivers on the roads today.	AMBAG has worked with the Regional Transportation Planning Agencies (RTPAs) and local cities and counties to develop a project list that is reflective of the diverse range of needs and interests in the region. While some members of the community feel that bicycle infrastructure should be given a higher priority, others feel that transportation agencies need to invest in maintaining and operating the current network of highways and roads. Under the proposed MTP/SCS, the tri-county area is investing more than in the past in Active Transportation (bicycle and pedestrian) facilities in response to heightened interest in this mode of transportation. Additionally, the 2035 MTP/SCS recognizes the need to improve the safety of the existing system for all users of the system. Therefore investment continues to be made in highways and roads that will reduce congestion and increase safety for all users.	Online	3/31/2014

No.	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
104	Public			Transportation Investments	I didn't notice how you factor electric vehicles into this equation. Obviously, we want less cars on the roadways, but plug in vehicles at least emit less than gas vehicles. Is there a goal to increase charging stations in our region to help?	California Senate Bill 375, enacted in 2008, promotes efforts to reduce regional greenhouse gas emissions from passenger vehicles and light duty trucks through changes in land use and transportation development patterns. To achieve these changes, the law encourages Metropolitan Planning Organizations (MPOs) like AMBAG to think differently about how communities are designed. As a result, MPOs, in partnership other regional agencies and local governments are now required to develop a Sustainable Communities Strategy (SCS) as part of the transportation planning process for inclusion in their plan. The SCS should demonstrate the land use and transportation measures that will be used to meet the region's greenhouse gas emission reduction target established by the State Air Resources Board, that is to reduce greenhouse gas emissions by 5% per capita by 2035 from the use of automobiles. At the same time, Executive Order S-3-05 signed by Governor Schwarzenegger includes a target of reducing greenhouse gas emissions (GHG) from all sectors, not just transportation, by 80% by 2050. While transportation represents a significant portion of overall GHG emissions in California, the transportation sector alone will not meet the Governor's Order. There are many other activities being undertaken by the State of California to meet this goal. Additionally, the greenhouse gas emission target set by the California Air Resources Board for the Monterey Bay Area does not include GHG reductions achieved by clean fuel standards and improved technologies to increase fuel efficiency in vehicles. It should also be emphasized that the 2035 MTP/SCS does not go out to the year 2050. As more direction from the State is developed and the next series of MTP/SCS plans are put together with timelines extending beyond 2035 AMBAG will examine additional ways to achieve greater reductions in GHGs in the future. AMBAG is participating in planning efforts to increase accessibility and locations of charging stations. Please see the region's Electric Vehicle Infrastructure for the Monterey Bay Area Plan and also refer to the Chapter 4 "Energy and Alternative Fuels" section of the Metropolitan Transportation Plan.	Online	3/31/2014
105	Public			Sustainable Communities Strategy	Taking some new steps in the direction of sustainability is good, as is moving away from a focus on moving single passenger vehicles around. However, the greenhouse gas reduction target is not based on science, that is, it does not reflect what climate scientists are telling us humanity needs to do to avoid the worst of climate change. A 5% per year reduction in total GHG emissions, year after year, is more like what's needed to reduce the risk of catastrophic climate change.	As more direction from the State is developed and the next series of MTP/SCS plans are put together with timelines extending beyond 2035, AMBAG will examine additional ways to achieve greater reductions in GHGs.	Online	4/1/2014
106	High Speed Rail Authority	Tripousis	Ben	General	The construction and operation of the high-speed rail system is a project in close proximity of the AMBAG planning area and within the planning horizon of the proposed Regional Transportation Plan. The Authority suggests that AMBAG consider the adopted planning and environmental documents for the high-speed rail system while evaluating the impacts of the proposed transportation plan. The Authority encourages the Monterey Bay Area Governments to prioritize transit connectivity and to work with local transit providers, especially fixed route transit service provided in Monterey County by Monterey-Salinas Transit (MST), in San Benito County by San Benito County Express and in Santa Cruz County by the Santa Cruz Metropolitan Transit District (METRO), to plan for transit connections to and from future high-speed rail stations in Gilroy and San Jose. NOTE: This comment received after the public comment period had closed.	Connections to the Gilroy and San Jose High Speed Rail stations have been discussed with the public, stakeholders and transit agencies. The Metropolitan Transportation Plan and Sustainable Communities Strategy is updated every four years. As High Speed Rail gets closer to fruition AMBAG, in consultation with its partner agencies, will consider incorporating funding for these transit connections.	Letter	4/30/2014

J MTP Checklist

Introduction

The 2010 Regional Transportation Plan (RTP) Guidelines includes a checklist that the Metropolitan Planning Organization is required to complete upon finalizing the long range transportation plan. The purpose of the RTP Checklist is to establish a minimum standard for developing the RTP. The checklist of transportation planning requirements has been updated in order to conform to federal and state RTP requirements. It is completed and included as an attachment to this Appendix for the 2035 MTP/SCS.

J Attachments

Metropolitan Transportation Plan Checklist

(Revised February 2010)

(To be completed electronically in Microsoft Word format by the MPO and submitted along with the draft RTP to Caltrans)

Name of MPO/RTPA: Association of Monterey Bay Area Governments (AMBAG)

Date Draft MTP Completed: February 2014

MTP Adoption Date: June 11, 2014 (scheduled)

What is the Certification Date of the Environmental Document (ED)? June 11, 2014 (scheduled)

Is the ED located in the MTP or is it a separate document? Separate

By completing this checklist, the MPO verifies the MTP addresses all of the following required information within the MTP.

Metropolitan Transportation Plan Contents

General	Yes/No	Page #
1. Does the MTP address no less than a 20-year planning horizon? (23 CFR 450.322(a))	Yes	1-4
2. Does the MTP include both long-range and short-range strategies/actions? (23 CFR part 450.322(b))	Yes	Chapters 2 and 4
3. Does the MTP address issues specified in the policy, action and financial elements identified in California Government Code Section 65080?	Yes	Chapters 2, 3, and 4
4. Does the MTP address the 10 issues specified in the Sustainable Communities Strategy (SCS) component as identified in Government Code Sections 65080(b)(2)(B) and 65584.04(i)(1)? **(MPOs only)**	Yes	Chapter 4
a. Identify the general location of uses, residential densities, and building intensities within the region? **(MPOs only)**	Yes	4-56
b. Identify areas within the region sufficient to house all the population of the region, including all economic segments of the population over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation and employment growth? **(MPOs only)**	Yes	4-80
c. Identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region pursuant to Government Code Section 65584? **(MPOs only)**	Yes	4-59-4-65 and 4-80

General

		Yes/No	Page #
d.	Identify a transportation network to service the transportation needs of the region? **(MPOs only)**	Yes	4-66
e.	Gather and consider the best practically available scientific information regarding resource areas and farmland in the region as defined in subdivisions (a) and (b) of Government Code Section 65080.01? **(MPOs only)**	Yes	4-75
f.	Consider the state housing goals specified in Sections 65580 and 65581? **(MPOs only)**	Yes	4.80
g.	Utilize the most recent planning assumptions, considering local general plans and other factors? **(MPOs only)**	Yes	4-56
h.	Set 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 ARB? **(MPOs only)**	Yes	4-56
i.	Provide consistency between the development pattern and allocation of housing units within the region (Government Code 65584.04(i)(1)? **(MPOs only)**	Yes	4-80
j.	Allow the regional transportation plan to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Section 7506)? **(MPOs only)**	Yes	1-12
4.	Does the MTP include Project Intent i.e. Plan Level Purpose and Need Statements?	Yes	1-12
5.	Does the MTP specify how travel demand modeling methodology, results and key assumptions were developed as part of the MTP process? (Government Code 14522.2) **(MPOs only)**	Yes	Appendix F

Consultation/Cooperation

		Yes/No	Page #
1.	Does the MTP contain a public involvement program that meets the requirements of Title 23, CFR part 450.316(a)?	Yes	Chapter 6 and Appendix D

Consultation/Cooperation

		Yes/No	Page #
2.	Did the MPO consult with the appropriate State and local representatives including representatives from environmental and economic communities; airport; transit; freight during the preparation of the MTP? (23CFR450.316(3)(b))	Yes	Chapter 6 and Appendix D
3.	Did the MPO who has federal lands within its jurisdictional boundary involve the federal land management agencies during the preparation of the MTP.	Yes	Chapter 6 and Appendix D
4.	Where does the MTP specify that the appropriate State and local agencies responsible for land use, natural resources, environmental protection, conservation and historic preservation consulted? (23 CFR part 450.322(g))	Yes	Chapter 6 and Appendix D
5.	Did the MTP include a comparison with the California State Wildlife Action Plan and (if available) inventories of natural and historic resources? (23 CFR part 450.322(g))	N/A	
6.	Did the MPO who has a federally recognized Native American Tribal Government(s) and/or historical and sacred sites or subsistence resources of these Tribal Governments within its jurisdictional boundary address tribal concerns in the MTP and develop the MTP in consultation with the Tribal Government(s)? (Title 23 CFR part 450.316(c))	N/A	
7.	Does the MTP address how the public and various specified groups were given a reasonable opportunity to comment on the plan using the participation plan developed under 23 CFR part 450.316(a)? (23 CFR 450.316(i))	Yes	Chapter 6 and Appendix D
8.	Does the MTP contain a discussion describing the private sector involvement efforts that were used during the development of the plan? (23 CFR part 450.316 (a))	Yes	Chapter 6 and Appendix D
9.	Does the MTP contain a discussion describing the coordination efforts with regional air quality planning authorities? (23 CFR 450.316(a)(2)) **(MPO nonattainment and maintenance areas only)**	N/A	
10.	Is the MTP coordinated and consistent with the Public Transit-Human Services Transportation Plan?	Yes	2-10
11.	Were the draft and adopted MTP posted on the Internet? (23 CFR part 450.322(j))	Yes	
12.	Did the MTP explain how consultation occurred with locally elected officials? (Government Code 65080(D)) **(MPOs only)**	Yes	Chapter 6 and Appendix D
13.	Did the MTP outline the public participation process for the sustainable communities strategy? (Government Code 65080(E) **(MPOs only)**	Yes	Chapter 6 and Appendix D

Modal Discussion

		Yes/No	Page #
1.	Does the MTP discuss intermodal and connectivity issues?	Yes	2-6
2.	Does the MTP include a discussion of highways?	Yes	2-4

Modal Discussion

		Yes/No	Page #
3.	Does the MTP include a discussion of mass transportation?	Yes	2-6
4.	Does the MTP include a discussion of the regional airport system?	Yes	2-17
5.	Does the MTP include a discussion of regional pedestrian needs?	Yes	2-11
6.	Does the MTP include a discussion of regional bicycle needs?	Yes	2-11
7.	Does the MTP address the California Coastal Trail? (Government Code 65080.1) **(For MPOs located along the coast only)**	Yes	2-17
8.	Does the MTP include a discussion of rail transportation?	Yes	2-10
9.	Does the MTP include a discussion of maritime transportation (if appropriate)?	N/A	
10.	Does the MTP include a discussion of goods movement?	Yes	2-20

Programming/Operations

		Yes/No	Page #
1.	Is a congestion management process discussed in the MTP? (23 CFR part 450.450.320(b)) **(MPOs designated as TMAs only)**	N/A	
2.	Is the MTP consistent (to the maximum extent practicable) with the development of the regional ITS architecture?	Yes	2-25
3.	Does the MTP identify the objective criteria used for measuring the performance of the transportation system?	Yes	Chapter 5
4.	Does the MTP contain a list of unconstrained projects?	Yes	Appendix C

Financial

		Yes/No	Page #
1.	Does the MTP include a financial plan that meets the requirements identified in 23 CFR part 450.322(f)(10)?	Yes	Chapter 3 and Appendix B
2.	Does the MTP contain a consistency statement between the first 4 years of the fund estimate and the 4-year STIP fund estimate? (2006 STIP Guidelines, Section 19)	Yes	3-6
3.	Do the projected revenues in the MTP reflect Fiscal Constraint? (23 CFR part 450.322(f)(10)(ii))	Yes	3-8 and 3-11
4.	Does the MTP contain a list of financially constrained projects? Any regionally significant projects should be identified. (Government Code 65080(4)(A))	Yes	Chapters 2 and 3, Appendix C
5.	Do the cost estimates for implementing the projects identified in the MTP reflect "year of expenditure dollars" to reflect inflation rates? (23 CFR part 450.322(f)(10)(iv))	Yes	3-8 and 3-10
6.	After 12/11/07, does the MTP contain estimates of costs and revenue sources that are reasonably expected to be available to operate and maintain the freeways, highway and transit within the region? (23 CFR 450.322(f)(10)(i))	Yes	Chapter 3 and Appendix B

Financial

		Yes/No	Page #
7.	Does the MTP contain a statement regarding consistency between the projects in the MTP and the ITIP? (2006 STIP Guidelines section 33)	Yes	3-6
8.	Does the MTP contain a statement regarding consistency between the projects in the MTP and the FTIP? (2006 STIP Guidelines section 19)	Yes	3-6
9.	Does the MTP address the specific financial strategies required to ensure the identified TCMs from the SIP can be implemented? (23 CFR part 450.322(f)(10)(vi) (**nonattainment and maintenance MPOs only**)	N/A	

Environmental

		Yes/No	Page #
1.	Did the MPO prepare an EIR or a program EIR for the MTP in accordance with CEQA guidelines?	Yes	
2.	Does the MTP contain a list of projects specifically identified as TCMs, if applicable?	N/A	
3.	Does the MTP contain a discussion of SIP conformity, if applicable? **(MPOs only)**	N/A	
4.	Does the MTP specify mitigation activities? (23 CFR part 450.322(f)(7))	N/A	
5.	Where does the EIR address mitigation activities?	Yes	4-80
6.	Did the MPO prepare a Negative Declaration or a Mitigated Negative Declaration for the MTP in accordance with CEQA guidelines?	N/A	
7.	Does the MTP specify the TCMs to be implemented in the region? **(federal nonattainment and maintenance areas only)**	N/A	

I have reviewed the above information and certify that it is correct and complete.

(Must be signed by MPO Executive Director or designated representative)	February 12, 2014 Date
Maura Twomey Print Name	Executive Director Title


PLANNING EXCELLENCE
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Association of Monterey Bay Area Governments


Monterey Bay 2035
Moving Forward
Sustainability.
Mobility.
Accessibility.
Economy.
Social Equity.