Madera County Transportation Commission

Final 2014 Regional Transportation Plan and Sustainable Communities Strategy (RTP & SCS)

July 11, 2014

Final
2014 Regional Transportation Plan and Sustainable Communities Strategy

Prepared For:

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Madera County Transportation Commission

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1. Executive Summary

Background

MCTC is required to update the Regional Transportation Plan (RTP) to reflect the existing and future regional transportation system in Madera County. The 2014 Update reflects the horizon or "planning" year of 2040, ensuring that the region's transportation system and implementation policies/programs will safely and efficiently accommodate growth envisioned in the Land Use Elements of the Cities of Chowchilla and Madera and Madera County, in the RTP and in the Sustainable Communities Strategy (SCS). As the Regional Transportation Planning Agency (RTPA) and Metropolitan Planning Organization (MPO) for Madera County, MCTC is responsible for development of the RTP and the SCS (reference Chapter 6 - "*Creating a Sustainable Future*" of the 2014 RTP and SCS).

Project Location and Description

Madera County is located in California's San Joaquin Central Valley). Encompassing 2,147 square miles, the County is situated in the geographic center of the State of California along State Route (SR) 99, approximately 18 miles north of Fresno. The County has an average altitude of 265 feet ranging from 180 to 13,000 feet above sea level. The San Joaquin River forms the south and west boundaries with Fresno County. To the north, the Fresno River forms a portion of the boundary with Merced County. Mariposa County forms the remainder of the northern boundary. The crest of the Sierra Nevada Mountains forms the eastern boundary with Mono County. Generally, the County can be divided into three broad geographic regions – the Valley area on the west; the foothills between Madera Canal and the 3,500 foot elevation contour; and the mountains from the 3,500 foot contour to the crest of the Sierra Nevada Mountains.

Regional Transportation Plan

The RTP is a long-range transportation plan providing a vision for regional transportation investments over at least a 20-year period. Using growth forecasts and socioeconomic trends (reference Chapter 3 "*Madera County – Past, Present, & Future*"), the Plan considers the role of transportation including economic factors, quality of life issues, and environmental factors. The RTP provides an opportunity to identify transportation strategies today that address our mobility needs for the future. The RTP is updated every four (4) years to reflect changes in economic trends, state and federal project and funding requirements, progress made toward project implementation, and current socioeconomic trends. Transportation projects must be included in the RTP in order to qualify for federal and state funding. The last RTP was adopted by MCTC's Policy Board in July 2010. The next RTP Update will be due in 2018.

Sustainable Communities Strategy

The SCS is a new element of the RTP that will demonstrate the integration of land use, transportation strategies, and transportation investments within the RTP. This new requirement was put in place by the passage of SB 375, with the goal of ensuring that the MCTC region can meet its regional greenhouse gas reduction targets set by the California Air Resources Board (ARB). In 2011, the California Air Resources Board (CARB) issued a 5% reduction target to each of the eight (8) Metropolitan Planning Organizations (MPOs) in the San Joaquin Valley including MCTC. CARB agreed that the targets would be applicable to each MPO independently of other Valley MPOs. The targets included a percentage reduction of greenhouse gas emissions from 2005 of 5% by the year 2020 and a reduction in GHG emissions of 10% by the year 2035. Developing the SCS requires meaningful collaboration with each of the three (3) local governments, as well as stakeholders to identify land-use and transportation opportunities around the region that will address the needs of the growing population and ensure compliance with State and Federal requirements.

RTP and SCS Contents

The RTP and SCS consists of various elements referenced in federal statutes and in the State RTP Guidelines including:

- ✓ *Chapter 1: The 2014 RTP and SCS – A Summary* – provides a brief summary of the RTP and SCS reflecting the major findings and recommendations found in each chapter of the Plan
- ✓ *Chapter 2: Requirements, Trends & Contents* – describes the purpose of the RTP and SCS process, associated mandates, the existing transportation system in Madera County, and the contents of the Plan itself
- ✓ *Chapter 3: The Madera Region: Past, Present, & Future* – provides a comprehensive overview of the Region including growth and development, and planning forecasts and assumptions
- ✓ *Chapter 4: A Shared Vision* - provides a comprehensive listing of goals, objectives, and strategies that address the short- and long-term mobility and accessibility needs and planning requirements for the County
- ✓ *Chapter 5: Delivering the Plan* - provides a comprehensive assessment of needs and issues considering the goals and objectives contained in Chapter 4 – "A Shared Vision", describes the air quality conformity requirements and issues, includes a multimodal element addressing the needs and issues, inventory, accomplishments, and an assessment of future demand for all modes of transportation including highways and arterials, mass transportation, aviation, non-motorized systems, goods movement, TDM, and ITS needs and analysis. The Element also contains the actions necessary to support the goals and objectives referenced in the Policy Element and in the needs assessment

- ✓ *Chapter 6: Creating a Sustainable Future* - Involves working with our partners, local governments, and stakeholders to identify a transportation system supported by a land use pattern that reduces vehicle trips, vehicle miles traveled (VMT), and greenhouse gas emissions and addresses requirements set forth in SB 375
- ✓ *Chapter 7: Investing In Change* - provides a thorough assessment of project costs and revenue assumptions for each mode of transportation. The RTP must be financially constrained in accordance with air quality conformity requirements. As such, this chapter must ensure that projects, which are needed to enhance mobility and accessibility throughout the County, are also financed within the timeframe of the Plan (year 2040) and reduce air emissions consistent with reduction targets. This chapter also includes a description of unmet transportation needs, maintenance and operation needs, and the potential for new financing strategies/sources of funding to address revenue shortfalls, if applicable
- ✓ *Chapter 8: Public Involvement for Change* – includes a thorough review of the public involvement and community outreach program for the Project
- ✓ *Chapter 9: Environmental Considerations* - references important findings of the air quality conformity process, the EIR document and process, and additional supportive information necessary to provide a complete and thorough understanding of the planning and environmental review process
- ✓ *Chapter 10*: Addressing *Environmental Justice* – provides a description of MCTC's environmental justice program that ensures early and continued public involvement, and an equal distribution of transportation projects to all areas of the region, paying close attention to the needs of low income and minority populations.
- ✓ *Chapter 11: Measuring Up* - provides a description of the various monitoring programs that will be used by MCTC to monitor the performance of the regional transportation system
- ✓ *Appendices* - includes the San Joaquin Valley Regional Transportation Overview and technical and other appendices detailing the methodologies applied, a glossary of terms, and other supportive information

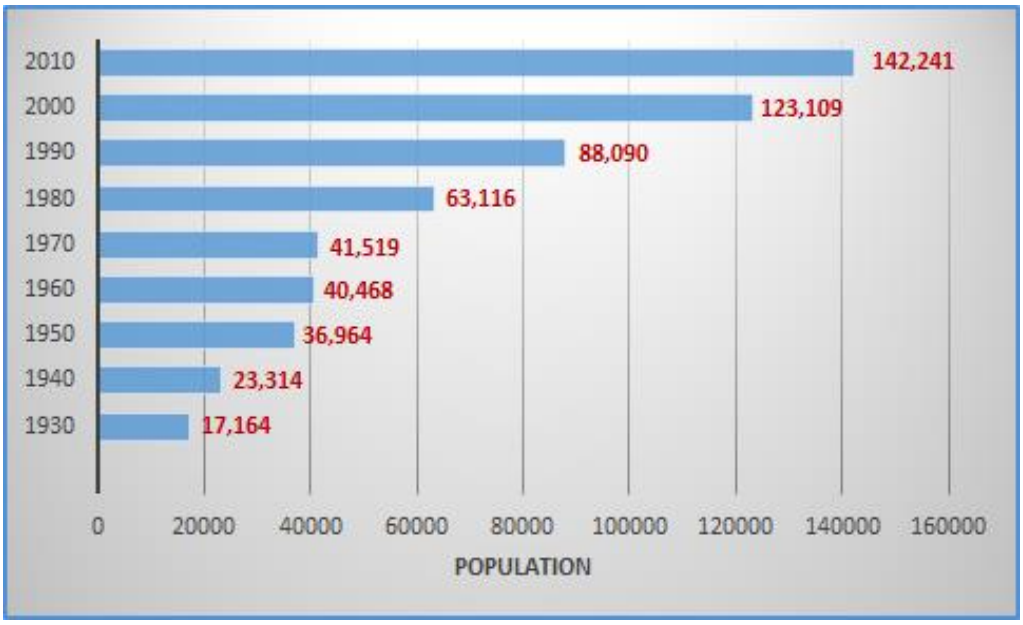
Demographic Changes

Current Population and Employment

Historical demographic trends and projections of both population and employment are essential to development of the RTP. The population estimates and projections that are referenced in the RTP and SCS and in Figure 1-1 were identified from U.S. Bureau of the Census, California Department of Finance (DOF), California Employment Development Department (EDD), Central California Futures Institute, or from other data and are consistent with assumptions used in the Madera County Regional Traffic Model.

FIGURE 1-1

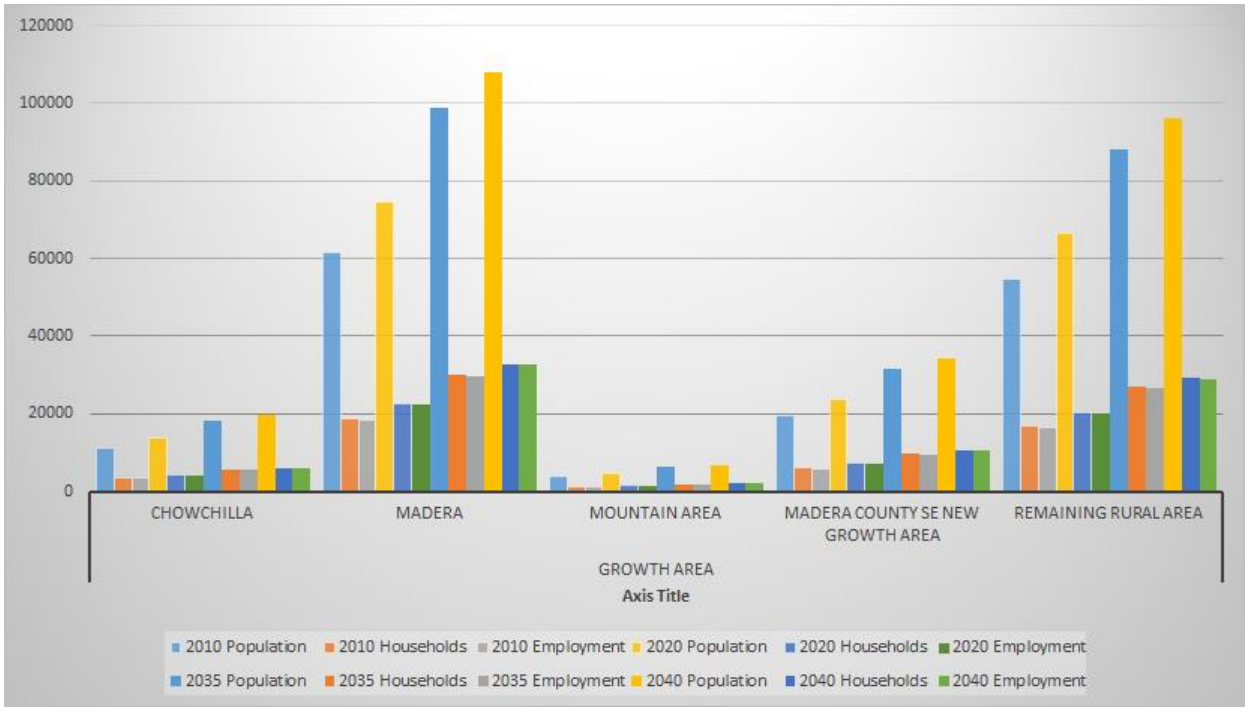
Madera County Historical Population Growth: Years 1930 - 2010



Future Population and Employment Projections

Population and employment estimates/projections for Madera County are provided for Years 2010, 2020, 2035 and 2040 are referenced in Figure 1-2. The estimates/projections of population, households and employment were allocated to the broad geographic areas presented in the table and further allocated to 473 traffic analysis zones (TAZs) as part of the Madera County Regional Traffic Model process. Socioeconomic conditions for each of these years is important for purposes of establishing the modeling base year or Year 2010, future years 2020 and 2035 or years for which the SCS has been developed to determine the greenhouse gas (GHG) emission reductions, and future ear 2040, which is the horizon year for development of the RTP.

FIGURE 1-2
Madera County Development Projections
2010, 2020, 2035, and 2040



Existing Transportation System

Highways and Arterials

Regional access to Madera County is provided by six state highways -- State Routes (SR) 41, 49, 99, 145, 152 and 233, with SR 41 and SR 99 carrying the bulk of North-South travel. Madera County's street network generally consists of a series of freeways, expressways, arterials, and collectors including: Roads 4, 9, 16, 23, 26, 36, 200, 223, 274, 400, 415, 600, Avenues 7, 7 ½, 9, 12, 14, 18 ½, 21, and 26, and Firebaugh and Children's Boulevards.

✓ Regionally Significant Roads System

MCTC, in conjunction with its member agencies and Caltrans, has developed the "Regionally Significant Road System" for transportation modeling purposes based on the FHWA Functional Classifications System of Streets and Highways. In general, the classification systems used by local agencies coincide with the FHWA Functional Classification System. However, design standards and geometrics for particular streets within local jurisdictions, are subject to specific design criteria of the

local agency. There is a significant distinction between the Regionally Significant Road System and the Countywide Network. Regionally significant projects are statutorily required to be treated separately for air quality reasons.

✓ Level of Service Analysis

Results of the LOS analysis indicate that two (2) segments along the Regionally Significant Road System are currently operating at LOS "D" through "F" for State Routes and no or zero local street and highway segments are operating at LOS "E" or "F. The resultant list of existing deficient facilities along the Regionally Significant Roads System and other important facilities provides an opportunity for MCTC, Caltrans, and local agencies to focus on projects that will improve the overall LOS of the regional network in the future.

Existing Public Transportation

Public transit in Madera County includes Madera Area Express fixed route and Dial-a-Ride, Madera County Connection, Eastern Madera Senior Bus, Escort Program, Chowchilla Area Transit Express, CatLinx, specialized social service transportation services, Greyhound, and taxi service. Public transportation is provided by fixed-route and demand-response transit systems.

✓ Social Service Transportation

Five key social service agencies provide transportation in Madera County. These agencies largely provide service to their clients and to specific sites.

✓ Private Providers

Several private carriers provide inter-city services, including Greyhound and Madera Cab Company. Greyhound operates seven days a week from the City of Madera's Downtown Intermodal Center on North "E" Street. Madera Cab Company provides service in Madera County seven days a week, 24 hours a day. This operator is based at the Downtown Intermodal Center.

✓ Passenger Rail/Support Facilities

Madera County is served by the Burlington Northern Santa Fe (BNSF) and the Union Pacific (UP) Railroads. Amtrak operates seven days a week with fourteen (14) daily stops in Madera along the BNSF Railroad alignment. The station is located on Avenue 15½ and Road 29. The nearest stop to the north is Merced and to the south, Fresno.

Aviation

The City of Madera owns and operates the Madera County Municipal Airport, which provides aviation services to approximately 18 fixed-base operators. The City of Chowchilla operates the Chowchilla

Municipal Airport with 18 fixed-base operators. Fresno Yosemite International Airport (FAT) in Fresno County is the primary passenger airport facility in the region.

Non-Motorized Systems

The Cities of Chowchilla and Madera, and Madera County continue to be involved in implementing bicycle facilities. The City of Madera annually reserves a portion of its Local Transportation Fund (LTF) proceeds for the construction of bicycle and pedestrian facilities. These funds are used in conjunction with funds from the CMAQ, State Bicycle Transportation Account, and other programs to implement elements of the Madera County 2004 Regional Bicycle Transportation Plan.

Goods Movement

Goods movement in Madera County is primarily provided by trucking and freight rail services. The trucking industry includes common carrier, private carrier, contract carrier, drayage and owner-operator services, which handle both line-haul and pick-up and delivery services. A number of trucking facilities are located in Madera County including the public highway system, truck terminal facilities, freight forwarders, truck stops, and maintenance facilities. These facilities are especially concentrated along SR 99.

Transportation Demand Management

Transportation demand management (TDM) programs in Madera County primarily consist of the voluntary rideshare program, the park & ride facilities program, the alternative fuels program, and other programs that provide for congestion relief and enhanced travel.

Intelligent Transportation Systems

In addition to planning for specific modes of transportation that will serve the needs of existing and future residents, the integration of advanced transportation technologies is also important. The use of new technologies [Intelligent Transportation Systems (ITS)] will allow maximum use of the transportation infrastructure including streets and highways and transit. Further, the need for traveler information is critical in order to lessen the impacts of accidents and other events in the region. Real-time traveler information can make traveling in Madera County more enjoyable and reduce delay and congestion.

Goals

Development of the RTP goals and objectives was a key step during preparation of the plan. The RTP Roundtable and Technical Working Group developed the set of goals and objectives based on an extensive review and consideration of their vision of the regional transportation system over the next twenty-six years, along with input from the public. Results obtained during the public outreach effort provided the

Roundtable and Technical Working Group with additional information needed to refine the goals and objectives.

It is important to remember that goals and objectives will, at times, compete with one another. The framework presented by the goals and objectives below should be viewed by the public as a set of guidelines against which the RTP can be assessed, while individual projects contribute to the ability of the RTP to meet these goals and objectives, and the project level information is useful in reviewing the projects, they should not be used to rank the projects against one another. The projects, policies, and systems together create the RTP.

The following goals are intended to guide MCTC in its pursuit of quality growth and highly integrated transportation systems, reflective of the "Principles to Success" noted above. The goals are broad policy statements that describe the purpose of the plan.

1. To promote Intermodal Transportation Systems that are Fully Accessible, Encourage Quality Growth and Development, Support the Region's Environmental Resource Management Strategies, and are Responsive to the Needs of Current and Future Travelers.

2. To Promote and Develop Transportation Systems that Stimulate, Support, and Enhance the Movement of People and Goods to Foster Economic Competitiveness of the Madera Region.

3. To Enhance Transportation System Coordination, Efficiency, and Intermodal Connectivity to Keep People and Goods Moving and Meet Regional Transportation Goals.

4. To Maintain the Efficiency, Safety, and Security of the Region's Transportation System.

5. To Improve the Quality of the Natural and Human Built Environment through Regional Cooperation of Transportation Systems Planning Activities.

6. To Maximize Funding to Maintain and Improve the Transportation Network.

7. To Identify Reliable Transportation Choices that Support a Diverse Population.

8. To protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).

Future Transportation System

To assess the needs in the region, a review of future travel characteristics projected for the year 2040, and how the individual components of the system can meet future needs has been analyzed. The systems analyzed include:

- ✓ Highways and Arterials
- ✓ Public or Mass Transportation (local bus systems, inter-regional bus systems, and passenger rail)
- ✓ Aviation (use of public and private airports and access to regional passenger airport facilities)
- ✓ Non-Motorized Travel (bicycles, trails and walking)
- ✓ Goods Movement (truck and freight rail)
- ✓ Transportation Demand Management (telecommuting, car-pooling, off-peak commuting, staggered work days, transportation system management strategies, etc.)
- ✓ Intelligent Transportation Systems or ITS (technology-based improvements that improve the efficiency of the multi-modal transportation systems

These systems are discussed separately, but must operate as an interconnected system.

Projected 2040 Travel Characteristics

Facilities along the Regionally Significant Road System are consistent with the Functional Classification System developed by the Federal Highway Administration (FHWA). These facilities, along with other major streets and highways, are included in the Madera County Regional Traffic Model network for the Year 2040. The traffic model was recently updated in 2013 to reflect expected growth and development within the County as projected by the State Department of Finance (DOF) and derived by the Madera County Transportation Commission (MCTC) and other local agency staff. The model was calibrated and validated for the year 2010 to reflect existing traffic conditions considering actual traffic counts taken along major street and highway segments throughout the region. In addition, the street and highway network was revised to accurately reflect the required improvements in the County needed to accommodate traffic to the year 2040.

The forecast of traffic generated by the projected population, housing and employment indicates that total vehicle trips will increase by about 93% between 2010 and 2040. This is attributed to continued use of major transportation corridors in the region by future growth and development. Furthermore, vehicle miles of travel (VMT) in 2040 are forecast to increase by approximately 44% from VMT in 2010. Much of the increase in VMT is due to longer distance trips; especially commute trips to and from Fresno for employment opportunities.

In addition to street and highway impacts, major impacts upon other modes of transportation would also be realized. Without implementation of planned mass transportation, aviation, non-motorized, goods movement, and other transportation-related improvements, the transportation/circulation system would be impacted. These impacts would further reduce the ability of local agencies in Madera County, Caltrans, and the associated Air Basin to improve levels of congestion and delay, and meet air quality standards. A major objective of this RTP and SCS is to identify a transportation strategy that will improve mobility between 2014 and 2040, while at the same time reducing the negative environmental impacts of travel.

A major objective of this RTP and SCS is to identify a transportation strategy that will improve mobility between 2011 and 2040, while at the same time reducing the negative environmental impacts of travel.

Highways and Arterials

It is assumed that the regional highway system will continue to carry the vast majority of person-trip travel and will be an important part of the freight movement system. Streets and highways also will be the same routes for buses, and carpools and vanpools, resulting in a highway network that is an integral part of the public transit system. Finally, the street and highway system will also serve the needs of tourist travel and recreational travel.

Because the highway system must continue to provide reasonable service throughout the plan period, it is essential to keep it well maintained. It is also important to plan for capacity increases only where future traffic will exceed capacity and where highway expansion is determined to be the best solution that will enhance travel safety. The functional classification system will be an important guide for street and highway improvements. It will be important for the region and the State to identify those streets and highways that are of strategic importance for commerce, tourism, and commuter travel.

✓ Highway and Arterial Performance

To assess highway and arterial needs, MCTC developed a process to evaluate candidate capacity-increasing and rehabilitation/safety projects considering performance-based measures and level of service (LOS) analysis.

✓ Capacity-Increasing Street and Highway Project Needs and Actions

New freeway and other street and highway capacity-increasing improvement projects have the greatest potential for causing significant adverse environmental effects versus other modes of transportation. This RTP and SCS proposes the widening or modification of existing streets and highways, changes to the designation of regional streets and highways, and new interchange facilities along new or existing freeways. Other projects include signalization improvements (new signals, signal modifications, and signal synchronization). Based upon the results of the performance evaluation process described above, a list of candidate capacity-increasing street and highway projects (proposed to be implemented by the year 2040) was prepared.

The RTP and SCS contains over $742 million in capacity-increasing highway and arterial improvement projects. This cost includes lane widenings, interchange improvements, new signals, and signal coordination systems. Approximately $359 million has been allocated for State Highway improvements along SR 41, SR 49, SR 99 and SR 145. In addition, new or improved interchange projects are planned along SR 41, SR 99 and SR 233. These projects are intended to relieve bottlenecks during peak use, to close gaps, and to increase capacity along congested freeways, such as SR 41 and SR 99, which provide access to major population and employment opportunities within the San Joaquin Valley.

- *Level of Service Analysis* - To identify potential impacts of the planned street and highway system, the level of service (LOS) for each major facility was measured. Minimum LOS for purposes of the RTP is LOS "D" for local street and road facilities and LOS "C" for State Routes. The LOS analysis was determined using the MCTC Traffic Model. For segments along the future RTP system, year 2040 traffic volumes estimated by the MCTC Regional Traffic Model, were applied. Results of the 2014 RTP LOS analysis indicate whether or not planned improvements contained in the Chapter 7 – "*Investing in Change*" will meet minimum LOS policies.

  Results of the LOS analysis for the RTP indicate that some facilities will fall deficient between 2010 and 2040. Improvement projects to improve these deficient levels of service would include lane widening and other operational improvements; however not all of the projects are included in the 2014 RTP and SCS "financially-constrained" program.

✓ Major Corridor Deficiencies/Needs/Actions

Major deficiencies identified in the LOS analysis for Year 2040 without RTP projects include SR 41 north of the San Joaquin River, Avenue 12 between SR 41 and SR 99, and SR 99 between the San Joaquin River and the Merced County Line. These deficiencies/needs, together with other issues described below set the stage for a set of actions that will be carried out by MCTC and the affected local agencies and Caltrans over the next twenty-six years.

✓ Street and Highway Rehabilitation/Safety Project Needs and Actions

In addition to LOS deficiencies, Caltrans and local agencies are also facing the difficult task of maintaining regional streets and highways with inadequate funding. With increased congestion expected in the future, the typical road will require some maintenance every five to ten (5-10) years, and major rehabilitation every ten (10) to 20 years. If rehabilitation and maintenance activities are not implemented, residents will continue to experience increased accident rates and reduced system-wide efficiency.

- *Enhanced Rehabilitation and Safety Improvements* - With the current backlog of highway and arterial maintenance and the pavement deterioration that goes with an aging roadway system, costs will increase dramatically through the RTP horizon year (2040) to keep the highway system operational. The RTP and SCS identifies additional funds principally for arterials that minimize roadway and bridge decay. Recent studies have also identified the increased cost to users as under-maintained roadways degrade tires and shock absorbers, creating wear and tear on engines and connections throughout the vehicle. Providing additional funding to improve pavement conditions before roadbed deterioration requires full rehabilitation would result in substantial maintenance savings to the Region. Preliminary analysis indicates that the benefits of an investment in proper ongoing maintenance would pay dividends of more than triple the cost. The funding estimates for this RTP and SCS call for $293 million in investments for rehabilitation and safety projects.

- *Projected Operation and Maintenance Costs* - There are currently an estimated 2,157 lane miles of streets and highways in the Madera County region, including 1,600 lanes miles on the regionally significant road network. By 2040, the lanes miles will increase to 1,952 miles.

Mass Transportation

Mass transportation is a transportation mode that moves large numbers of people from one destination to another. It provides an economical means of travel that reduces single-occupancy vehicle trips, improves air quality, and enhances the overall quality of life. Mass transportation in Madera County consists of public transit services provided by both the public and private sectors and Amtrak passenger rail service. Amtrak rail improvements are coordinated by Madera County. The Cities of Madera and Chowchilla and Madera County provide a total of seven different public transit services—three fixed-route and four demand-responsive.

✓ Mass Transportation Needs and Actions

Madera County has made notable progress in addressing many public transit needs throughout the Region. MCTC's "Unmet Transit Needs" process has determined that transit services within the Madera County are meeting the reasonable transit needs of the public. These transit systems provide vital transportation services while reducing single-occupancy vehicle trips, improving air quality, and enhancing the overall quality of life for residents throughout the County.

Madera County's projected population growth over the next 26 years, combined with the number of transit-dependent residents, rising fuel costs, and changing demographics and travel patterns, undoubtedly will impact the demand for transit services. While public transit will continue to play an important role in the mobility of those who are dependent on transit as a lifeline service and increasingly for those residents seeking transportation options, delivery of transit services must be reliable, convenient, and cost-effective.

The RTP and SCS reflects a total of $238.4 million in planned transit improvements over the 26-year timeframe of the Plan. This is a 121% increase over transit funding shown in the 2011 RTP ($107.8 million). Of this total, $61.4 million or 26% of transit expenditures is projected for transit enhancements above and beyond current operating and fleet costs projected through 2040. These cost projections assume implementation of the "Hybrid Scenario," continuation at a minimum of current levels of transit services for all systems in the County, and initiation of enhanced transit service in core growth areas. These areas are identified through population and household growth derived from the MCTC transportation model.

Aviation

Increased air service demand will continue to occur in Madera County. This projected demand will increase the need for airport improvements. A number of these improvements are identified in the RTP including land acquisition for future improvements, runway and taxiway renovations and extensions, etc. These improvements have been identified to address aviation system needs described in *the Regional Aviation System Plan* prepared by MCTC in June 1994.

Non-Motorized Systems

MCTC recognizes that increased bicycling, walking and equestrian activities can reduce traffic congestion, air and noise pollution and fuel consumption. As a result, these modes effectively contribute to the quality of life in the region. Bicycle travel has emerged as an increasingly popular form of recreation in the region. Commuting to work has also increased in the urbanized areas of Madera County. Bicycles are essentially pollution-free, use no fossil fuels, are quiet, and take up very little space either in operation or in storage. Bicycling is of interest to the individual because it promotes health, is enjoyable and inexpensive, and, in the congestion of the County, bicycling can be the fastest way of getting to work or to any destination, especially during the peak periods.

✓ Non-Motorized System Needs and Actions

The Cities of Chowchilla and Madera and Madera County have prepared bicycle plans and identify the planned routes for bike lanes and paths. The plans stress the importance of making the road system compatible for bicycle and pedestrian transportation. In addition, the State of California has been

working to improve and promote on-street bicycle commuting to urban cores and to support bicycle access to transit and passenger rail modes.

The Madera County 2004 Bicycle Transportation Plan addresses the needs of both commuting and recreational cyclists throughout the county, identifies safe and convenient routes to key locations throughout the county, and suggests needed improvements and additions to the bikeway routes and facilities. MCTC staff will focus on the implementation program of the plan.

✓ Bicycle and Trail Improvements

To enable the vision of non-motorized linkages to activity centers within the region, the local agencies have requested approximately $36.2 million for non-motorized projects in the 2014 RTP and SCS, representing a 70% increase in funding for non-motorized improvement projects from the 2011 RTP.

✓ Pedestrian Improvements

There are several strategies that will serve to improve conditions for existing pedestrians and to induce others to join them. In general, all new roadway projects and all reconstruction projects should be constructed so as to provide increased safety and mobility for all users, including people who walk and bicycle. In addition, local agencies have identified general streetscape projects within their jurisdictions to promote walkability within activity centers; especially in downtown areas and along major corridors. These and other projects that will reduce greenhouse gas (GHG) emissions may be funded through the SCS Funding Program.

Goods Movement

Goods movement in Madera County is primarily made along the network of highways and railroads. After many years of decline due to increased competition from trucks, rail freight is reasserting itself as an important component of the transportation system. While cartage by truck will remain an important component of a competitive and multimodal freight network, an efficient, high capacity freight rail system is also essential to ensure the seamless movement of goods between Madera County and markets and manufacturers in the north, south and east. While local freight distribution within the San Joaquin Valley, including Madera County, will continue to be handled mostly by trucks, railroads will serve some industries along the railroad lines. Improvements made to rail rights-of-way, generally for passenger travel, should also help the freight railroads by allowing faster, smoother travel.

✓ Goods Movement Needs and Actions

Development of a modern, efficient goods movement system for the region is a cooperative venture, including all of the freight modal providers, airport operators, the federal, State, and local governments, and many other parties. Air cargo operations at the Chowchilla and Madera Municipal Airports are desirable. According to *the Regional Aviation System Plan* for Madera County prepared by MCTC in June 1994, most of the products from agribusiness are transported by truck or by train.

✓ Grade Separation Improvements

Regional rail freight movements often conflict with highway commuter and goods movement traffic. With the anticipated increase in truck and train movements, substantial additional delay for passenger vehicles and trucks can be expected at grade crossings. To avoid these delays, grade separations carrying arterials under or over rail lines carrying substantial amounts of freight is recommended along critical routes such as SR 99 near SR 152. In order to support rail/highway grade crossing conflicts, MCTC intends to support the local agencies' in obtaining funds for grade crossing studies, support the construction of grade separations where streets and highways cross regional rail lines, and recognize the need for additional funding for grade crossing improvement projects to relieve truck and other highway congestion because current program funding needs exceed available public and private funding**.**

Transportation Demand Management

Transportation demand management (TDM) is the all-inclusive term given to a variety of measures used to improve the efficiency of the existing transportation system by managing travel demand. Approximately $56.8 million has been allocated toward TDM improvement projects. Travel behavior may be influenced by mode, reliability, frequency, route, time, and costs, support programs/facilities and education. TDM strategies encourage the use of alternatives to the single occupant vehicle such as carpools, vanpools, bus, rail, bikes, and walking. Alternative work hour programs such as compressed work week programs, flextime, and telecommuting (teleworking) are also TDM strategies as are parking management tactics such as preferential parking for carpools and parking pricing; as well as other strategies to improve traffic flow.

Intelligent Transportation Systems

In addition to traditional lane widening and signal system improvements, the need to further enhance the capacity of the existing and future system using Intelligent Transportation System (ITS) will be important. ITS represents a means of applying new technological breakthroughs in detection, communications, computing and control technologies to improve safety and performance of the surface transportation system. This can be done by using the technologies to manage the transportation system to respond to changing operating conditions, congestion or accidents. ITS technology can be applied to arterials, freeways, transit, trucks and private vehicles.

✓ Intelligent Transportation Systems Needs and Actions

The *San Joaquin Valley Strategic Deployment Plan*, a collaborative effort between the eight Valley counties and Caltrans, was completed in 2001. The plan includes specific strategies and implementation program for ITS applications in Madera County. MCTC continues to participate in the deployment of 511 traveler information technology in the San Joaquin Valley.

Land Use and Transportation Planning Coordination

Madera County participated with Caltrans, Fresno County, the Cities of Fresno and Clovis, and various stakeholder groups in Phase III of the San Joaquin Valley Growth Response Study. Phase III of the Study focused on development of a land use allocation model and a visualization/indicator model for use with the current transportation demand models. These modeling tools will assist the cities of Fresno and Clovis and the counties of Fresno and Madera in reviewing the urban landscape, considering alternative growth scenarios, and making policy changes to successfully implement their planning documents. The tools will provide information on the land use patterns that could enhance transit, reduce vehicle miles traveled, and address air quality issues.

The Sustainable Communities Strategy

The MCTC 2014 RTP and SCS details how the region will reduce greenhouse gas (GHG) emissions to state-mandated levels over time. The inclusion of the SCS is required by Senate Bill 375, and stresses the importance of meeting GHG per capita emission reduction targets set by the California Air Resources Board (CARB). MCTC has approached development of the SCS as an "opportunity" to enhance the integration of transportation, land use and the environment in the Madera region.

Chapter 6 of the RTP and SCS outlines the approach to develop the Sustainable Communities Strategy (SCS). This is the first time that this chapter has been included in the RTP and is provided in response to SB 375 requirements. SB 375 requires that MCTC incorporate the SCS into the RTP. The SCS:

- ✓ Is intended to show how integrated land use and transportation planning can lead to lower GHG emissions from autos and light trucks
- ✓ Resulted in increased transit use and mode share, all of which have led to both mobility and air quality improvements
- ✓ Encourages changes to the urban form that improve accessibility to transit, and create more compact development, thereby yielding a number of transportation benefits to the region. These include reductions in:

- Travel time
- Vehicle miles traveled (VMT)
- Vehicle hours traveled (VHT)
- Vehicle hours of delay

SB 375 was passed by the California Legislature, signed by the Governor, and became law effective September 30, 2008. The legislation requires regions within California to work together to reduce GHG emissions from cars and light trucks. SB 375 requires the integration of transportation, land use, and housing planning with the next updates of the RTPs and (RHNAs). The goal of the SCS is to plan for more sustainable communities that will result in transportation modes that reduce the use of single occupant vehicles. Transportation strategies contained in the RTP including Transportation System Management, Transportation Control Measures and multi-modal transportation system improvements, are major components of the SCS, along with the preferred land use scenario. Transportation and land use integrated together results in less vehicle trip making, especially resulting from increased density, mixed-use, and land use intensity.

Madera County GHG Targets

In 2011, the CARB issued a 5% reduction target to each of the eight (8) Metropolitan Planning Organizations (MPOs) in the San Joaquin Valley including MCTC. CARB agreed that the targets would be applicable to each MPO independently of other Valley MPOs. The targets included a percentage reduction of greenhouse gas emissions from 2005 of 5% by the year 2020 and a reduction in GHG emissions of 10% by the year 2035. Developing the SCS requires meaningful collaboration with each of the local agencies, as well as stakeholders to identify land use and transportation planning opportunities around the region that will address the needs of the growing population and ensure compliance with State and Federal requirements.

Alternative SCS Scenarios

MCTC began with the land use modeling process developed under the Blueprint process using UPLAN. MCTC had developed several land use scenarios (*Status Quo, Low Change, Moderate Change*, and *Major Change*), which were modeled and presented to the local agencies, stakeholders and the public. The result of this effort was the selection of the preferred *Low Change* Blueprint scenario. Since the Blueprint process is now a familiar concept within the county, MCTC decided to use the Blueprint scenarios as the basis for the 2014 RTP SCS scenario development process.

Using the Blueprint as the foundation for the alternative SCS scenarios, MCTC coordinated with the cities and the County, as well as stakeholders and the general public to develop a realistic and implementable RTP and SCS. The first steps were to form the Roundtable Committee in November 2012, meet with each of the local agencies, and conduct a series of workshops with stakeholders and the public to identify their priorities for growth and development within the Madera region. This provided a “bottoms-up” approach

that led to development of each of the scenarios for further refinement and analysis. Chapter 8 – "*Capturing Public & Stakeholder Input*," provides a thorough understanding of the RTP and SCS Roundtable and public outreach process undertaken to develop the RTP and the SCS. Based upon the input received, data requirements and inputs for the updated UPLAN software were prepared, utilizing the parcel-based databases from the Blueprint process, as well as the Blueprint scenario definitions.

The Choice Scenario

On March 20, 2014, the RTP and SCS Roundtable reviewed results of the alternative scenario modeling process and agreed that the Hybrid scenario was the preferred SCS scenario. The Roundtable's recommendation to incorporate the Hybrid Scenario in the 2014 RTP was forwarded to the MCTC Policy Board for its consideration on March 26, 2014. On March 25, 2014, VRPA Technologies, Inc. and MCTC conducted a public visioning workshop to review and discuss the alternative SCS scenarios with the general public and stakeholders. At the March 26 MCTC Board meeting, the Policy Board reaffirmed the Roundtable's recommendation and approved the Hybrid scenario as the scenario that should be reflected in the RTP and SCS and implemented to reduce GHG emissions in Madera County.

During review of the Draft 2014 RTP and SCS and Draft Program Environmental Impact Report (EIR), VRPA Technologies, Inc. and MCTC will conduct another set of public workshops throughout the Madera region and meet with the RTP and SCS Roundtable to receive additional input. Such input will be incorporated into the Final 2014 RTP and SCS and Final PEIR.

SCS/APS Problem Statement

SB 375 requires MCTC to develop the SCS for the Madera region. If the GHG emissions reduction targets cannot be met through the SCS, an APS may be developed showing how those targets would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. There are two mutually important facets to the SB 375 legislation: reducing VMT and encouraging more compact, complete, and efficient communities for the future.

Based upon the results of the alternative scenario development process, Madera County is not able to meet the SCS GHG 5 and 10 percent GHG emission reduction targets. Given this situation, and in anticipation of the requirement to develop an APS, a preliminary analysis has been undertaken in order to better understand issues related to meeting the targets and why Madera County has not been able to satisfactorily comply. This analysis ultimately will involve a detailed evaluation of the traffic model and model inputs. However, one factor that is immediately apparent is the disparity between the two primary geographic regions that comprise Madera County and, parenthetically, the absence of this distinction in those counties which are able to demonstrate compliance with the targets.

Financing the Regional System

Chapter 7 of the RTP and SCS identifies current and anticipated revenue and strategies to fund projects described in Chapter 5 – "*Delivering the Plan*." Primary transportation modes addressed are highways, local streets and roads, public transit, non-motorized bicycle and pedestrian, and rail projects.

The main focus of this financial analysis is to forecast the County's transportation system capital, operating, maintenance and rehabilitation needs and costs relative to reasonably available forecasted revenue and to optimize transportation investments in Madera County. This effort ultimately reveals the magnitude of transportation network needs and projected funding gap that must be bridged or backfilled to address identified needs. The overall economic outlook will be a major determinant in the availability of funding over the planning horizon.

The RTP and SCS is required to be "financially constrained" reflecting those projects that can be realistically funded based on projected revenue and funding opportunities. Projects identified as needed but for which no funds have been identified are also included as unconstrained projects and would receive priority should funding become available. Challenges posed by this plan become evident as the cost of identified transportation needs in all modes exceeds projected funding.

Projected Revenues and Expenditures

A projection of reasonably available revenue is required to determine how many proposed projects can be fully funded through 2040. The Financial Element reflects traditional or historical growth trends in transportation funds available from a variety of federal, State, and local sources. Consistently reliable sources of funding, such as the excise gas tax, however, may become less stable as fuel sales decline and transportation costs rise. The continuation of Measure T and the collection of projected County-wide impact assessment fees are assumed. The loss of these large revenue sources would significantly impact the ability of the County to deliver projects.

It is acceptable practice to identify funding sources that reasonably expected to be valuable during the planning period. Measure T is the second transportation sales tax measure passed in Madera County that provides ½ percent sales tax proceeds for transportation projects and programs. It is therefore expected that Measure T will be renewed by or prior to the year 2026. Financial assumptions are always based on uncertainty and the federal and state funding sources used to develop the financial constrained revenue projections are all also based on assumptions that Congress and the State of California will continue to appropriate funds. When funding sources or programs are eliminated, or when Congress passes new transportation reauthorization legislation the RTP is updated to reflect those changes.

Table 1-1 below shows the cumulative available transportation revenue in constant dollars for all modes and Table 1-2 shows how the revenue has been allocated to each of the modes.

TABLE 7-1
Revenues by Mode
2014 – 2040 ($ Million)

Mode	Total	Percent
Streets & Roads	$1,052.8	76 %
Public Transit	$238.43	17 %
Non-Motorized	$36.20	3 %
Other*	$56.81	4 %
Total	$1,384.23	100%

* "Other" includes no and low-emission vehicle projects; electric charging stations; traffic signals; and various transportation control measures/transportation systems management projects, etc.

TABLE 7-2
Expenditure Summary by Mode
2014 – 2040 ($ Million)

Mode	Total	Percent
Streets & Roads – Rehab & Safety	$298.0	22%
Streets & Roads – Capacity Increasing	$754.8	54%
Subtotal: Streets & Roads	$1,052.8	
Public Transit	$238.4	17%
Non-Motorized	$36.2	3%
Other*	$56.8	4%
Total	$1,384.2	100%

* "Other" includes no and low-emission vehicle projects; electric charging stations; traffic signals; and various transportation control measures/transportation systems management projects, etc.

Environmental Compliance

As mandated by State law, a Program Environmental Impact report (PEIR) has been prepared pursuant to Section 15163 of the California Environmental Quality Act (CEQA). The intent of the PEIR is to serve as CEQA compliance for the MCTC Regional Transportation Plan and Sustainable Communities Strategy (RTP and SCS) and identifies:

- ✓ Significant effects of the updated 2014 RTP and SCS on the environment and indicate the manner in which those significant effects can be mitigated or avoided
- ✓ Unavoidable adverse impacts that cannot be mitigated
- ✓ Project alternatives

The PEIR is an informational document, the purpose of which is to inform public agency decision-makers and the general public of the significant environmental effects (both beneficial and adverse) of the proposed 2014 RTP and SCS.

Public Participation

The RTP and SCS plays a major role in establishing goals and objectives and guide development of infrastructure improvements**.** Extensive efforts were made to achieve consultation and coordination with all transportation providers, facility operators, appropriate federal, State, and local agencies, Native American Tribal Governments, environmental resource agencies, Environmental Justice Communities, air districts, pedestrian and bicycle representatives, and adjoining MPOs/RTPAs according to the requirements of 23 CFR 450.316 and the 2012 MCTC Public Participation Plan.

The 2014 RTP and SCS public participation program built on the success of previous public outreach campaigns to ensure widespread dissemination of information to a geographically and socially diverse population. Since the last RTP update in 2010, MCTC staff has continued to engage the public through workshops, public meetings, and presentations at service clubs and professional organizations. Educating the public about the regional transportation planning process and opportunities for continued public participation and input remains a priority for MCTC.

Environmental Justice

Chapter 10 of the 2014 RTP and SCS addresses environmental justice provisions and assessment. The equity analysis section mainly assesses whether all racial and income target areas will benefit from fair

shares in the transportation investments. However, some transportation projects may create some adverse impacts. Successful transportation projects do not only focus on improvements to the transportation system, but also minimizes and mitigates any negative environmental and social impacts the project may create.

The projects included in the RTP and SCS are intended to alleviate existing congestion and improve the level of service (LOS) for the roadway system. The completion of these proposed projects is likely to help congestion, thus reducing air pollutant emissions from vehicle idling and constantly accelerating and decelerating. Therefore, the neighborhoods that contain these projects may initially experience some negative impacts in local air quality due to the projects' construction, but in the long run, the local air quality in these areas will benefit from the better traffic flow and less localized pollutant emission.

In addition to the roadway projects, the transit and bike projects included in the RTP and SCS will also contribute to the improvement of air quality. The City and County of Madera has also been recognized for its efforts to improve air quality through the purchase of low pollutant or natural gas vehicles. Much of the money used for these particular clean air projects comes from federal CMAQ dollars.

The analysis mainly focuses on racial minority, low-income and geographic equity of transportation projects within Madera County. This analysis endeavors to present a reasonably comprehensive investigation on the fairness of the distribution of benefits and detriments of the transportation projects included in this RTP and SCS. Considering all the analyses as a whole, it is sufficient to conclude that the RTP and SCS does meet the environmental justice requirements: ensuring that all residents of Madera County are subject to proportionate benefits and detriments of transportation investment.

Performance Monitoring

As the Regional Transportation Planning Agency (RTPA) for Madera County, MCTC monitors local and other regional transportation plans, projects and programs for consistency with regional plans. This monitoring process is conducted through the following processes:

- ✓ Regional Transportation Improvement Program (RTIP) / Federal Transportation Improvement Program (FTIP)

- ✓ Air Quality Conformity
- ✓ Other Regional Transportation Monitoring such as the Highway Performance Monitoring System (HPMS) and a traffic monitoring report
- ✓ Triennial Performance Audit for Transit
- ✓ Benchmarking using performance-based measures to identify and monitor the performance of the transportation system

2. Requirements, Trends & Content

Background

MCTC is required to update the Regional Transportation Plan (RTP) to reflect the existing and future regional transportation system in Madera County. The 2014 Update reflects the horizon or "planning" year of 2040, ensuring that the region's transportation system and implementation policies/programs will safely and efficiently accommodate growth envisioned in the Land Use Elements of the Cities of Chowchilla and Madera and Madera County, in the RTP and in the Sustainable Communities Strategy (SCS). As the Regional Transportation Planning Agency (RTPA) and Metropolitan Planning Organization (MPO) for Madera County, MCTC is responsible for development of the RTP and the SCS (reference Chapter 6 - "*Creating a Sustainable Future*" of the 2014 RTP and SCS).

MCTC understands the importance of input and consensus and utilizes a collaborative process to create each RTP and with this latest RTP, the SCS as well. Throughout development of the RTP, MCTC sought the opinion and feedback of interested parties, including local governments, state and federal agencies, environmental and business communities, tribal governments, non-profit organizations, other stakeholders, and the general public. Each of the local, state and federal agencies, as well as other stakeholders were invited to become members of the MCTC 2014 RTP and SCS Roundtable and were involved in development of the RTP and SCS beginning in November 2012. Over the course of five (5) Roundtable meetings, MCTC gained insight into their transportation, land use and environmental issues and needs.

In addition, a series of public workshops and Environmental Justice (EJ) events were held to receive input from the general public (reference Chapter 8 - "*Public Involvement for Change*" of the 2014 RTP and SCS). The Workshops were held during preparation of the SCS scenarios and to review the final set of scenarios for consideration by the MCTC Policy Board. The EJ events were held in the City of Madera and were conducted in Spanish to ensure that the needs of EJ Community were understood and considered during development of the RTP and the SCS. The end result of this collaborative process is this RTP and SCS, which reflects public consideration and addresses the region's needs. The RTP and SCS is further described below.

Regional Transportation Plan

The RTP is a long-range transportation plan providing a vision for regional transportation investments over at least a 20-year period. Using growth forecasts and socioeconomic trends (reference Chapter 3 "Madera County – Past, Present, & Future"), the Plan considers the role of transportation including economic factors, quality of life issues, and environmental factors. The RTP provides an opportunity to identify transportation strategies today that address our mobility needs for the future. The RTP is updated every four (4) years to reflect changes in economic trends, state and federal project and funding requirements, progress made toward project implementation, and current socioeconomic trends. Transportation

projects must be included in the RTP in order to qualify for federal and state funding. The last RTP was adopted by MCTC's Policy Board in July 2010. The next RTP Update will be due in 2018. Regional transportation plans (RTPs) are developed by Regional Transportation Planning Agencies (RTPAs) and Metropolitan Planning Organizations (MPOs) in cooperation with Caltrans and other stakeholders. MCTC has prepared the 2014 RTP consistent with the following mandates:

- ✓ Section 65080 et seq., of Chapter 2.5 of the California Government Code
- ✓ Federal transportation reauthorizations and requirements including MAP-21 (Moving Ahead for Progress in the 21st Century Act), and the prior federal reauthorization bill SAFETEA-LU or the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users enacted in 2005. These acts require that RTPs include only those projects which can actually be delivered with funds expected to be available (i.e., financially constrained), and that those projects will help attain and maintain air quality standards consistent with the Clean Air Act Amendments of 1991 and other federal mandates noted below (reference Chapter 7 - "*Investing in Change*" of the 2014 RTP and SCS)
- ✓ Transportation Conformity for the Air Quality Attainment Plan per 40 CFR Part 51 and 40 CFR Part 93 (reference the separate conformity finding document and Chapter 5 - "*Delivering the Plan for Change*" of the 2014 RTP and SCS)
- ✓ Assembly Bill 32, the California Global Warming Solutions Act of 2006
- ✓ California Transportation Commission (CTC) RTP Guidelines (adopted by the Commission in April 2010 plus an Addendum addressing Climate Change and Greenhouse Gas Emissions adopted by the Commission on May 29, 2008) to assist in the preparation of RTPs pursuant to Section 14522 of the Government Code

RTPs are prepared to provide a clear vision of the regional transportation goals and objectives. In addition, RTPs have many specific functions including:

- ✓ Providing an assessment of the current modes of transportation and the potential for new travel options within the region
- ✓ Predicting the future needs for travel and goods movement
- ✓ Identification and documentation of specific actions necessary to address the region's mobility and accessibility need
- ✓ Identification of guidance and documentation of public policy decisions by local, regional, state and federal officials regarding transportation expenditures and financing;

- ✓ Identification of needed transportation improvements
- ✓ Promotion of consistency between the California Transportation Plan, the RTP, and other transportation plans developed by the cities, the county, districts, private organizations, tribal governments, and State and federal agencies in responding to statewide and interregional transportation issues and needs
- ✓ Providing a forum for 1) participation and cooperation and 2) to facilitate partnerships that reconcile transportation issues, which transcend regional boundaries

Involving the public, federal, state and local agencies, as well as local elected officials, early in the transportation planning process to facilitate discussions and decisions on the social, economic, air quality and environmental issues related to transportation.

Sustainable Communities Strategy

The SCS is a new element of the RTP that will demonstrate the integration of land use, transportation strategies, and transportation investments within the RTP. This new requirement was put in place by the passage of SB 375, with the goal of ensuring that the MCTC region can meet its regional greenhouse gas reduction targets set by the California Air Resources Board (ARB). In 2011, the California Air Resources Board (CARB) issued a 5% reduction target to each of the eight (8) Metropolitan Planning Organizations (MPOs) in the San Joaquin Valley including MCTC. CARB agreed that the targets would be applicable to each MPO independently of other Valley MPOs. The targets included a percentage reduction of greenhouse gas emissions from 2005 of 5% by the year 2020 and a reduction in GHG emissions of 10% by the year 2035. Developing the SCS requires meaningful collaboration with each of the three (3) local governments, as well as stakeholders to identify land-use and transportation opportunities around the region that will address the needs of the growing population and ensure compliance with State and Federal requirements.

The SCS is a comprehensive regional vision implemented by the local agencies. Some of the key land-use policies and strategies that MCTC has identified through its RTP and SCS Roundtable to achieve the goals of SB 375, through the SCS, are:

- ✓ Focusing growth in existing and emerging centers and along major transportation corridors
- ✓ Creating areas of low and moderately dense and mixed-use development and walkable communities
- ✓ Preserving existing agricultural and open spaces throughout Madera County

Details regarding the SCS can be found in Chapter 6 of this RTP and SCS.

Project Location and Description

Madera County is located in California's San Joaquin Central Valley (reference Figure 2-1). Encompassing 2,147 square miles, the County is situated in the geographic center of the State of California along State Route (SR) 99, approximately 18 miles north of Fresno. The County has an average altitude of 265 feet ranging from 180 to 13,000 feet above sea level. The San Joaquin River forms the south and west boundaries with Fresno County. To the north, the Fresno River forms a portion of the boundary with Merced County. Mariposa County forms the remainder of the northern boundary. The crest of the Sierra Nevada Mountains forms the eastern boundary with Mono County. Generally, the County can be divided into three broad geographic regions – the valley area on the west; the foothills between Madera Canal and the 3,500 foot elevation contour; and the mountains from the 3,500 foot contour to the crest of the Sierra Nevada Mountains.

The Valley area is generally flat and ranges in elevation from 45 to 1,000 feet. This area contains approximately two-thirds of the County's population and includes the cities of Chowchilla and Madera, as well as the unincorporated communities of Fairmead, Madera Ranchos, and Bonadelle Ranchos. A well-developed agricultural economic base characterizes this area.

The foothill area contains the remaining one-third of the County population residing in the unincorporated communities of Oakhurst, Ahwahnee, North Fork, Coarsegold, Raymond and Yosemite Lakes Park.

The agricultural base in this area is primarily grazing. Much of the area's employment base is involved in the tourist-related services with a significant commuter component going to Fresno, Madera and other valley employment and service centers.

The mountain area is essentially uninhabited with most of the land located in the Sierra National Forest, Yosemite National Park, Devils Postpile National Monument, and the Ansel Adams and John Muir Wilderness Areas. Historically, the national forest area has supported a strong lumber-based economy; however, this has been seriously curtailed by recent environmental actions.

FIGURE 2-1
Madera County within the State of California

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The Existing Transportation System

Highways and Arterials

Regional access to Madera County is provided by six state highways -- State Routes (SR) 41, 49, 99, 145, 152 and 233, with SR 41 and SR 99 carrying the bulk of North-South travel (reference Figure 2-2 – Madera County Regionally Significant Road System). Madera County's street network generally consists of a series of freeways, expressways, arterials, and collectors including: Roads 4, 9, 16, 23, 26, 36, 200, 223, 274, 400, 415, 600, Avenues 7, 7 ½, 9, 12, 14, 18 ½, 21, and 26, and Firebaugh and Children's Boulevards.

The City of Chowchilla is located in north-central Madera County along the west side of SR 99, straddling SR 233 (Robertson Boulevard). The City of Madera is located in central Madera County and straddles both sides of SR 99 and SR 145 (Madera, Gateway and Yosemite Avenues). Other major arterials in the City of Madera include: Avenue 12, Avenue 14 (Howard Road and Olive Avenue), Cleveland Avenue, Road 23, and other sections of Gateway Drive.

In addition, SR 41 provides access to the communities of Coarsegold and Oakhurst, leading into the Sierra Nevada Mountains towards Yosemite National Park. SR 49 branches off of SR 41 in Oakhurst providing access to the community of Ahwahnee. Each of these major streets and highways, in addition to others depicted on Figure 2-2, are part of the Madera County Regionally Significant Road System.

✓ Regionally Significant Roads System

MCTC, in conjunction with its member agencies and Caltrans, has developed the "Regionally Significant Road System" for transportation modeling purposes based on the FHWA Functional Classifications System of Streets and Highways. In general, the classification systems used by local agencies coincide with the FHWA Functional Classification System. However, design standards and geometrics for particular streets within local jurisdictions, are subject to specific design criteria of the local agency.

There is a significant distinction between the Regionally Significant Road System and the Countywide Network. Regionally significant projects are statutorily required to be treated separately for air quality reasons.

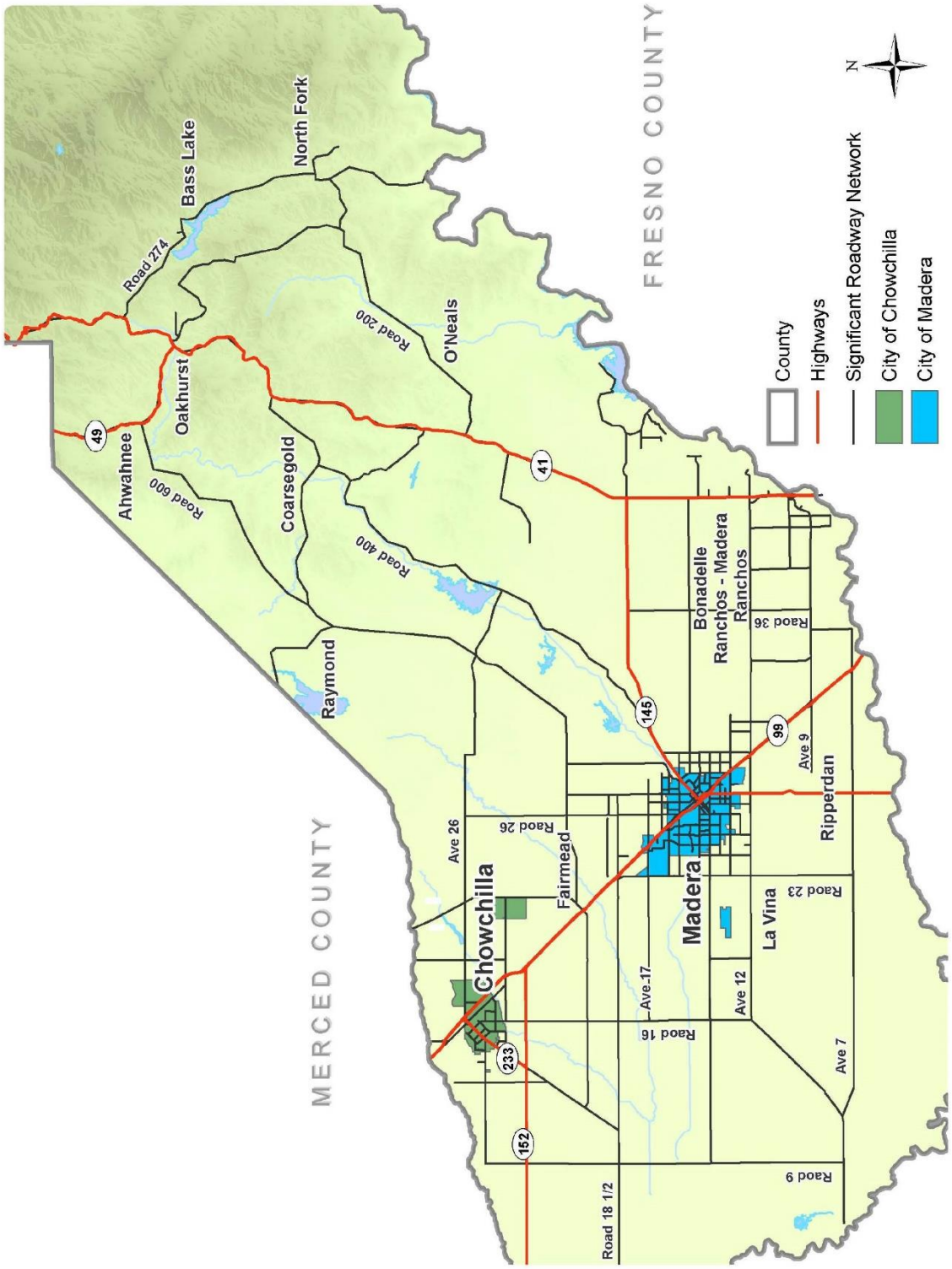
✓ Functional Classification System

Functional classification is the process by which streets and highways are grouped into classes according to the type of service they are intended to provide. Fundamental to this process is the recognition that individual streets and roads do not serve travel independently in any major way.

Functional classifications define the channelization process by defining the area that a particular road or street should service through a highway network.

FIGURE 2-2

Madera County Regionally Significant Road System



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✓ Inventory

Currently there are standards for road facilities falling into five functional classifications:

- **Freeways** provide high speed, through traffic movement on limited access, continuous routes. This class of facility provides connections to other regional highways and carries high traffic volumes at maximum legal speeds. Access is strictly controlled and conforms to state standards for rural freeways with interchanges spaced at two mile or greater distances. There is no direct access provided to adjacent properties. Freeways are typically developed within a 180 to 200 foot right-of-way.

- **Expressways** - very similar in function to freeways with the primary difference found in points of access. Expressways provide limited access via at grade intersections with arterial streets, which are usually spaced one mile intervals. Expressways are developed as four lane divided facilities within a 100 to 120 foot right-of-way.

- **Arterials** - primary purpose is to provide mobility. Arterials are designed to carry through traffic on continuous routes and to connect major traffic generators, freeways, and other arterials. Access is allowed under specific conditions and in conformance with local standards. Urban arterials are designed to accommodate four travel lanes and can be either divided or undivided. Rural arterials are generally two lane facilities, which serve to connect rural communities to urbanized areas or freeways. Arterials are developed within a 100 foot right-of-way.

- **Collectors** - primary purpose is to provide access to local land uses. Collectors provide for internal traffic movement and connect local roads to higher level facilities such as arterials. Urban collectors may be four lanes but are usually two lane facilities within an 80 foot right-of-way. Rural collectors are two lanes constructed within an 80 foot right-of-way.

- **Local Roads** - provide direct access to adjoining properties and connect with collector and arterial roads. Local roads are developed as two lane facilities within a 60 foot right-of-way.

This hierarchy of classifications is a general guide to the major elements of the circulation system. Many times a street will serve several functions providing both mobility and access. Street width does not always correspond to streets regional function. This is especially true in the rural areas where rights of way and pavement width on major regional routes can be considerably less than ideal standards.

✓ State Highways

Parts of seven state highways pass through Madera County, including one unconstructed route:

- **State Route 99** - a four-lane freeway from the Fresno County Line to Avenue 21 and from SR 152 to the Merced County Line. The segment between Avenue 21 and SR 152 was

widened to a six-lane freeway. SR 99 is the primary inter-regional corridor within the San Joaquin Valley. It provides a critical linkage for shipment of agricultural goods to markets outside of the Valley; provides for through traffic between major metropolitan areas of California; and during the summer months has significant recreational access function.

- **State Route 41** – a four-lane freeway between the Fresno County Line and Avenue 10 and extends in a north/south direction through eastern Madera County to the Mariposa County Line as a two-lane highway with the exception of a four-lane section within the Community of Oakhurst. SR 41 has regional and national importance as an access to Yosemite National Park and the recreational areas of the east county. With residential growth in the SR 41 corridor, most notably in the Oakhurst, Coarsegold, Yosemite Lakes, and the Ranchos area, this route is becoming increasingly important as a commuter link to the Fresno-Clovis Metropolitan Area (FCMA).

- **State Route 49** – a two- to four-lane highway in eastern Madera County extending 9 miles north and west from its intersection with SR 41 in Oakhurst. This facility provides local circulation within the general Oakhurst/Ahwahnee area and regional access to the California "Gold Country" and Yosemite National Park.

- **State Route 145** – a two- and four-lane highway extending north/south from the Fresno County Line to the City of Madera, then east/west to its intersection with SR 41, SR 145 provides a secondary access to Yosemite National Park via SR 41, and provides an important linkage to both SR 99 and Interstate 5 (I-5) for farm to market shipping.

- **State Route 152** – a four-lane divided expressway extending east/west from the Merced County Line to SR 99. SR 152 is a primary access route from the central San Joaquin Valley to Monterey and Santa Clara Counties. It is an important agricultural, commercial, and recreational access route.

- **State Route 233** – a two- and four-lane highway extending four miles northeasterly from its intersection with SR 152 to the interchange with SR 99. This route serves primarily to provide for northbound traffic movement from SR 152 and SR 99, as well as local access to Chowchilla.

✓ Level of Service Analysis

Level of Service (LOS) standards are used to quantitatively assess the Regionally Significant System's performance. To determine the type and number of transportation projects to accommodate Madera County's expected growth, LOS was assessed along the existing Regionally Significant Roads System.

According to the 2010 Highway Capacity Manual (HCM), LOS is categorized by two parameters of traffic, uninterrupted and interrupted flow. Uninterrupted flow facilities do not have fixed elements such as traffic signals that cause interruptions in traffic flow. Interrupted flow facilities have fixed elements that cause an interruption in the flow of traffic such as stop signs, signalized intersections,

and arterial roads[1]. According to goals and objectives described in Chapter III of the 2011 RTP, Policy Element, the goal is to maintain acceptable levels of service along the highways, streets and roads network. For purposes of this environmental analysis, a minimum LOS of "D" was assumed along local streets and roads. Caltrans minimum LOS for the State routes is LOS "C". To determine the existing LOS for each segment along the Regionally Significant Roads System and other facilities where current traffic volumes were available, segment LOS was estimated using the 2010 MCTC Traffic Model.

Results of the LOS segment analysis along the RTP Regionally Significant Roads System are reflected in Figure 2-3 (Madera County) and Figure 2-4 (Cities of Madera and Chowchilla). LOS results are shown for the PM Peak Hour unless the AM Peak Hour results identified greater deficiencies. Results of the LOS analysis indicate that three (3) segments along the Regionally Significant Road System are currently operating at LOS "D" through "F" for State Routes and no or zero local street and highway segments are operating at LOS "E" or "F. The resultant list of existing deficient facilities along the Regionally Significant Roads System and other important facilities provides an opportunity for MCTC, Caltrans, and local agencies to focus on projects that will improve the overall LOS of the regional network in the future.

Existing Public Transportation

Public transit in Madera County includes Madera Area Express fixed route and Dial-a-Ride, Madera County Connection, Eastern Madera Senior Bus, Escort Program, Chowchilla Area Transit Express, CatLinx, specialized social service transportation services, Greyhound, and taxi service. Public transportation is provided by fixed-route and demand-response transit systems, as described below.

✓ City of Madera

The City of Madera and its environs are served by a number of public and private transportation providers. The City operates the Madera Area Express (MAX) fixed-route system and Dial-A-Ride, a general public demand-responsive system. Both services are operated under contract with First Transit. The fixed-route system is operated weekdays from 7:00 a.m. to 6:30 p.m., Saturdays from 9:00 a.m. to 4:00 p.m., and Sundays from 8:30 a.m. to 2:30 p.m. Service operates primarily within the City limits, as shown in Figure 2-5. The system transports over 145,000 riders annually.

[1] Transportation Research Board, 2010

FIGURE 2-3
2010 PM Peak Hour Level of Service Results – County

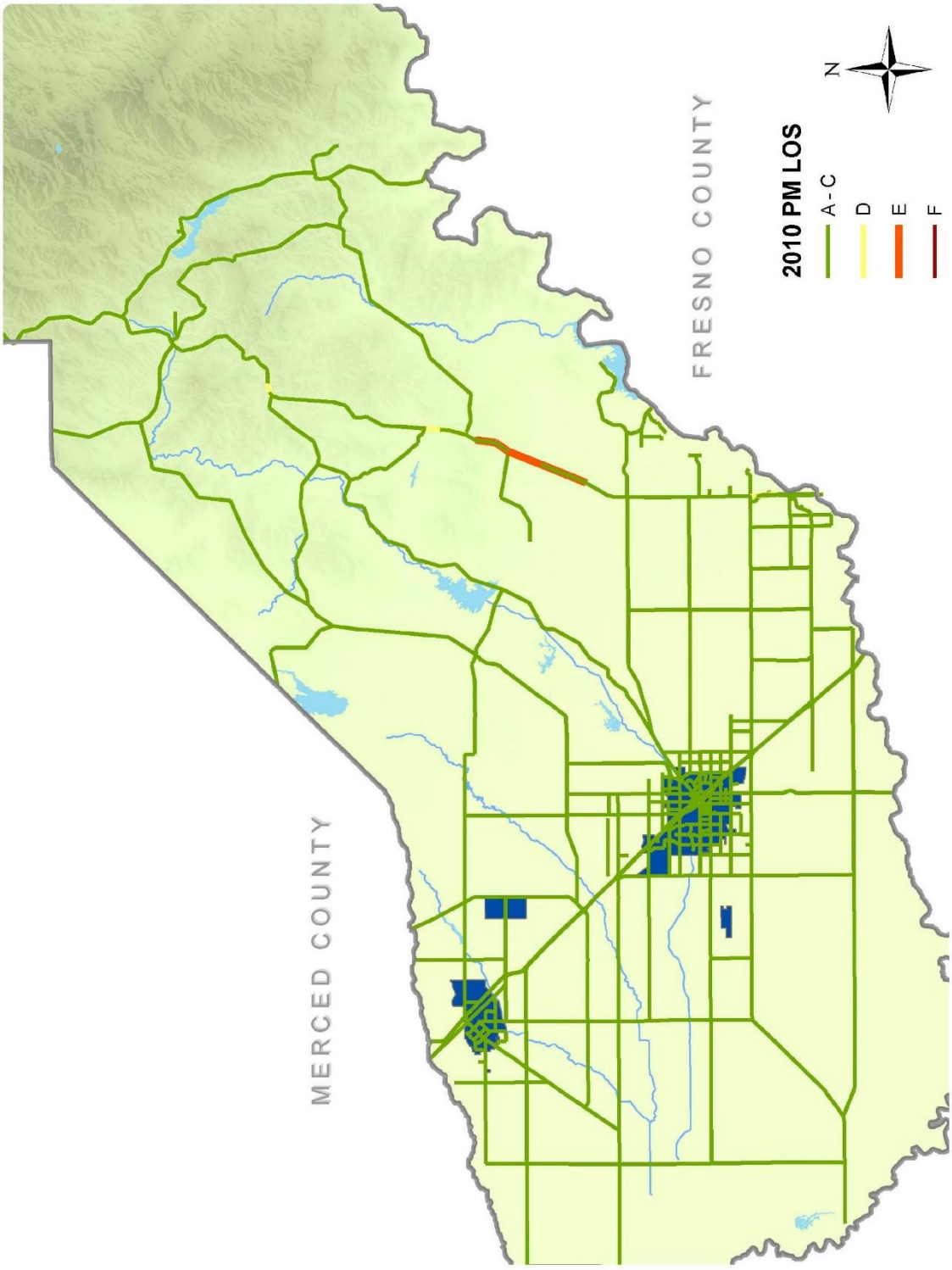

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FIGURE 2-4

2010 PM Peak Hour Level of Service Results – Cities

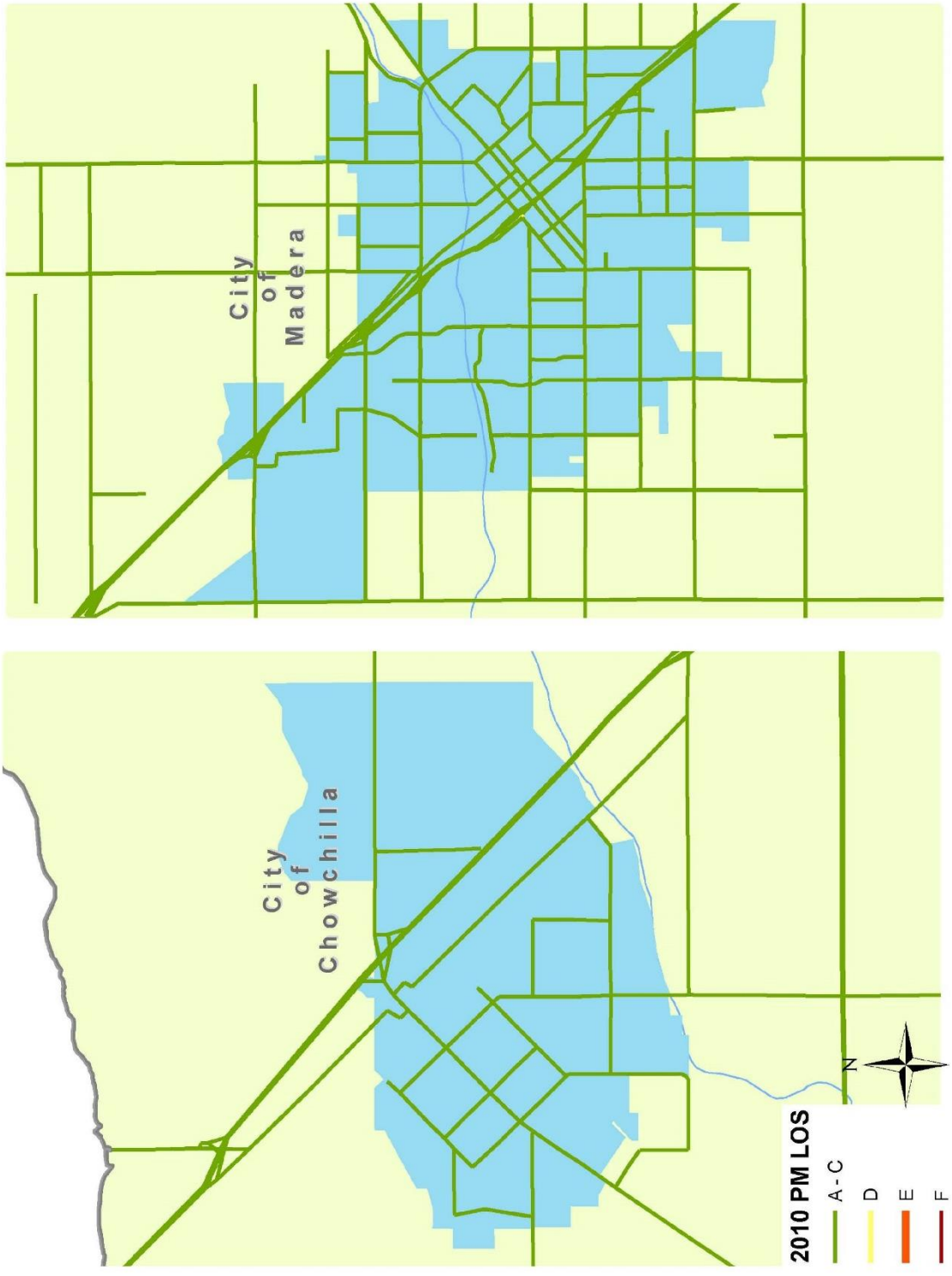

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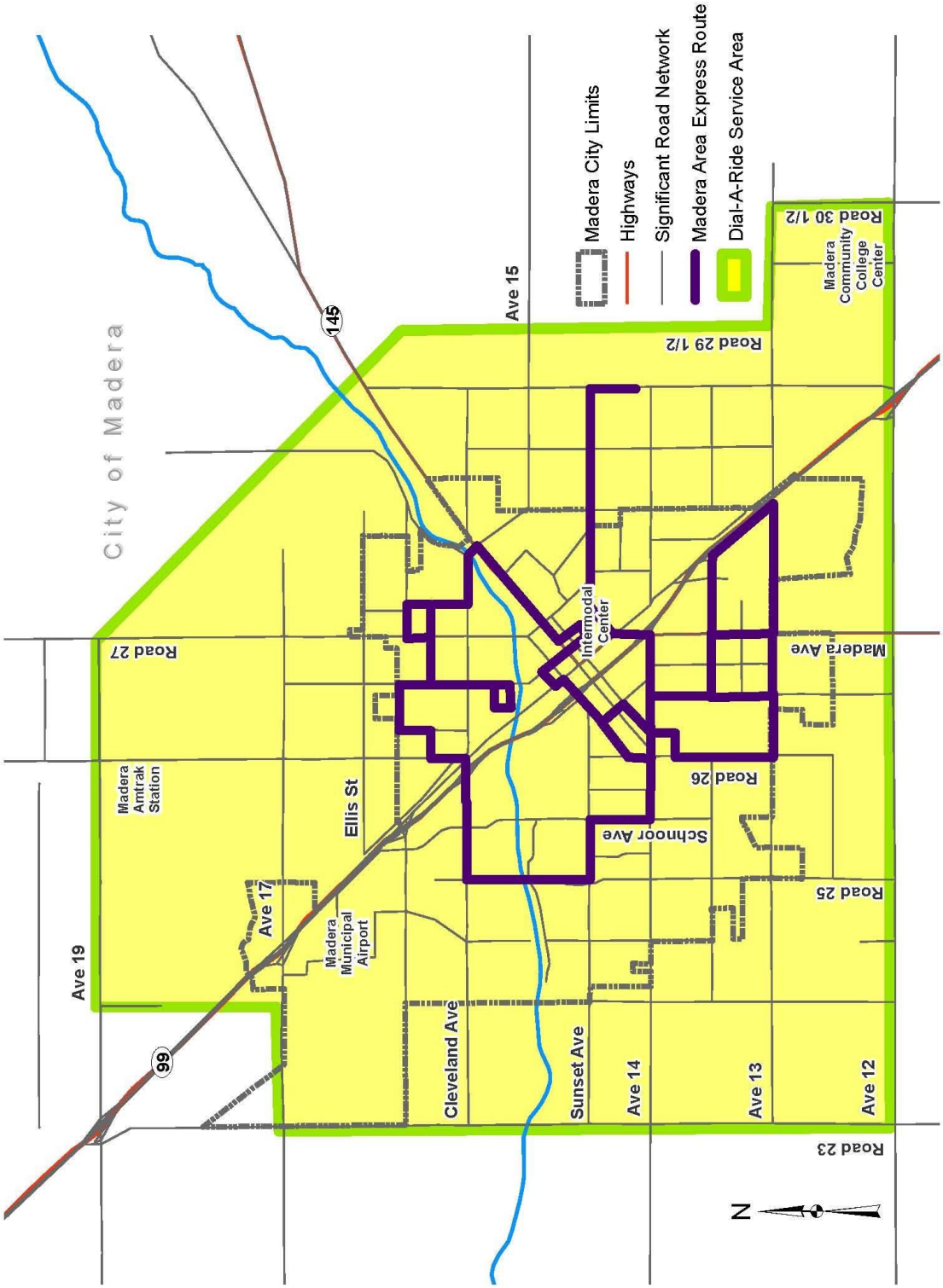
FIGURE 2-5
Madera Area Express & Madera Dial-A-Ride Service Areas



your madera 2040

Dial-A-Ride is a general public system primarily serving the elderly and disabled. The service operates weekdays from 7:00 a.m. to 6:30 p.m., Saturdays from 9:00 a.m. to 4:00 p.m. and Sundays from 8:30 a.m. to 2:30 p.m. The system operates within the Madera urban area covering a five-mile radius from the downtown area, as depicted on Figure 2-5, and transports 35,000 riders annually. This service is funded jointly by the City and County.

✓ City of Chowchilla

The City of Chowchilla operates Chowchilla Area Transit Express (CATX), a general public, demand-responsive service. CATX service was initiated in 1995 and incorporated the senior bus program. Service is offered weekdays from 7:30 a.m. to 5:00 p.m. The County of Madera funds CATX service for unincorporated portions of the service area. As shown in Figure 2-6, the CATX service area encompasses the City and contiguous unincorporated areas, including Fairmead. Service is provided with two vehicles on weekdays and transports 13,000 riders annually.

CatLinx inter-city fixed-route service from the City of Chowchilla to the City of Merced was initiated as a pilot service in November 2012. This service provides two roundtrips on weekdays—one in the morning and another in the late afternoon and transports 2,800 riders annually.

✓ County of Madera

The County of Madera operates three transit services, Madera County Connection (MCC), a general public, intercity fixed-route system; the Eastern Madera Senior Bus, a demand-response service for seniors and disabled; and the Escort Program, a demand-response service providing medical trips.

The MCC was initiated in 2001 and provides general public, inter-city fixed-route service. As shown in Figure 2-7, MCC provides access to the communities of Madera, Chowchilla, Fairmead, La Vina, Ripperdan, Eastin Arcola, Ranchos, Yosemite Lakes Park, Coarsegold, Oakhurst, and North Fork. The service operates five days a week from 6:00 a.m. to 8:00 p.m. and transports 25,000 riders annually. The Senior Bus serves the communities of Oakhurst, Coarsegold, Bass Lake and Ahwahnee and transports 4,000 riders annually. The Escort Program provides trips to Madera, Fresno, and Clovis and carries 350 riders annually.

FIGURE 2-6
Chowchilla Service Area

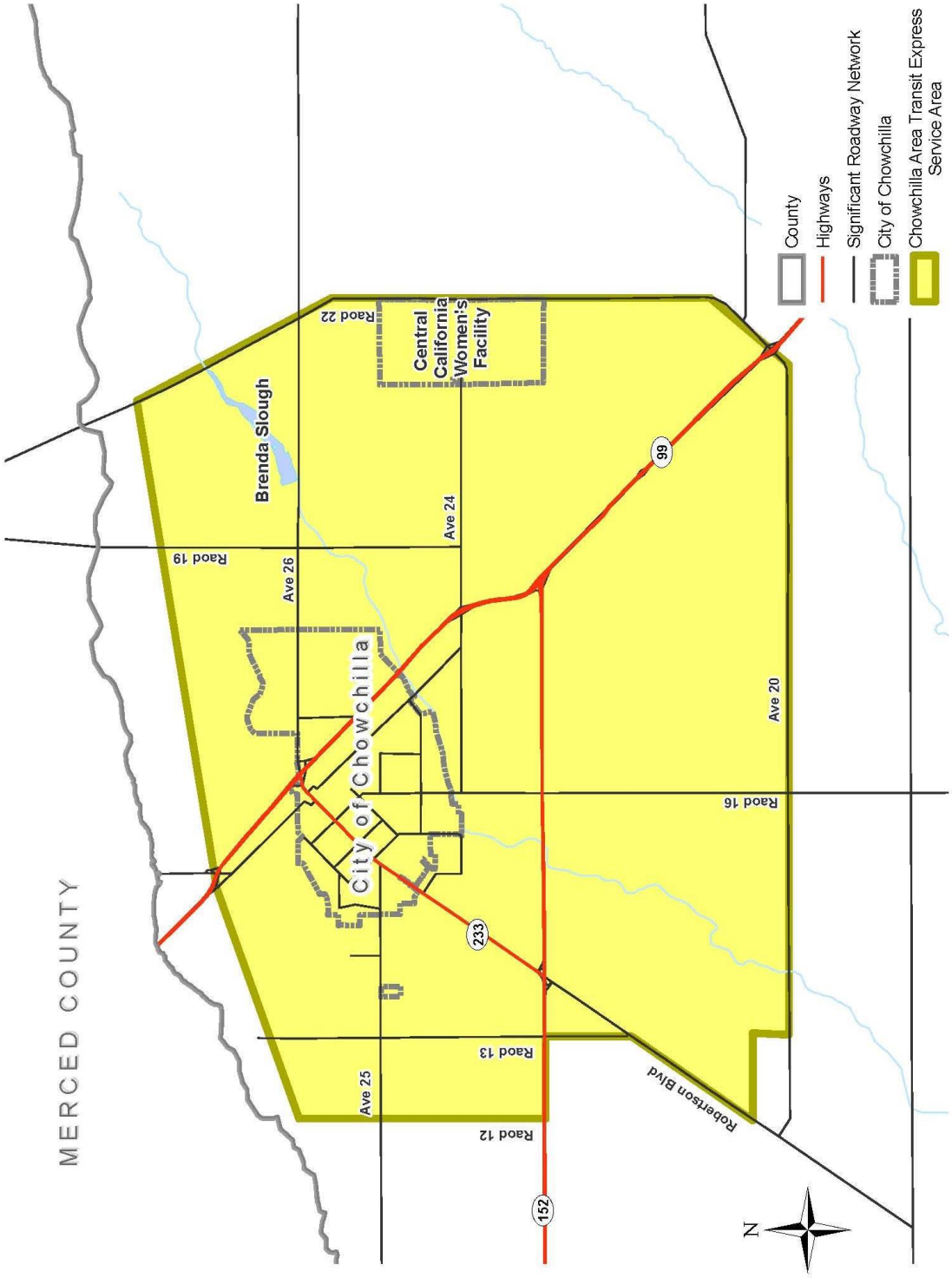


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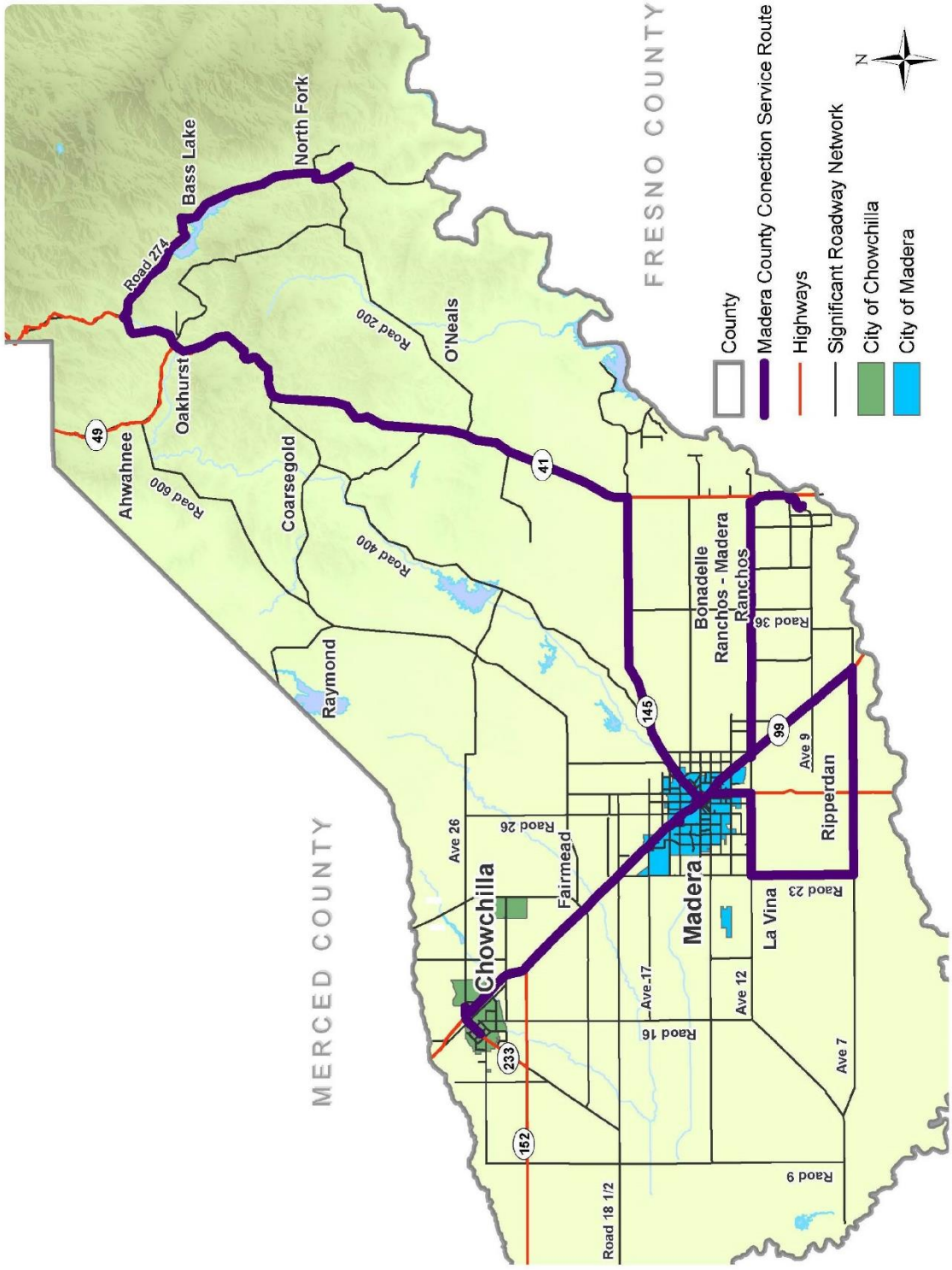
FIGURE 2-7
Madera County Connection Service Route



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✓ Social Service Transportation

Five key social service agencies provide transportation in Madera County (reference Table 2-1). These agencies largely provide service to their clients and to specific sites.

✓ Private Providers

Several private carriers provide inter-city services, including Greyhound and Madera Cab Company. Greyhound operates seven days a week from the City of Madera's Downtown Intermodal Center on North "E" Street. Madera Cab Company provides service in Madera County seven days a week, 24 hours a day. This operator is based at the Downtown Intermodal Center shown to the right.

In addition to those private transit services listed above, other private medical transit services are available within the County.

TABLE 2-1
Social Service Transportation Providers in Madera County

SOCIAL SERVICE AGENCY	TRANSPORTATION PROVIDED
Heartland Opportunity Center	• Demand-response service • Weekdays from 8 a.m. to 4 p.m. • Serves disabled persons over 18 years old
Community Action Partnership of Madera County – Head Start	• Fixed-route transportation to schools • Weekdays from 6 a.m. to 5 p.m. • Serves Head Start students
Pacific Family Health, Inc.	• Demand-response service • Monday thru Saturday from 5 a.m. to 9 p.m. • Serves dialysis patients
Madera County Behavioral Health	• Service as needed to and from the Madera Counseling Center in the greater Chowchilla, Madera, and Oakhurst communities • Weekdays from 8 a.m. to 5 p.m. • Counseling Center clients
American Cancer Society	• Volunteer driver program using private vehicles • Serves ambulatory cancer patients

✓ Passenger Rail/Support Facilities

Madera County is served by the Burlington Northern Santa Fe (BNSF) and the Union Pacific (UP) Railroads. Amtrak operates seven days a week with fourteen (14) daily stops in Madera along the BNSF Railroad alignment. The station is located on Avenue 15½ and Road 29. The nearest stop to the north is Merced and to the south, Fresno.

Amtrak services are provided on the Burlington Northern & Santa Fe tracks located east of Madera. The *San Joaquin* Amtrak route provides passenger rail service to Oakland and Bakersfield four times a day and Sacramento twice a day. Amtrak also provides thruway bus service from various rail stations along the San Joaquin route to cities that are not accessible by rail, such as Los Angeles, San Francisco and San Jose. A relatively new Amtrak station opened in November 2010 and is located on Road 26 north of Madera. Figure 2-8 provides the location of existing passenger rail and support facilities, airports, and non-motorized facilities in Madera County.

Aviation

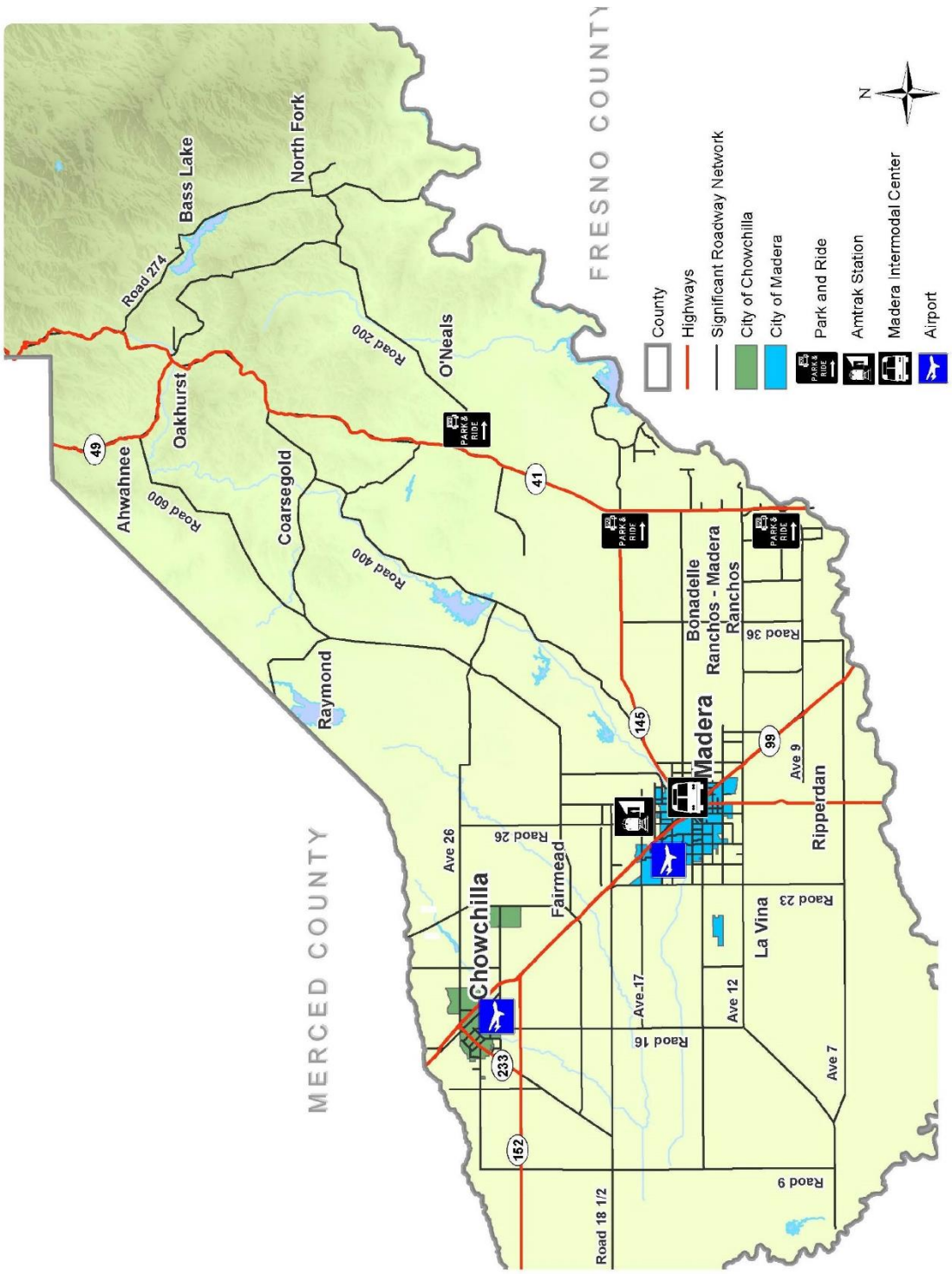
The City of Madera owns and operates the Madera County Municipal Airport, which provides aviation services to approximately 88 fixed-base operators. The City of Chowchilla operates the Chowchilla Municipal Airport with 18 fixed-base operators. Table 2-2 provides the total operations per year for each of these airport facilities. Fresno Yosemite International Airport (FAT) in Fresno County is the primary passenger airport facility in the region. Both airports are depicted in Figure 2-8 below.

TABLE 2-2

Madera County Airport Operations

AIRPORT	OPERATIONS PER YEAR
Madera Municipal	7.200
Chowchilla Municipal	6,700
TOTAL	**13,900**

FIGURE 2-8
Existing Passenger Rail & Transit Support Facilities, Airports, & Park-and-Ride Facilities



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Non-Motorized Systems

The Cities of Chowchilla and Madera, and Madera County continue to be involved in implementing bicycle facilities. The City of Madera annually reserves a portion of its Local Transportation Fund (LTF) proceeds for the construction of bicycle and pedestrian facilities. These funds are used in conjunction with funds from the CMAQ, State Bicycle Transportation Account, and other programs to implement elements of the Madera County 2004 Regional Bicycle Transportation Plan.

Goods Movement

Goods movement in Madera County is primarily provided by trucking and freight rail services. The trucking industry includes common carrier, private carrier, contract carrier, drayage and owner-operator services, which handle both line-haul and pick-up and delivery services. A number of trucking facilities are located in Madera County including the public highway system, truck terminal facilities, freight forwarders, truck stops, and maintenance facilities. These facilities are especially concentrated along SR 99.

Transportation Demand Management

Transportation demand management (TDM) programs in Madera County primarily consist of the voluntary rideshare program, the park & ride facilities program, the alternative fuels program, and other programs that provide for congestion relief and enhanced travel. Details regarding these TDM programs are provided below.

✓ Voluntary Rideshare Program

Central Valley Rideshare is a program provided by the Fresno County Council of Governments (Fresno COG) and services Fresno, Kings, Madera, and a portion of Tulare counties. The program provides computerized matching, employer outreach and marketing.

✓ Park & Ride Facilities

There are currently three Caltrans owned/maintained Park & Ride lots along the SR 41 corridor (reference Figure 2-8) at its intersection with:

- Road 200
- SR 145
- Avenue 10

✓ Alternative Fuels Program

The Cities, County of Madera, and Madera Unified School District have installed CNG fueling facilities and have some alternative fuels projects focused on the purchase of CNG-fueled vehicles (passenger cars, trucks, dump trucks, utility vehicles, etc.) for city and County operations. The County and cities continue to utilize and expand their CNG fueling facilities as they continue to implement an alternative fuels program to include city, County, and school district fleet vehicles.

Intelligent Transportation Systems

In addition to planning for specific modes of transportation that will serve the needs of existing and future residents, the integration of advanced transportation technologies is also important. The use of new technologies [Intelligent Transportation Systems (ITS)] will allow maximum use of the transportation infrastructure including streets and highways and transit. Further, the need for traveler information is critical in order to lessen the impacts of accidents and other events in the region. Real-time traveler information can make traveling in Madera County more enjoyable and reduce delay and congestion. According to information provided through the San Joaquin Valley ITS Study, there are a number of ITS strategies referenced in the ITS Plan including surveillance and red-light running equipment at high accident locations in Madera, emergency vehicle dispatching systems in rural areas of the County, traveler information, restructuring and optimization of rural demand-responsive transit service, and analysis tools including geographic information systems (GIS).

Plan Development

Overview

The 2014 RTP and SCS is a planning guide that contains transportation policy and projects for the next 26 years (to year 2040). The RTP and SCS include programs and policies for congestion management, transit, bicycles and pedestrians, roadways, freight and finances. The RTP must be revised at least every four years, since the County is designated as non-attainment for federal air quality standards.

The RTP's primary use is as a regional long-range plan for federally funded transportation projects, and it also serves as a comprehensive, coordinated transportation plan for all the governmental jurisdictions within the region. Different jurisdictions have different transportation implementation responsibilities under the plan. These include Caltrans, the County of Madera, and the Cities of Chowchilla and Madera.

The process to approve the 2014 RTP included assessing Madera County's transportation needs, preparation of the SCS, identifying projects to address the needs, evaluating the projects considering the benefit vs. cost and other performance objectives, addressing air quality conformity requirements, conducting public hearings on the 2014 RTP and SCS by MCTC, certification of the RTP and SCS Draft and Final Program Environmental Impact Report (PEIR) by MCTC, and approval of a resolution passed by MCTC approving the RTP and SCS. Public involvement was encouraged throughout the RTP and SCS development process.

RTP and SCS Contents

The RTP and SCS consists of various elements referenced in federal statutes and in the State RTP Guidelines including:

- ✓ *Chapter 1: The 2014 RTP and SCS – A Summary* – provides a brief summary of the RTP and SCS reflecting the major findings and recommendations found in each chapter of the Plan

- ✓ *Chapter 2: Requirements, Trends & Contents* – describes the purpose of the RTP and SCS process, associated mandates, the existing transportation system in Madera County, and the contents of the Plan itself

- ✓ *Chapter 3: The Madera Region: Past, Present, & Future* – provides a comprehensive overview of the Region including growth and development, and planning forecasts and assumptions

- ✓ *Chapter 4: A Shared Vision* - provides a comprehensive listing of goals, objectives, and strategies that address the short- and long-term mobility and accessibility needs and planning requirements for the County

- ✓ *Chapter 5: Delivering the Plan* - provides a comprehensive assessment of needs and issues considering the goals and objectives contained in Chapter 4 – "A Shared Vision", describes the air quality conformity requirements and issues, includes a multimodal element addressing the needs and issues, inventory, accomplishments, and an assessment of future demand for all modes of transportation including highways and arterials, mass transportation, aviation, non-motorized systems, goods movement, TDM, and ITS needs and analysis. The Element also contains the actions necessary to support the goals and objectives referenced in the Policy Element and in the needs assessment

- ✓ *Chapter 6: Creating a Sustainable Future* - Involves working with our partners, local governments, and stakeholders to identify a transportation system supported by a land use pattern that reduces vehicle trips, vehicle miles traveled (VMT), and greenhouse gas emissions and addresses requirements set forth in SB 375

- ✓ *Chapter 7: Investing In Change* - provides a thorough assessment of project costs and revenue assumptions for each mode of transportation. The RTP must be financially constrained in accordance with air quality conformity requirements. As such, this chapter must ensure that projects, which are needed to enhance mobility and accessibility throughout the County, are also financed within the timeframe of the Plan (year 2040) and reduce air emissions consistent with reduction targets. This chapter also includes a description of unmet transportation needs, maintenance and operation needs, and the potential for new financing strategies/sources of funding to address revenue shortfalls, if applicable

- ✓ *Chapter 8: Public Involvement for Change* – includes a thorough review of the public involvement and community outreach program for the Project

- ✓ *Chapter 9: Environmental Considerations* - references important findings of the air quality conformity process, the EIR document and process, and additional supportive information necessary to provide a complete and thorough understanding of the planning and environmental review process

- ✓ *Chapter 10: Addressing Environmental Justice* – provides a description of MCTC's environmental justice program that ensures early and continued public involvement, and an equal distribution of transportation projects to all areas of the region, paying close attention to the needs of low income and minority populations.

- ✓ *Chapter 11: Measuring Up* - provides a description of the various monitoring programs that will be used by MCTC to monitor the performance of the regional transportation system

- ✓ *Appendices* - includes the San Joaquin Valley Regional Transportation Overview and technical and other appendices detailing the methodologies applied, a glossary of terms, and other supportive information

RTP and SCS Scope

Upon approval, the RTP and SCS serves as the region's main policy tool designating future road improvements and extensions, addresses non-motorized, transit, rail, and aviation transportation needs, and identifies funding strategies. The intent of the RTP and SCS is to:

- ✓ Describe the transportation needs and issues within the County, including regional relationships that affect the Region's transportation system

- ✓ Identify a preferred SCS scenario and transportation system that results in reduced GHG emissions

- ✓ Describe the proposed traffic circulation system in terms of classification, location, cost and need

- ✓ Consider as essential, alternatives other than the single occupant vehicle in providing services and access to facilities

- ✓ Support policies that coordinate the circulation system with planned land uses and provide direction for future decision-making in the realization of the RTP goals and objectives

- ✓ Develop implementation strategies and identify funding sources to provide for the timely implementation of the RTP's and SCS's recommendations

Relationship to Other Plans and Programs

The 2014 RTP and SCS, in conjunction with General Plan Circulation Elements adopted by the Cities of Chowchilla and Madera and Madera County, designates the location and scale of existing and proposed transportation systems integrated with future land use allocations consistent with those general plans and policies. Transportation improvements and land use allocation shown in the RTP and SCS are generalized and are not intended to show specific alignments or sites for future land use development.

3. The Madera Region - Past, Present & Future

Current Population and Employment

Historical demographic trends and projections of both population and employment are essential to development of the RTP. The population estimates and projections that are referenced in Tables 3-1 through 3-4 and Figures 3-1 through 3-3 were identified from U.S. Bureau of the Census, California Department of Finance (DOF), California Employment Development Department (EDD), Central California Futures Institute, or from other data and are consistent with assumptions used in the Madera County Regional Traffic Model.

TABLE 3-1

Madera County Historical Population Growth: Years 1930 - 2010

YEAR	POPULATION	% INCREASE	AVERAGE ANNUAL INCREASE
1930	17,164		
1940	23,314	35.8	3.1
1950	36,964	58.5	4.7
1960	40,468	9.5	0.9
1970	41,519	2.6	0.2
1980	63,116	52	4.3
1990	88,090	39.6	3.4
2000	123,109	39.8	4
2010	142,241	15.5	1.55

Source: U.S. 2010 Census

2010 Population excludes group quarters population

FIGURE 3-1
Madera County Historical Population Growth: Years 1930 - 2010

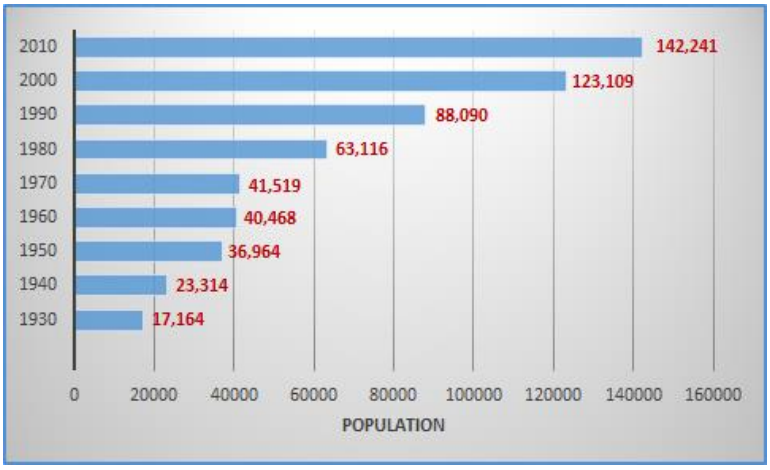


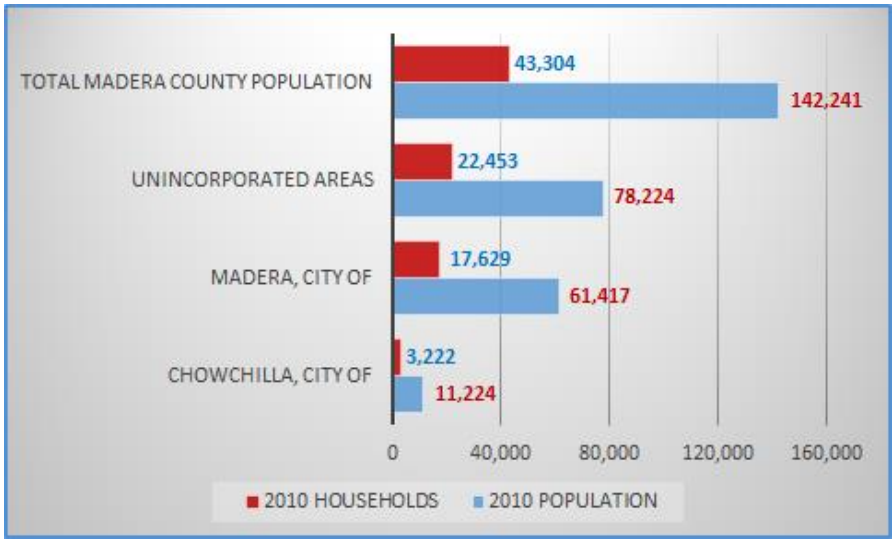
TABLE 3-2
January 1, 2010 Population & Households

AREA OF MADERA COUNTY	2010 POPULATION	2010 HOUSEHOLDS
Chowchilla, City of	11,224	3,417
Madera, City of	61,417	18,698
Unincorporated areas	78,224	23,814
TOTAL	150,865	45,929

Source: U.S. 2010 Census
2010 Population excludes group quarters population

FIGURE 3-2

January 1, 2010 Population & Households



Based on data from the U.S. Economic Census, the California DOF, the California EDD, and input from MCTC and Madera County staff, Table 3-3 and Figure 3-3 provide information on employment by major industrial category.

Other Current Socioeconomic Factors

In addition to population, households, and employment, it is important to understand the other socioeconomic factors that help identify the uniqueness of Madera County including household median income, age characteristics, and ethnicity. According to the 2010 U.S. Census:

- ✓ The median household income in 2010 was $47,937, which was relatively similar to other Central Valley counties
- ✓ 48.6% of the population in Madera County was male and 51.4% was female
- ✓ 34.1% was under the age of eighteen
- ✓ 53.4% were between the ages of twenty and 65
- ✓ 12.2% of the population was 65 years of age or older
- ✓ 86.4% of the population was white
- ✓ 55.2% was Hispanic
- ✓ 4.1% was African-American
- ✓ 4.6% was American Indian, Eskimo, or Aleut
- ✓ 2.5% was Asian or Pacific Islander

TABLE 3-3
Employment and Madera County Residents
By Industry Category – 2010

TOTAL EMPLOYMENT	42,800	% OF TOTAL EMPLOYMENT
Total Farm	10,300	24.1%
Total Nonfarm	32,500	75.9%
Mining, Logging, and Construction	*1,100*	2.6%
Manufacturing	*2,800*	6.5%
Trade, Transportation, and Utilities	*4,900*	11.4%
Wholesale Trade	700	1.6%
Retail Trade	3,400	7.9%
Transportation, Warehousing, and Utilities	800	1.9%
Information	*400*	0.9%
Financial Activities	*700*	1.6%
Professional and Business Services	*2,700*	6.3%
Educational Services (Private), Health Care, and Social Assistance	*5,900*	13.8%
Health Care and Social Assistance	5,600	13.1%
Leisure and Hospitality	*2,600*	6.1%
Other Services (excludes 814-Private Household Workers)	*800*	1.9%
Government	*10,600*	24.8%
Federal Government (D)	400	0.9%
State and Local Government	10,300	24.1%
State Government	2,500	5.8%
Local Government	7,700	18.0%
Local Government Education	4,300	10.0%

Source: U.S. Economic Census, the California DOF, the California EDD

Future Population and Employment Projections

Population and employment estimates/projections for Madera County are presented in Table 3-4 and Figure 3-3. These estimates/projections are provided for Years 2010, 2020, 2035 and 2040. The estimates/projections of population, households and employment were allocated to the broad geographic areas presented in the table and further allocated to 473 traffic analysis zones (TAZs) as part of the Madera County Regional Traffic Model process. Socioeconomic conditions for each of these years is important for purposes of establishing the modeling base year or Year 2010, future years 2020 and 2035 or years for which the SCS has been developed to determine the greenhouse gas (GHG) emission reductions, and future year 2040, which is the horizon year for development of the RTP. It should be noted that population projections for the year 2040 between the 2011 RTP and the 2014 RTP have

decreased by approximately 79,000 people. This reduction has significantly reduced level of service (LOS) deficiencies throughout the County.

TABLE 3-4
Madera County Development Projections
2010, 2020, 2035, and 2040

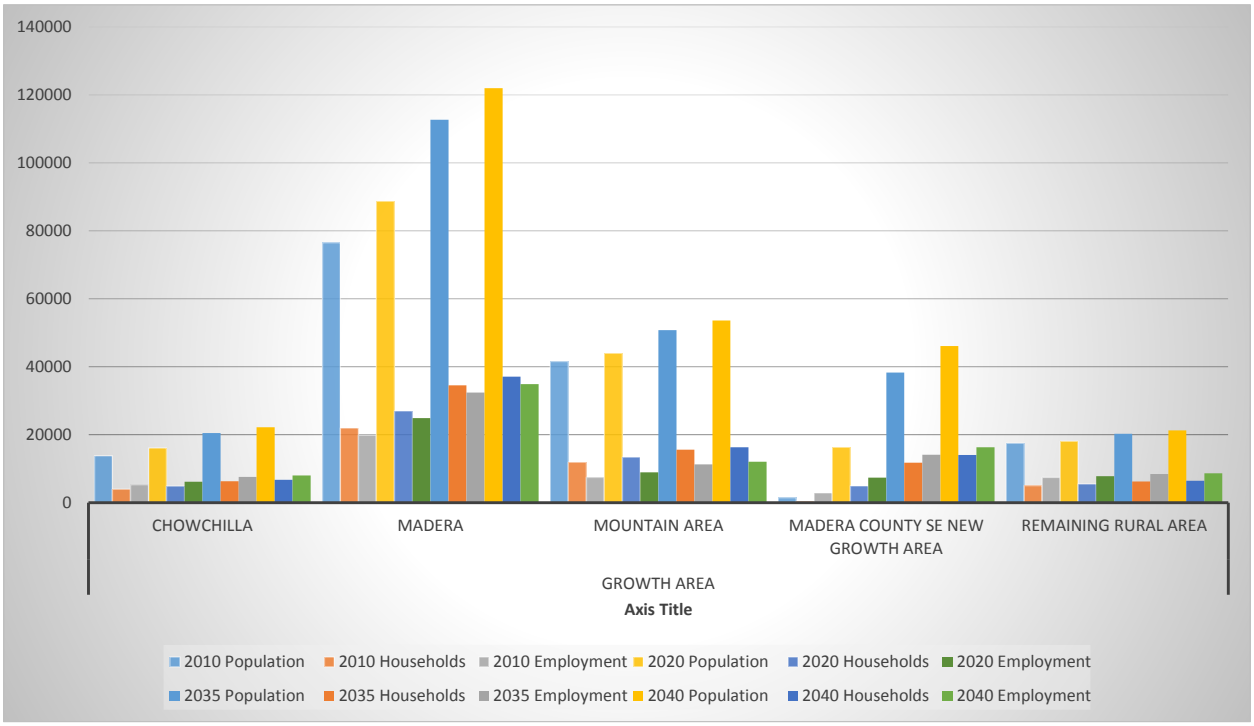
Year	Socioeconomic Condition	Growth Area					Year
		Chowchilla	Madera	Mountain Area	Madera County SE New Growth Area	Remaining Rural Area	
2010	Population	13810	76516	41535	1509	17496	150865
	Households	3964	21963	11922	433	5022	43304
	Employment	5298	19834	7432	2878	7413	42855
2020	Population	16078	88741	43973	16305	18079	183176
	Households	4893	27006	13382	4962	5502	55745
	Employment	6201	24855	8961	7363	7815	55195
2035	Population	20489	112681	50760	38319	20281	242530
	Households	6286	34570	15573	11756	6222	74407
	Employment	7556	32387	11255	14092	8418	73708
2040	Population	22199	121984	53617	46109	21252	265161
	Households	6750	37091	16303	14020	6462	80626
	Employment	8007	34897	12020	16334	8619	79877

Source: MCTC Regional Traffic Model Socioeconomic Profile, April 2014
Includes group quarters population

Based upon the information presented in Tables 3-1, through 3-4, and Figures 3-1 through 3-3, socioeconomic conditions between 2010 and 2040 in Madera County are expected to increase as noted below:

- ✓ Population will Increase by 76% or by 114,296 people
- ✓ Households are expected to increase by 76% or by 37,322 households
- ✓ Employment will increase by 76% or by 37,022 jobs

FIGURE 3-3
Madera County Development Projections
2010, 2020, 2035, and 2040



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4. A Shared Vision

Introduction

This Element directly reflects the legislative, planning, financial and institutional history that has shaped the region's transportation system. This Element is intended to frame and drive actions that will affect the direction and nature of transportation, and its impact on Madera County. This can be accomplished by either reinforcing positive opportunities and trends already in place, or stimulating change in a new direction to achieve desired outcomes. Is the first RTP document to also contain a Sustainable Communities Strategy (SCS) in accordance with Senate Bill (SB) 375. The word "sustainable is defined as follows:

We work with our partners, local governments, and stakeholders to achieve a quality of life, inclusive of economic well-being, that provides resources for today's generation while preserving an improved quality of life for future generations.

The 2014 RTP and SCS

The overall vision for the 2014 Regional Transportation Plan (RTP) is: "*A sound multimodal transportation system facilitating a vibrant economy, enhancing the physical and cultural environment, and ensuring a high quality of life for citizens in Madera County*". This vision can be achieved by promoting the development of an integrated multimodal transportation system that is designed considering land resource management strategies and air quality and greenhouse gas emission reduction goals or targets to address SCS requirements of SB 375. This vision has not changed between the 2001 version of the plan and the 2014 update. The vision of where we want to be through Fiscal Year 2040 will help public and private decision-makers make informed choices on transportation, land use, and environmental matters.

It is understood that Madera County, the cities of Chowchilla and Madera, and the Madera County Transportation Commission (MCTC), must work together to find a common set of principles, goals and objectives that will address the requirements set forth in various transportation, land use, environmental, and housing laws and regulations related to preparation of the RTP, the Sustainable Communities Strategy (SCS), the Program Environmental Impact Report (PEIR), and other related plans and programs, some of which present hard choices and changes to the ways in which transportation projects are planned and programmed from this point forward. As the Regional Transportation Planning Agency (RTPA), MCTC is mandated by State and federal law to prepare the RTP and SCS, the Air Quality Conformity document, the Regional Housing Needs Assessment (RHNA), an Environmental Justice (EJ) Analysis, and the accompanying PEIR.

This Element provides a comprehensive listing of principles, goals, and objectives that address the short- and long-term mobility and accessibility needs and planning requirements within the County. The principles and goals must be reflective of the public's desire for a viable future transportation system, while at the same time supportive of basic/possible system-level performance measures reflected in the new federal transportation legislation – Moving Ahead for Progress in the 21st Century (MAP-21). Map 21 identifies seven (7) strategies that must be considered as the RTP is prepared and implemented over time:

- ✓ **Economic Vitality** (Enabling competitiveness, productivity, and efficiency of the transportation system to enhance the economy and reduce user costs)

- ✓ **Safety** (All modes of transportation are physically safe and secure)

- ✓ **Security** (The public is satisfied with the function and performance of the transportation system)

- ✓ **Accessibility and Mobility** (Travel along the transportation system is enhanced and the public has reasonable access to all modes of transportation)

- ✓ **Enhance the Environment** (The transportation system improves the environment through energy conservation, improving the quality of life, and promoting consistency between transportation improvements, planned growth, economic development, and environmental justice issues)

- ✓ **Integration and Connectivity** (The transportation system is integrated and connected across and between modes throughout the region for the movement of people and freight)

- ✓ **Management and Operation** (The transportation system can be operated and maintained over the life of the Plan)

The transportation strategy focuses on maintaining and improving the existing system and establishing a balanced set of transportation improvements. The challenge is to develop a transportation system that provides efficient choices, improves access to opportunities and continually improves the existing infrastructure. It should also support regional and local land resource management strategies and contribute to the region's attainment of national air quality standards and SCS greenhouse gas emission targets. The plan must balance the needs of the urban and rural areas, enhance the region's competitiveness, and minimize negative social and environmental impacts.

To address these outcomes, MCTC has implemented a comprehensive public outreach program and formed two committees (the RTP Roundtable and the RTP Technical Working Group). Each of these groups considered the seven (7) MAP-21 strategies reflected above, as well as Title VI of the Civil Rights Act of 1964, which addresses environmental justice requirements. Map-21 presents an opportunity to express and carry out a new transportation vision for the Madera region in this and succeeding RTPs. This

vision should build on the current system, working to make it comprehensive and fully integrated, and emphasizing the need for a balanced range of transportation options comprised of many modes, including auto, transit, non-motorized, rail, truck, and air.

This Plan advocates four (4) principles to success and seven (7) goals with accompanying objectives based on the information provided in federal and State legislation, as well as plans, guidelines, and recommendations developed by State and regional agencies. Additional detail focusing on implementation strategies is provided in Chapter 5 – "*Delivering the Plan*" for each mode of transportation. The 2014 RTP principles, goals and objectives described below, are also structured to address requirements in the RTP Guidelines related to the inclusion of "performance based measures or criteria" in the development and implementation of the RTP.

Principles to Success

The following four principles will guide the Madera County Transportation Commission (MCTC) as it endeavors to achieve its Vision and improve the overall quality of life in Madera County through an integrated multimodal transportation system and supportive land use footprint.

- ✓ **Improved Quality of Life-** MCTC's plans, programs, and policies will work to improve the quality of life in the Madera County region by integrating transportation systems that promote access to affordable housing, education resources, jobs, and recreational facilities.

- ✓ **Prosperity -** MCTC's plans, programs, and policies will facilitate enhanced economic viability of the region by increasing access to education and new job opportunities. A more educated population combined with a low cost of living can attract new investment in the Madera region.

- ✓ **Cultural Diversity-** MCTC's plans, programs, and policies will respect the region's wide variety of cultures and subcultures (each having unique needs and perspectives) by facilitating a range of transportation modes and housing choices designed to benefit the County's diverse population.

- ✓ **Health and Environment-** MCTC's plans, programs, and policies will give preference to new development and economic prosperity in ways that ensure the health of its citizens, maintain and enhance the surrounding environment (cultural and socioeconomic resources), and those ways that enhance the regions financial stability over time.

Goals

Development of the RTP goals and objectives was a key step during preparation of the plan. The RTP Roundtable and Technical Working Group developed the set of goals and objectives based on an extensive review and consideration of their vision of the regional transportation system over the next twenty-six years, along with input from the public. Results obtained during the public outreach effort provided the Roundtable and Technical Working Group with additional information needed to refine the goals and objectives.

It is important to remember that goals and objectives will, at times, compete with one another. The framework presented by the goals and objectives below should be viewed by the public as a set of guidelines against which the RTP can be assessed, while individual projects contribute to the ability of the RTP to meet these goals and objectives, and the project level information is useful in reviewing the projects, they should not be used to rank the projects against one another. The projects, policies, and systems together create the RTP.

The following goals are intended to guide MCTC in its pursuit of quality growth and highly integrated transportation systems, reflective of the "Principles to Success" noted above. The goals are broad policy statements that describe the purpose of the plan.

1. To promote Intermodal Transportation Systems that are Fully Accessible, Encourage Quality Growth and Development, Support the Region's Environmental Resource Management Strategies, and are Responsive to the Needs of Current and Future Travelers.

2. To Promote and Develop Transportation Systems that Stimulate, Support, and Enhance the Movement of People and Goods to Foster Economic Competitiveness of the Madera Region.

3. To Enhance Transportation System Coordination, Efficiency, and Intermodal Connectivity to Keep People and Goods Moving and Meet Regional Transportation Goals.

4. To Maintain the Efficiency, Safety, and Security of the Region's Transportation System.

5. To Improve the Quality of the Natural and Human Built Environment through Regional Cooperation of Transportation Systems Planning Activities.

6. To Maximize Funding to Maintain and Improve the Transportation Network.

7. To Identify Reliable Transportation Choices that Support a Diverse Population.

8. To protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).

Objectives

The objectives below establish specific actions that support the goals. Together, the goals and objectives provide the policy framework for transportation decision-making. It is vital to translate the MCTC region's objectives into realistic land use and transportation strategies and investments, measured against a carefully defined set of evaluation criteria that respond to regional needs.

1. Provide the Madera region with transportation mobility options necessary to carry out essential daily activities and support equitable access to the region's assets.

2. Shift investment strategies towards a variety of modes.

3. Improve and maintain an integrated transportation network that reduces congestion and minimizes safety issues.

4. Strive to create a fully "seamless" intermodal transportation system by addressing critical linkages between modes based upon public needs.

5. Maintain, repair and rehabilitate the existing and future regional transportation system.

6. Undertake transportation investments that enhance the future economic viability and performance of the transportation system.

7. Reduce the cost of doing business by providing for the efficient movement of goods, people and information.

8. Combine elements of priority projects to maximize funding and provide for a well-connected and seamless transportation system.

9. Promote community design that supports transit use and increases non-motorized transportation while still meeting the mobility needs of residents and employees.

10. Support goals contained in city and county general plans that strive to enhance urban and community centers, promote the environmentally sensitive use of lands in Madera County,

revitalize distressed areas, and collaborate with agencies to ensure that new growth areas are planned in a well-balanced manner focusing on walkability and livability.

11. Improve the integration of land use, urban design, transportation, rural and environmental feature preservation, and economic development policies and decisions through incentives and/or policies.

12. Increase efforts to improve the form and function of transportation corridors in order to contribute to the "sense of place." Such investments can: improve attractiveness to visitors or prospective businesses or residents; complement existing natural and cultural resources; and improve the function of the road for a variety of modes.

13. Make transportation decisions that are compatible with air quality conformity objectives and the preservation of key regional ecosystems.

14. Fulfill national and State mandates for environmentally sensitive planning, including the development of attractive alternatives to single-occupant driving and support for walking and bicycling.

15. Support cooperative interagency and public-private environmental conservation efforts.

16. Avoid disproportionately high adverse environmental impacts upon low-income individuals, the elderly, persons with disabilities or minority populations consistent with Title VI regulations.

17. Consider how transportation policies, programs, and investment strategies affect the overall health of people and the environment including reduction of greenhouse gas and air quality emissions, physical activity, and other environmental resources consistent with California and federal environmental requirements as well as SB 375 objectives and requirements.

18. Improve marketing and the promotion of successful existing transportation services.

19. Conduct effective outreach to ensure fiscally sound transportation investments that result in improved system mobility and safety.

20. Invest in the development of walkable communities that offer citizens the ability to access residences, jobs, retail, recreation, and other community amenities without the need to rely on an automobile.

21. Invest in modern regional aviation, public transit, and passenger rail systems to maintain the region's economic competitiveness with other regions, and to ensure continued economic prosperity.

22. Maintain partnership-based planning to achieve a social, economic and environmental well-being.

23. Directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs through development of the Congestion Management Program (CMP) that effectively utilizes new transportation funds, alleviates traffic congestion and related impacts, and improves air quality.

24. Use the Regional Housing Needs Assessment (RHNA) consistent with the SCS, to prioritize local resource allocation, and to decide how to address existing and future housing and transportation needs resulting from population, employment and household growth.

25. Build communities that encourage healthy lifestyles and active living for all ages.

26. Encourage transportation systems that enhance walking or bicycling and that can help people increase physical activity, resulting in significant potential health benefits and disease prevention.

27. Promote and conduct the effective dialogue with agencies, developers, and users or potential users to help guide investment discussions and maintain and improve the effectiveness of the transportation system.

28. Embrace promising and fiscally responsible transportation and information technologies (Intelligent Transportation Systems) that serve to interconnect systems and provide information to residents and travelers.

29. Coordinate land use decisions and transportation systems with other affected agencies and the public.

30. Ensure that new project motorized and non-motorized transportation plans are enacted in the first phase of the project.

31. Develop appropriate funding mechanisms to finance significant regional facilities. Such funding would be held in trust for future projects.

32. Protect and conserve existing agricultural land, provide broad community access to healthful foods, and promote the environmental and economic benefits of rural agricultural lands.

RTP Element Consistency

Chapter 5 – "*Delivering the Plan*", Chapter 6 – "*Creating A Sustainable Future*", and Chapter 7 - "*Investing In Change*" provide a list of actions needed to address the vision, principles for success, goals and objectives listed above. These actions have been compared to the goals and objectives in Table 4-1. Table 4-1 clearly identifies that the RTP's actions address the stated goals and objectives resulting in an achievable vision for the region.

TABLE 4-1

Relationship of Goals to Actions

Goals	Highways & Arterials			Regional Transit			Aviation		Non-Motorized Facilities		Goods Movement		TDM			ITS	Land Use Coord.	Other Projects	Env. Review	SCS Planning									
	Mixed Flow	Land Use Coordination	O&M	Transit Services	Passenger Rail	Institutional	Airport Expansion	Airport Maintenance	Non-Motorized Facilities	Non-Motorized Incentives	RR Grade Crossings	Main Line Productivity	Carpool	Coordination	Park & Ride Improvements	ITS Improvements	Land Use Planning	Supportive Facilities	Env. Mitigation	SCS Scenarios	Resource Areas & Farmland	Public Involvement	Preferred Scenario	RHNA Consistency	LAFCO Policies	Social Equity	Public Health	CEQA Streamlining
1. To promote Intermodal Transportation Systems that are Fully Accessible, Encourage Quality Growth and Development, Support the Region's Environmental Resource Management Strategies, and are Responsive to the Needs of Current and Future Travelers.	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
2. To Promote and Develop Transportation Systems that Stimulate, Support, and Enhance the Movement of People and Goods to Foster Economic Competitiveness of the Madera Region.	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X			X					
3. To Enhance Transportation System Coordination, Efficiency, and Intermodal Connectivity to Keep People and Goods Moving and Meet Regional Transportation Goals.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X			X					
4. To Maintain the Efficiency, Safety, and Security of the Region's Transportation System.			X	X	X	X	X	X	X	X	X	X	X	X	X	X		X										
5. To Improve the Quality of the Natural and Human Built Environment through Regional Cooperation of Transportation Systems Planning Activities.		X															X		X	X			X	X	X			X
6. To Maximize Funding to Maintain and Improve the Transportation Network.	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X										
7. To Identify Reliable Transportation Choices that Support a Diverse Population.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X			X		
8. To protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).		X		X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X		X			X	X	X

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5. Delivering the Plan for Change

Introduction

This chapter discusses the various components of the transportation system that will serve population and employment in Madera County to the year 2040, as well as identify the travel trends and the changing demands of the multi-modal transportation system. This chapter focuses on transportation system accomplishments, needs, and actions required to address existing deficiencies recommendations for studies and projects that seek ways to satisfy future unmet transportation needs.

Travel to and from Madera County extends well beyond its borders. Traveling by car is not the only type of travel that links this region with others. Freight movement extends well past the borders of Madera County, into adjoining regions, other states, and even to other countries. Non-work trips for recreational travel and personal business also reach past the Madera County boundary. As a result, the transportation system must be capable of adequately meeting a wide range of needs. But there are often different ways of meeting these needs, some of which are more or less efficient than others, and some of which are more or less expensive than others.

To assess the needs in the region, a review of future travel characteristics projected for the year 2040, and how the individual components of the system can meet future needs are provided in this Chapter. The systems analyzed include:

- ✓ Highways and Arterials
- ✓ Public or Mass Transportation (local bus systems, inter-regional bus systems, and passenger rail)
- ✓ Aviation (use of public and private airports and access to regional passenger airport facilities)
- ✓ Non-Motorized Travel (bicycles, trails and walking)
- ✓ Goods Movement (truck and freight rail)
- ✓ Transportation Demand Management (telecommuting, car-pooling, off-peak commuting, staggered work days, transportation system management strategies, etc.)
- ✓ Intelligent Transportation Systems or ITS (technology-based improvements that improve the efficiency of the multi-modal transportation systems

These systems are discussed separately, but must operate as an interconnected system.

Projected 2040 Travel Characteristics

The Regionally Significant Road System is reflected in Figure 5-1. As stated in Chapter 2, these facilities are consistent with the Functional Classification System developed by the Federal Highway Administration (FHWA). These facilities, along with other major streets and highways, are included in the Madera County Regional Traffic Model network for the Year 2040. The traffic model was recently updated in 2013 to reflect expected growth and development within the County as projected by the State Department of Finance (DOF) and derived by the Madera County Transportation Commission (MCTC) and other local agency staff. The model was calibrated and validated for the year 2010 to reflect existing traffic conditions considering actual traffic counts taken along major street and highway segments throughout the region. In addition, the street and highway network was revised to accurately reflect the required improvements in the County needed to accommodate traffic to the year 2040.

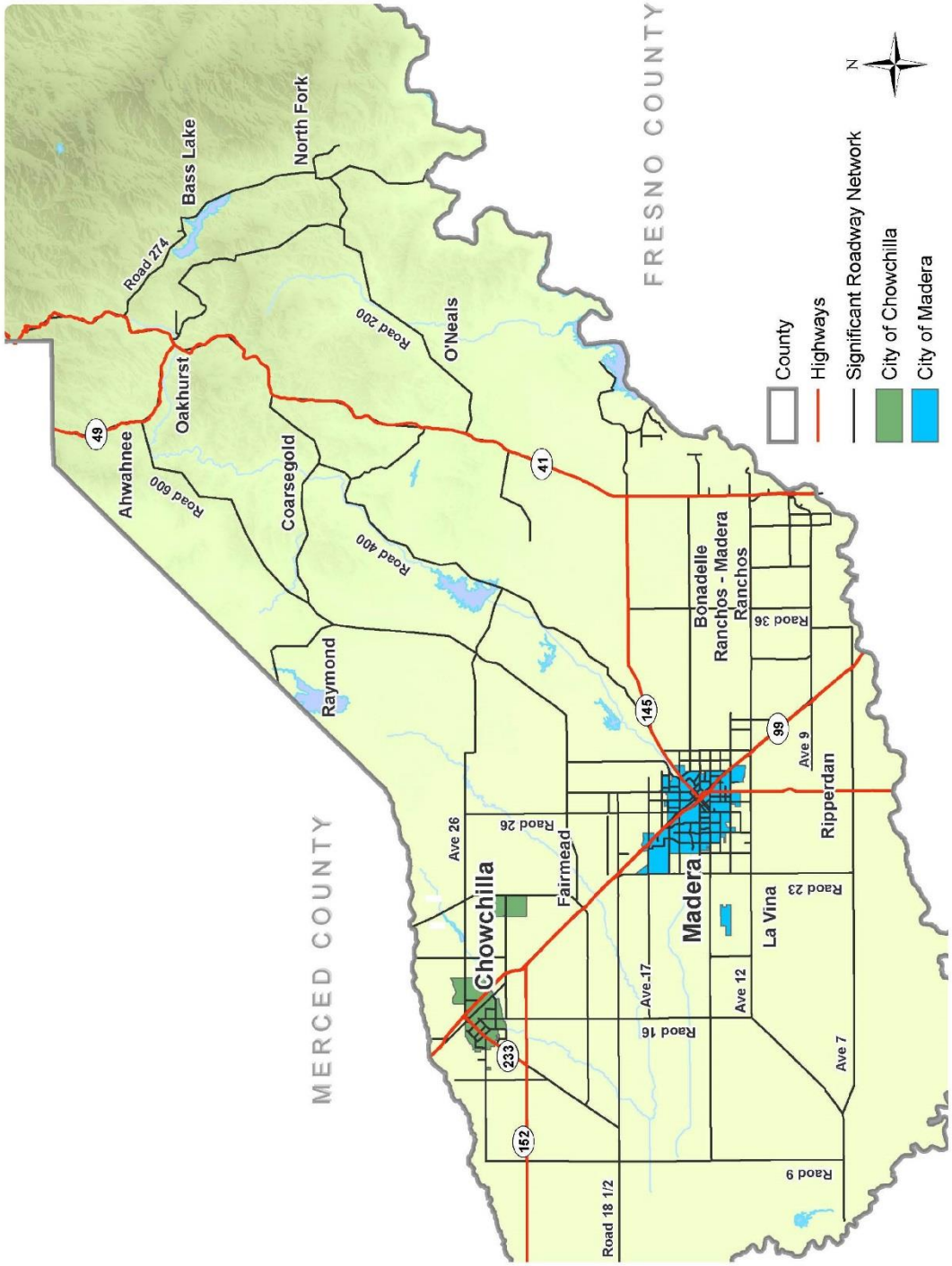
The future year (2040) socioeconomic data forecasts used to generate vehicle trips along the street and highway network are reflected in Table 5-1. The forecast of traffic generated by the projected population, housing and employment indicates that total vehicle trips will increase by about 93% between 2010 and 2040. This is attributed to continued use of major transportation corridors in the region by future growth and development. Furthermore, vehicle miles of travel (VMT) in 2040 are forecast to increase by approximately 44% from VMT in 2010. Much of the increase in VMT is due to longer distance trips; especially commute trips to and from Fresno for employment opportunities.

Under a "No-Build" scenario, if additional street and highway projects are not identified beyond those improvement projects already scheduled for construction over the next five (5) years, the street and road system is projected to experience congestion by the year 2040, given the expected increase in population, housing and employment referenced in Chapter 3 – "*The Madera Region – Past, Present & Future.*" Specifically, a number of segments along the Regionally Significant Road System would experience level of service deficiencies or congestion resulting from the implementation of a No Build scenario. These impacts are considered to be significant given the amount of average daily traffic that is projected by 2040. Significant delay and congestion well beyond the traffic capacity of these segments would be realized resulting in significant environmental and economic impacts.

In addition to street and highway impacts, major impacts upon other modes of transportation would also be realized. Without implementation of planned mass transportation, aviation, non-motorized, goods movement, and other transportation-related improvements, the transportation/circulation system would be impacted. These impacts would further reduce the ability of local agencies in Madera County, Caltrans, and the associated Air Basin to improve levels of congestion and delay, and meet air quality standards. A major objective of this RTP and SCS is to identify a transportation strategy that will improve mobility between 2014 and 2040, while at the same time reducing the negative environmental impacts of travel.

FIGURE 5-1

Regionally Significant Road System



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RTP System Accomplishments, Needs and Actions

Individual components of the regional transportation system, including highways and arterials, mass transportation, non-motorized transportation systems, aviation systems, goods movement, transportation demand management, transportation systems management, and Intelligent Transportation Systems (ITS), are addressed in the following sections. These systems comprise the Region's multimodal transportation system and identify the ways in which they will meet future demand and needs.

TABLE 5-1

Regional Traffic Model Socioeconomic Data Forecasts

Year	Socioeconomic Condition	Growth Area					Year
		Chowchilla	Madera	Mountain Area	Madera County SE New Growth Area	Remaining Rural Area	
2010	Population	13810	76516	41535	1509	17496	150865
	Households	3964	21963	11922	433	5022	43304
	Employment	5298	19834	7432	2878	7413	42855
2020	Population	16078	88741	43973	16305	18079	183176
	Households	4893	27006	13382	4962	5502	55745
	Employment	6201	24855	8961	7363	7815	55195
2035	Population	20489	112681	50760	38319	20281	242530
	Households	6286	34570	15573	11756	6222	74407
	Employment	7556	32387	11255	14092	8418	73708
2040	Population	22199	121984	53617	46109	21252	265161
	Households	6750	37091	16303	14020	6462	80626
	Employment	8007	34897	12020	16334	8619	79877

Highways and Arterials

It is assumed that the regional highway system will continue to carry the vast majority of person-trip travel and will be an important part of the freight movement system. Streets and highways also will be the same routes for buses, and carpools and vanpools, resulting in a highway network that is an integral part of the public transit system. Finally, the street and highway system will also serve the needs of tourist travel and recreational travel.

Because the highway system must continue to provide reasonable service throughout the plan period, it is essential to keep it well maintained. It is also important to plan for capacity increases only where future traffic will exceed capacity and where highway expansion is determined to be the best solution that will enhance travel safety. The functional classification system will be an important guide for street and highway improvements. It will be important for the region and the State to identify those streets and highways that are of strategic importance for commerce, tourism, and commuter travel.

From a traffic service perspective, the purpose of these strategic streets and highways will need to be tailored to their location in the region. In both the urban and rural areas of Madera County, this type of system will, for the most part, be comprised of existing routes with available opportunity for expansion. There should also be improvements to relieve bottlenecks at intersections and efforts made to allow passing opportunities around slow-moving vehicles in the mountain areas of the County. This will particularly help with goods movement. The ability to receive and send deliveries in a timely fashion is essential if the area is to remain regionally and nationally competitive. It is therefore, important to plan for trucks carrying a variety of cargo (manufactured goods, raw materials, and fuels) to have direct and safe access to the region's principal streets and highways.

✓ Highway and Arterial Accomplishments

Since approval of the 2011 RTP, a few major street and highway projects have been implemented. These improvements have improved mobility in the County and have increased safety. The following list is not comprehensive, but provides a listing of the major improvements that should be recognized in this RTP update.

- *City of Chowchilla*
  - Washington Road Improvement
  - Measure T Improvement Project
  - Alley Paving
  - Howell Road Overlay
- *City of Madera*
  - SR 99/SR 145 Interchange
  - Lake Street, Cleveland to Kennedy
  - Lake Street, Kennedy to Ellis
  - Ellis OC @ SR 99
  - Fourth Street, Gateway to Lake
  - SR 99/Fourth Interchange with Fourth Street, “K” to Gateway
  - Fresno River Trail Schnoor Undercrossing, south bank
  - CNG facility
  - Fresno River Trail, Westberry to Road 24
  - Raymond/Cleveland Traffic Signal
  - ARRA Lump Sum Rehab (D, Lake, Sherwood, I, Merced)
- *County of Madera*
  - Avenue 15 Rehab
  - Road 415 Overlay
  - Road 26 Rehab
  - Road 28 Bridge Replacement
  - Road 450 Bridge Replacement
  - Cesar Chavez Pedestrian Path
  - Desmond/Nishimoto Path and Sidewalk
  - Pave Dirt Roads - Valley Lake Ranchos
  - Pave Dirt Roads - Valley Lake Ranchos
  - Road 426 Sidewalk
  - Pave Dirt Road - Road 407 W
  - Pave Dirt Road - Road 407 E
  - Pave Dirt Road - Hickory Street
  - Pave Dirt Roads - Valley Lake Ranchos
  - Pave Dirt Roads - Valley Lake Ranchos
- *Caltrans*
  - SR 99 Bridge Enhancements Avenue 7 to Le Grande Avenue

✓ Highway and Arterial Performance

To assess highway and arterial needs, MCTC developed a process to evaluate candidate capacity-increasing and rehabilitation/safety projects considering performance-based measures and level of service (LOS) analysis. A description of each type of process is provided below.

- *Project Prioritization Criteria* - The RTP Guidelines identify the requirements for "performance-based" planning. To comply with RTP Guidelines, MCTC prepared quantification and qualification prioritization criteria for review by the RTP and SCS Roundtable. Based upon comments received from the Roundtable, the criteria was revised and applied to evaluate the street and highway capacity increasing projects. Once a full range of candidate regional highway and arterial projects was identified for the 2014 RTP and SCS by each of the local agencies, an analysis framework consisting of measurable criteria was developed to establish project priorities before the projects are modeled. Emphasis was given to identifying key differences between the candidate projects by mode and the tradeoffs that need to be weighed in the decision-making process. Over 50 candidate regional transportation capacity-increasing projects and other modal projects were identified and evaluated. The evaluation criteria are provided in Appendix A. Interchange project have been included with the capacity increasing project. Only project with other than local funds were evaluated. The project evaluation results are provided in Appendix A.

- *RTP Guidelines* - According to the RTP Guidelines, each RTPA should define a set of "program level" transportation system performance measures that reflect the goals and objectives adopted in the RTP. These performance measures are used to evaluate and select plan alternatives. Government Code Section 14530.1(b)(5) requires more detailed project specific "objective criteria for measuring system performance and the cost effectiveness of candidate projects" in the STIP Guidelines. The program level performance measures in the RTP set the context for judging the effectiveness of the RTIP, as a program, in furthering the goals and objectives of the RTP, while the STIP Guidelines address performance measurements of specific projects. As noted in Chapter 7 - *Creating a Sustainable Future*, a number of performance indicators or measures were developed and applied to compare various RTP and SCS scenarios including those indicators that identify how well the street and highway system will perform.

✓ Capacity-Increasing Street and Highway Project Needs and Actions

Based upon the results of the performance evaluation process described above, a list of candidate capacity-increasing street and highway projects (proposed to be implemented by the year 2040) was prepared and is reflected in Table 5-2 and depicted in Figures 5-2 through 5-4.

TABLE 5-2
Capacity Increasing Street and Highway Improvement Projects

Project #	Agency	Project # / Priority	Project Name	Project Limits	Planned Improvement	Total Cost	Project Opening Year
1	Chowchilla		SR 233 (ROBERTSON)	15th Street to Palm Pkwy	Restripe to 4 Lanes	$ 1,000,000	2020
2	Chowchilla	49/8	SR 99	SR 233 Interchange	Reconstruct Interchange	$ 16,000,000	2020
3	Chowchilla		AVE 26	SR 99 to Coronado	2 Lanes to 4 Lanes	$ 10,000,000	2025
4	Chowchilla	19/21	FIG TREE	SR 99 Overcrossing	2 Lane Overcrossing to Chowchilla Blvd	$ 14,000,000	2030
5	County	9/7	SR 41	SR 145 to RD 200	Passing Lanes	$ 22,148,000	2016
6	County	8/4	AVE 12	SR 99 to RD 30 1/2	2 Lanes to 4 Lanes	See Project #59	2016
7	County		Oakhurst Midtown Bypass	RD 426 to 41	New 2 Lane	$ 7,495,000	2019
8	County		RD 40	AVE 9 to AVE 12	0 Lanes to Max. 4 Lanes	$ 4,000,000	2018
9	County	6/12	AVE 9	RD 38 to Children's	2 Lanes to 4 Lanes	$ 8,582,972	2025
10	County		SR 41	Madera County Line to AVE 10	4 Lanes to 6 Lanes	$ 5,780,407	2025
11	County	30/1	SR 41	AVE 10 to AVE 12	6 Lane Freeway & Interchange At AVE 12	$ 100,858,967	2028
12	County	4&9/7	AVE 12	RD 30 1/2 to RD 36	2 Lanes to 4 Lanes	$ 15,087,543	2030
13	County	13/4	AVE 12	RD 38 to SR 41	2 Lanes to 4 Lanes	$ 6,000,000	2030
14	County		AVE 12	SR 41 to North Rio Mesa Blvd	2 Lanes to 6 Lanes	$ 4,790,259	2035
15	County	39/14	SR 49	Westlake Dr to Meadow Vista Dr	2 Lanes to 4 Lanes	$ 7,000,000	2035
16	County		AVE 10	RD 40 1/2 to SR 41	Widen to 4 Lanes	$ 5,000,000	2040
17	County		CHILDREN'S BLVD	SR 41 NB Ramps to Peck Blvd	4 Lanes to 6 Lanes	$ 7,281,193	2040
18	County		RD 145	RD 206 to SR 41	2 Lanes to 4 Lanes	$ 15,185,957	2040
19	County		RD 206	Madera County Line to RD 145	2 Lanes to 4 Lanes	$ 18,204,521	2040
20	County		SR 41	NB On-Ramp/SR 41 At Children's Blvd.	1 Lane to 2 Lanes	$ 5,000,000	2040
21	County	31/2	SR 41	AVE 12 to SR 145	2 Lanes to 4 Lanes	$ 45,000,000	2040
22	Madera		LAKE	4th to Cleveland	2 Lanes to 4 Lanes	$ 3,500,000	2016
23	Madera		OLIVE	Gateway to Roosevelt	2 to 4 Lanes	$ 5,000,000	2017
24	Madera	17/8	CLEVELAND	Sharon to Tozer	Restripe to 4 Lanes	$ 491,950	2025
25	Madera	16/20	AVIATION	Extend to AVE 17	New 2 Lane	$ 1,500,000	2025
26	Madera		YEAGER	Falcon to Aviation	New 2 Lane	$ 1,500,000	2025
27	Madera		ELLIS	RD 26 to Krohn	2 Lanes to 4 Lanes	$ 5,874,135	2025
28	Madera	50/19	WESTBERRY	At Fresno River	New 4 Lane bridge	$ 12,298,739	2025
29	Madera		AVE 17	SR 99 Interchange	Interchange Improvements/Widen Structure	$ 56,685,401	2025
30	Madera		CLEVELAND	Schnoor to SR 99	4 Lanes to 6 Lanes	$ 3,750,000	2026
31	Madera		GATEWAY	Yosemite to Cleveland	2 Lanes to 4 Lanes	$ 8,600,000	2027
32	Madera	20/8	GATEWAY	Olive to 9th	2 Lanes to 4 Lanes	$ 2,670,202	2030
33	Madera		ELLIS	RD 26 to Lake	2 to 4 Lanes	$ 3,914,320	2030
34	Madera		SCHNOOR	Trevor to Sunset	Overlay/restripe to 4 Lanes	$ 1,106,886	2030
35	Madera		SHARON BLVD	Ellis to AVE 17	New 4 Lane RD	$ 8,600,000	2030
36	Madera		GRANADA	At Fresno River	Widen Structure 2 Lanes to 4 Lanes	$ 6,500,000	2030

TABLE 5-2 (Cont.)
Capacity Increasing Street and Highway Improvement Projects

Project #	Agency	Project # / Priority	Project Name	Project Limits	Planned Improvement	Total Cost	Project Opening Year
37	Madera		WESTBERRY	Cleveland to AVE 16	2 Lanes to 4 Lanes	$ 2,716,787	2030
38	Madera		HOWARD	Westberry to Granada	2 Lanes to 4 Lanes	$ 4,673,902	2030
39	Madera		PECAN	Golden State to Stadium	2 Lanes to 4 Lanes	$ 4,673,902	2030
40	Madera		PECAN	Pine to Schnoor	2 Lanes to 4 Lanes	$ 2,000,000	2016
41	Madera		PINE	Almond AVE to Madera High School South Driveway	2 Lanes to 4 Lanes	$ 1,911,322	2030
42	Madera		SUNSET	4th to Westberry	2 Lanes to 4 Lanes	$ 3,000,000	2035
43	Madera		D ST	Clark to Adell	2 Lanes to 4 Lanes	$ 1,500,000	2035
44	Madera	24/16	RD 29	Olive to AVE 13	2 Lanes to 4 Lanes	$ 8,098,953	2035
45	Madera	23/3	RD 29	AVE 12 to AVE 13	2 Lanes to 4 Lanes	$ 8,100,000	2035
46	Madera	25/10	RD 29	AVE 14 to AVE 15	2 Lanes to 4 Lanes	$ 4,720,848	2035
47	Madera	46/9	SR 145	AVE 12 to AVE 13 1/2	2 Lanes to 4 Lanes	$ 4,014,405	2035
48	Madera		SR 145	SR99 to Yosemite	2 Lanes to 4 Lanes	$ 5,536,935	2035
49	Madera		STADIUM	Pecan to Maple	2 Lanes to 4 Lanes	$ 1,209,919	2035
50	Madera		STOREY RD	SR 145 to City Limit	2 Lanes to 4 Lanes	$ 2,396,629	2035
51	Madera		SUNRISE	B Street to RD 28	2 Lanes to 4 Lanes	$ 2,892,483	2035
52	Madera		TOZER/RD 28	AVE 13 to Knox	2 Lanes to 4 Lanes	$ 1,869,561	2035
53	Madera		HOWARD RD	Pine to Schnoor	4 Lanes to 5 Lanes	$ 5,000,000	2040
54	Madera	15/18	AVE 17	RD 23 to Golden State	2 Lanes to 4 Lanes	$ 3,000,000	2040
55	Madera	15/18	AVE 17	RD 26 to RD 27	2 Lanes to 4 Lanes	$ 3,000,000	2040
56	Madera		CLEVELAND	RD 26 to SR 99	4 Lanes to 6 Lanes/Interchange Improvements	$ 54,988,588	2040
57	Madera	18/21	ELLIS AVE	Interchange At SR 99	Convert to Interchange	$ 30,000,000	2040
58	State	40/5	SR 99	Fresno County Line to AVE 7	4 Lanes to 6 Lanes	$ 54,000,000	2016
59	State		SR 99	AVE 12 Interchange Improvements	Reconstruct Interchange	$ 85,500,000	2016
60	State	42/1	SR 99	AVE 12 to AVE 17	4 Lanes to 6 Lanes	$ 1,500,000	2020
61	State	41/5	SR 99	AVE 7 to AVE 12	4 Lanes to 6 Lanes	$ 1,500,000	2028
62	State	43/6	SR 99	AVE 17 to AVE 18 1/2	4 Lanes to 6 Lanes	$ 1,500,000	2036
63	State	45/11	SR 99	AVE 20 to AVE 21	4 Lanes to 6 Lanes	$ 1,500,000	2040
64	State	44/2	SR 99	AVE 18 1/2 to AVE 20	4 Lanes t0 6 Lanes	$ 1,500,000	2040
					TOTAL:	**$742,710,687**	

New freeway and other street and highway capacity-increasing improvement projects have the greatest potential for causing significant adverse environmental effects versus other modes of transportation. This RTP and SCS proposes the widening or modification of existing streets and highways, changes to the designation of regional streets and highways, and new interchange facilities along new or existing freeways. Other projects include signalization improvements (new signals, signal modifications, and signal synchronization).

FIGURE 5-2
Capacity Increasing Street and Highway Improvement Projects – County

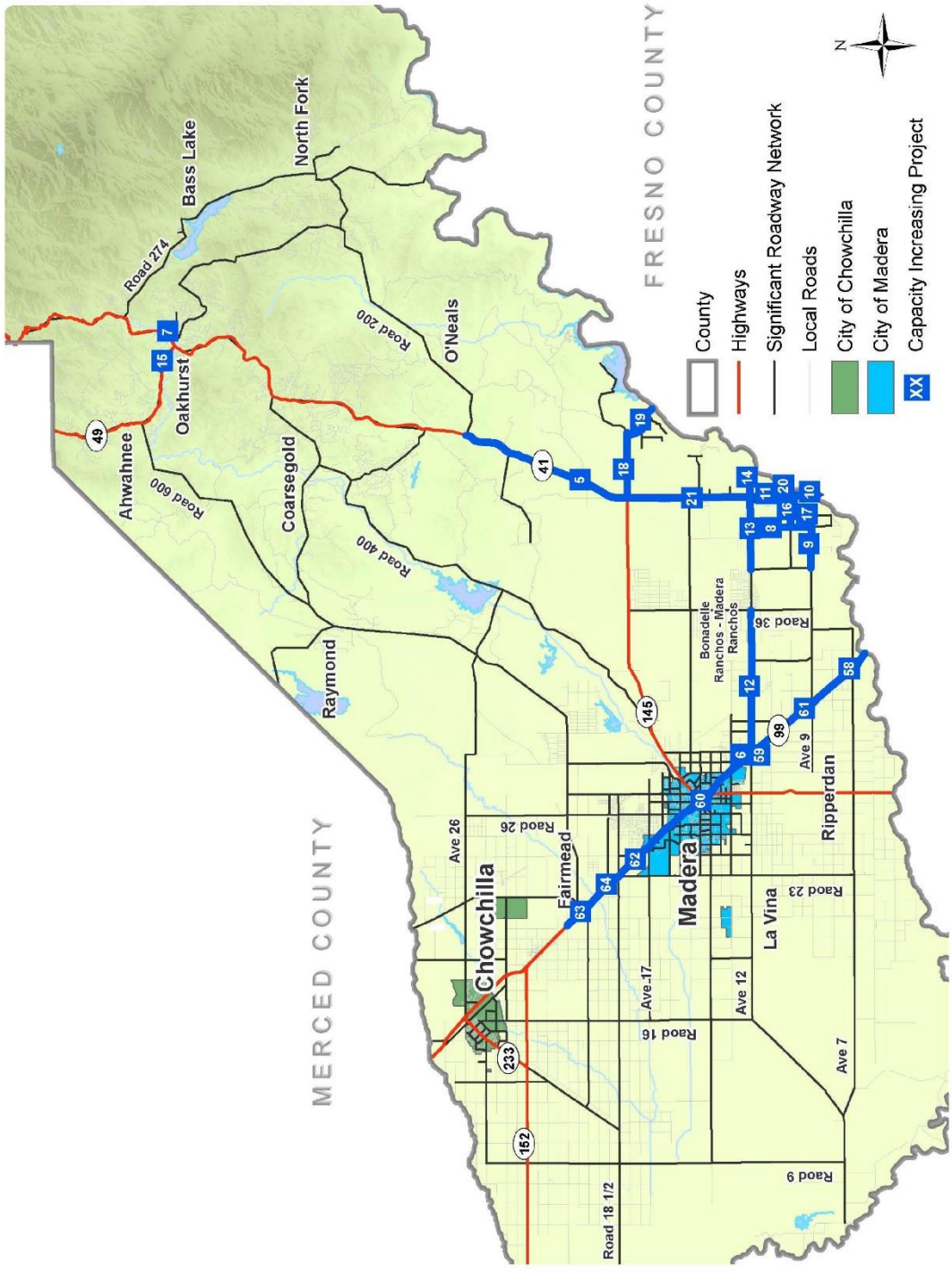

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FIGURE 5-3
Capacity Increasing Street and Highway Improvement Projects - Chowchilla

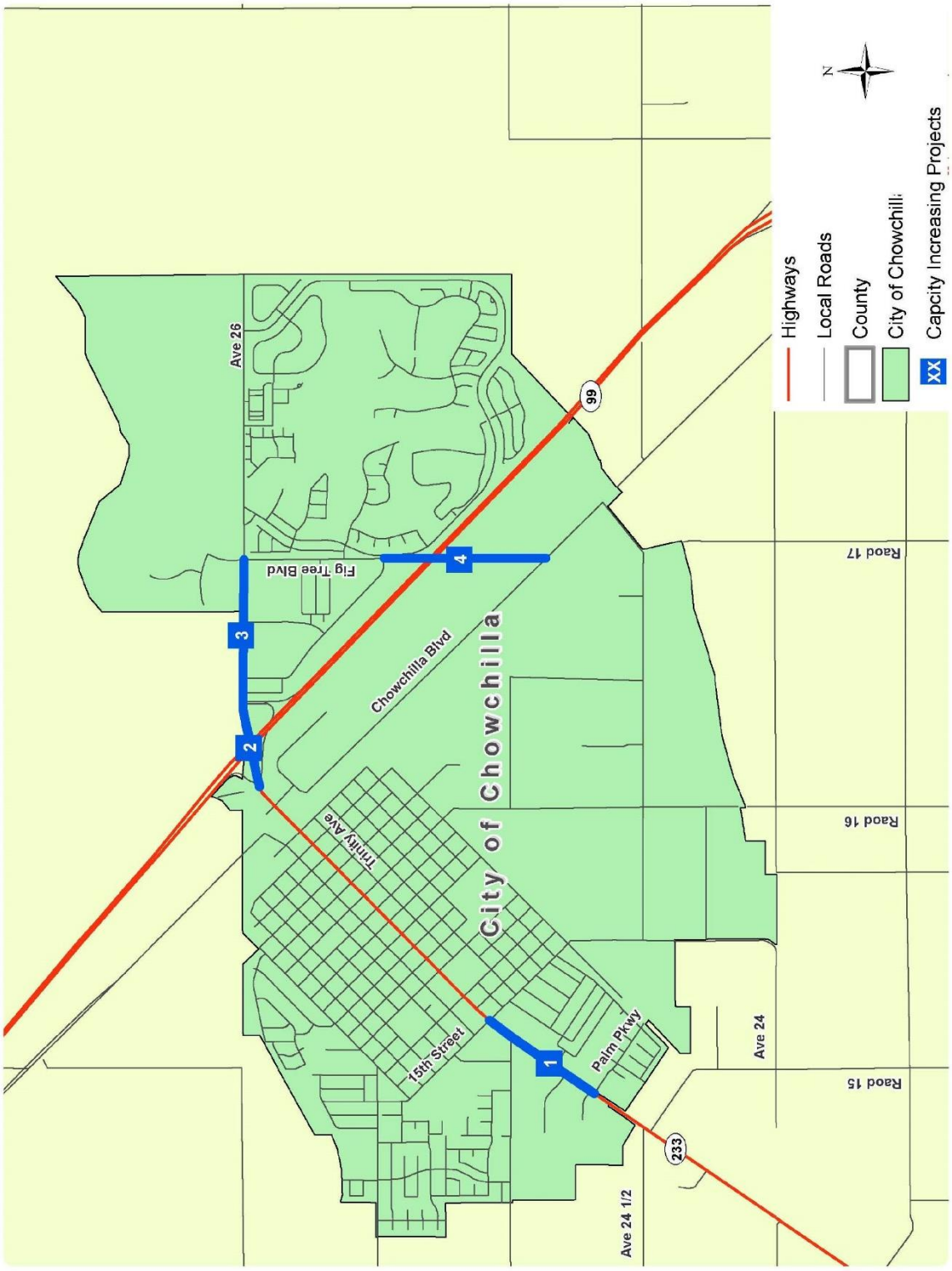

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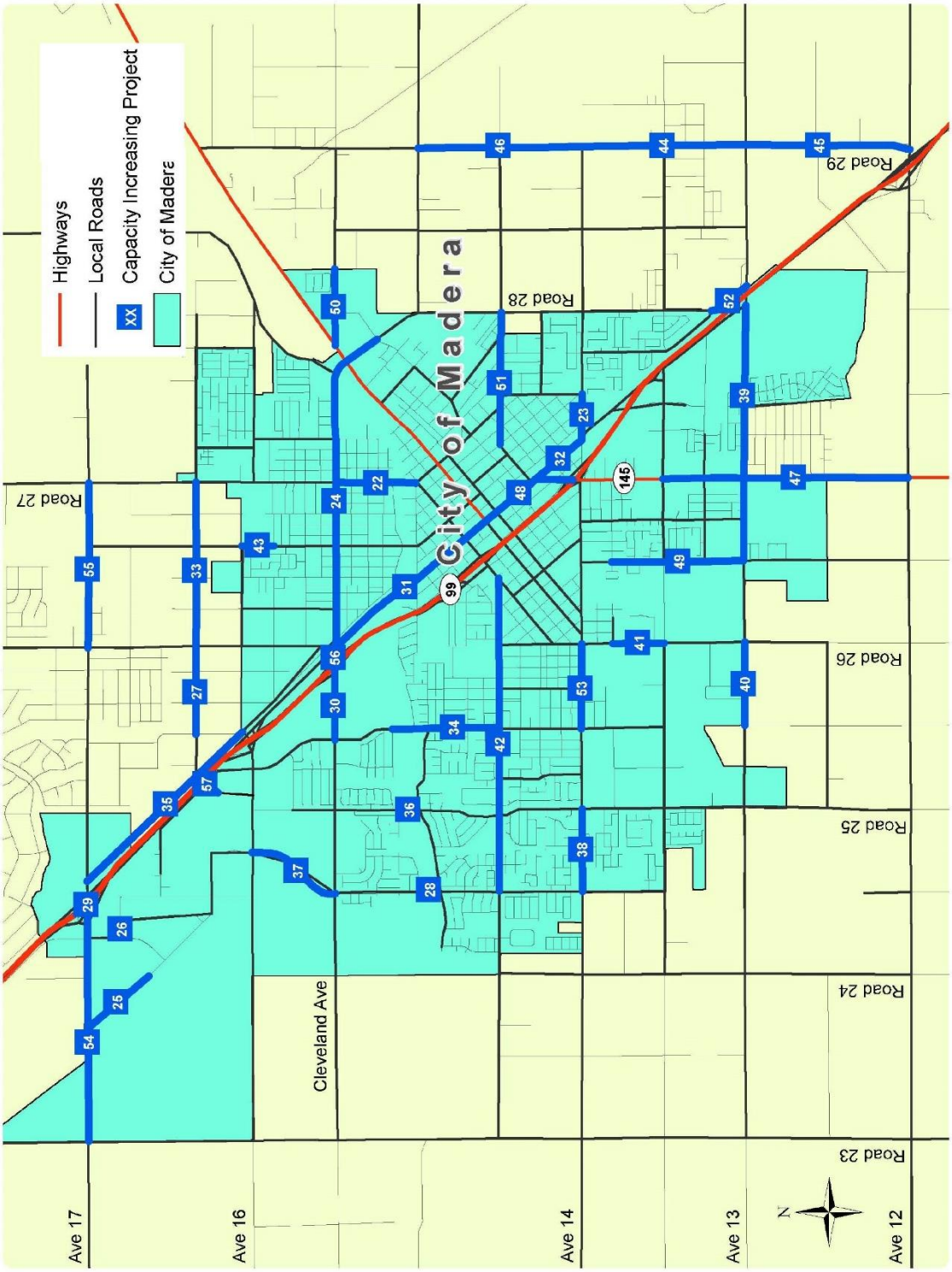
FIGURE 5-4

Capacity Increasing Street and Highway Improvement Projects – City of Madera



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Referencing Table 5-2, this RTP contains over $742 million in capacity-increasing highway and arterial improvement projects. This cost includes lane widenings, interchange improvements, new signals, and signal coordination systems. Approximately $359 million has been allocated for State Highway improvements along SR 41, SR 49, SR 99 and SR 145. In addition, new or improved interchange projects are planned along SR 41, SR 99 and SR 233. These projects are intended to relieve bottlenecks during peak use, to close gaps, and to increase capacity along congested freeways, such as SR 41 and SR 99, which provide access to major population and employment opportunities within the San Joaquin Valley.

Strategic capacity improvements can be combined with improved management of the regional freeway system and peak period travel demand reduction strategies to effectively meet the Region's travel needs. The region needs innovative capacity enhancements, but as always, innovations must meet a benefit-cost test.

For implementation purposes, it is understood that Caltrans and the local agencies have the discretion to program projects from Table 5-2 considering the availability of funding. While funding timeframes have been identified in Table 5-2, the years shown are only estimates of when funding may become available and programmed for a certain project.

The following needs are described to identify why the projects referenced in Table 5-2 are necessary and how the projects will help meet regional transportation needs over the life of the Plan.

- *Level of Service Analysis* - To identify potential impacts of the planned street and highway system, the level of service (LOS) for each major facility was measured. Minimum LOS for purposes of the RTP is LOS "D" for local street and road facilities and LOS "C" for State Routes. The LOS analysis was determined using the MCTC Traffic Model. For segments along the future RTP system, year 2040 traffic volumes estimated by the MCTC Regional Traffic Model, was applied. Results of the 2014 RTP LOS analysis indicate whether or not planned improvements contained in the Chapter 7 – *Investing in Change* will meet minimum LOS policies.

  Results of the LOS analysis for the RTP indicate that some facilities will fall deficient between 2010 and 2040. Figures 5-5 through 5-8 also provide a graphic display of the resulting deficient levels of service in the Year 2040. Improvement projects to improve these deficient levels of service would include lane widening and other operational improvements; however not all of the projects are not included in the 2014 RTP and SCS "financially-constrained" program.

FIGURE 5-5
Year 2040 Projected AM Peak Hour Level of Service - County

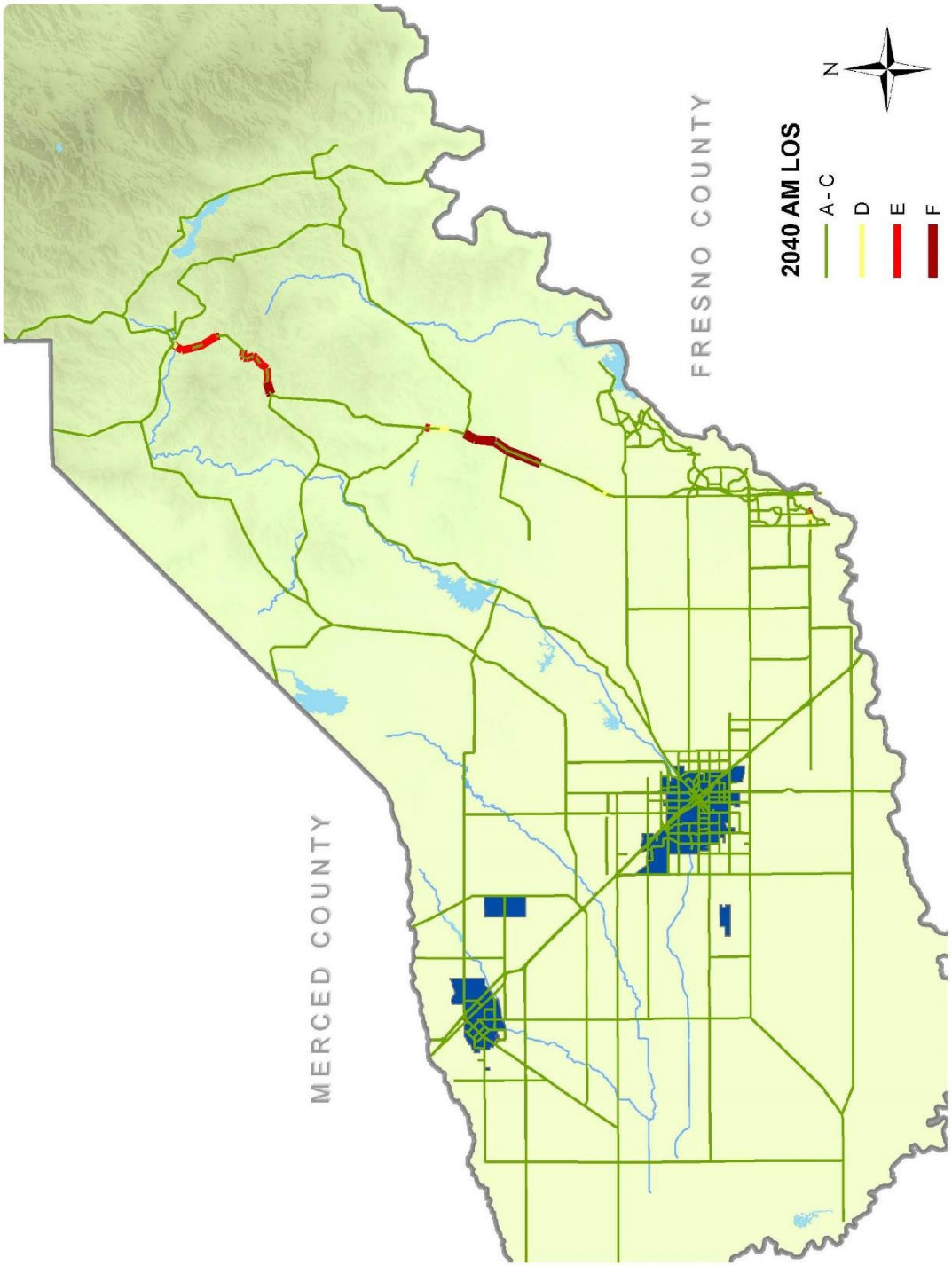

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FIGURE 5-6
Year 2040 Projected PM Peak Hour Level of Service - County

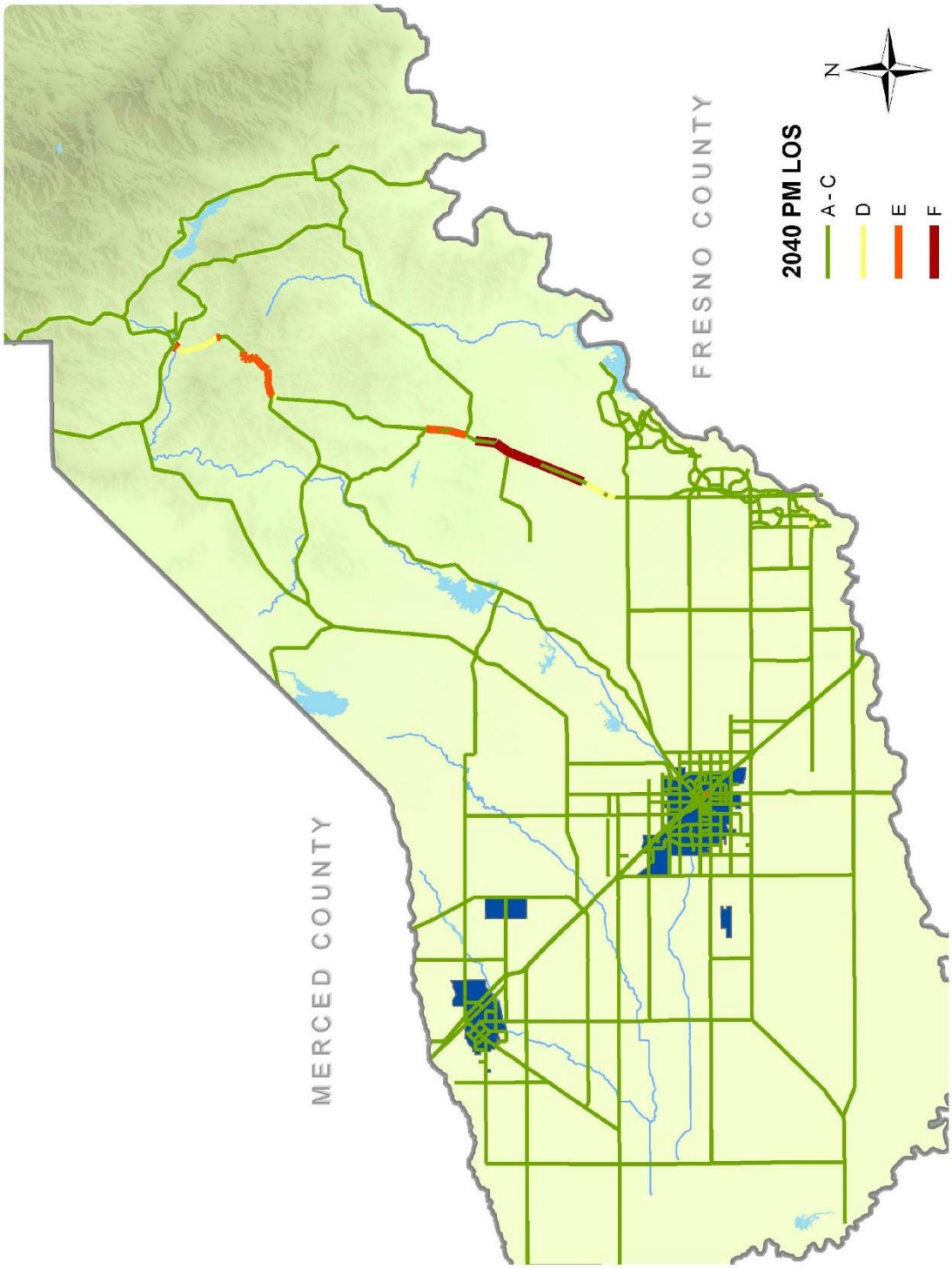

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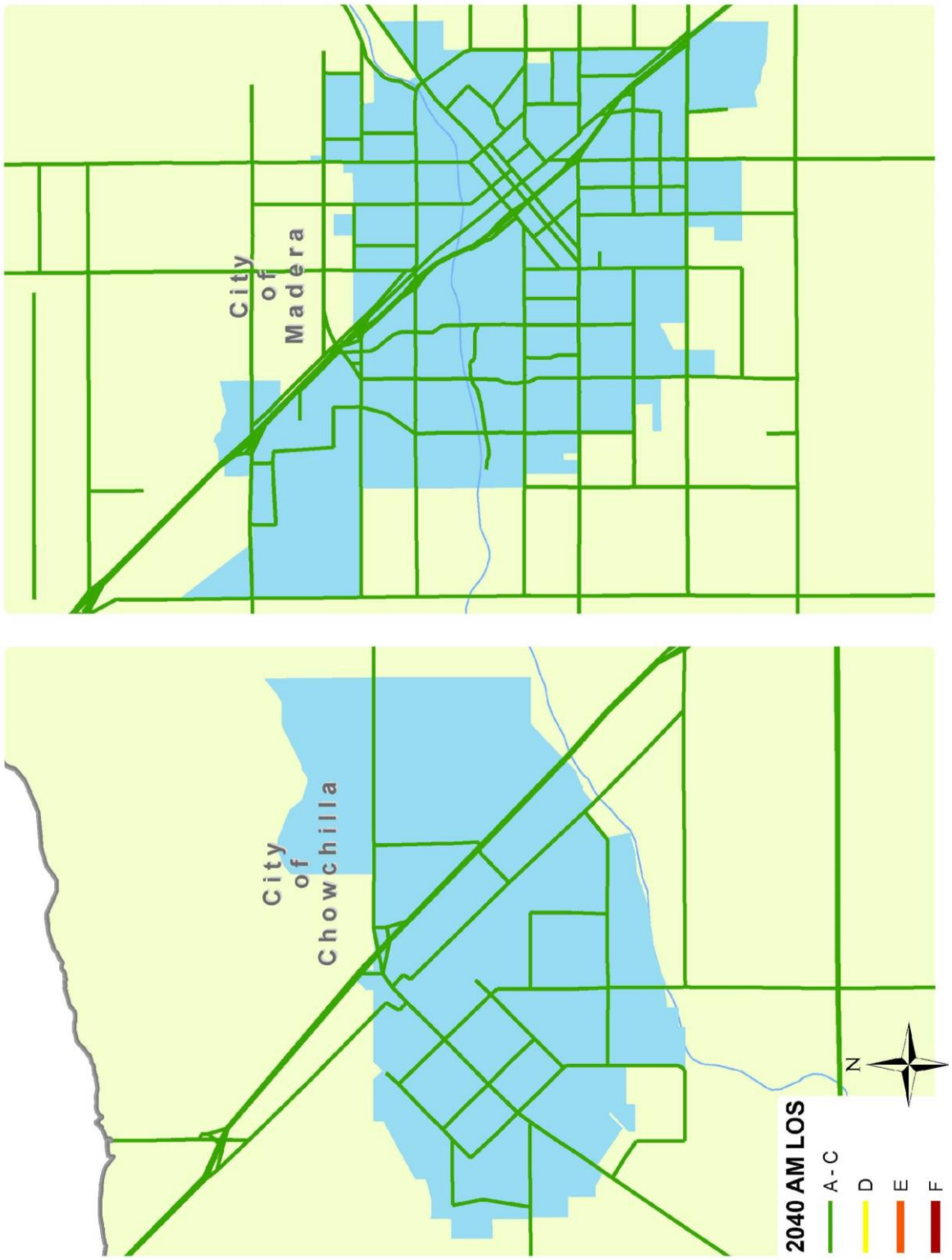
FIGURE 5-7

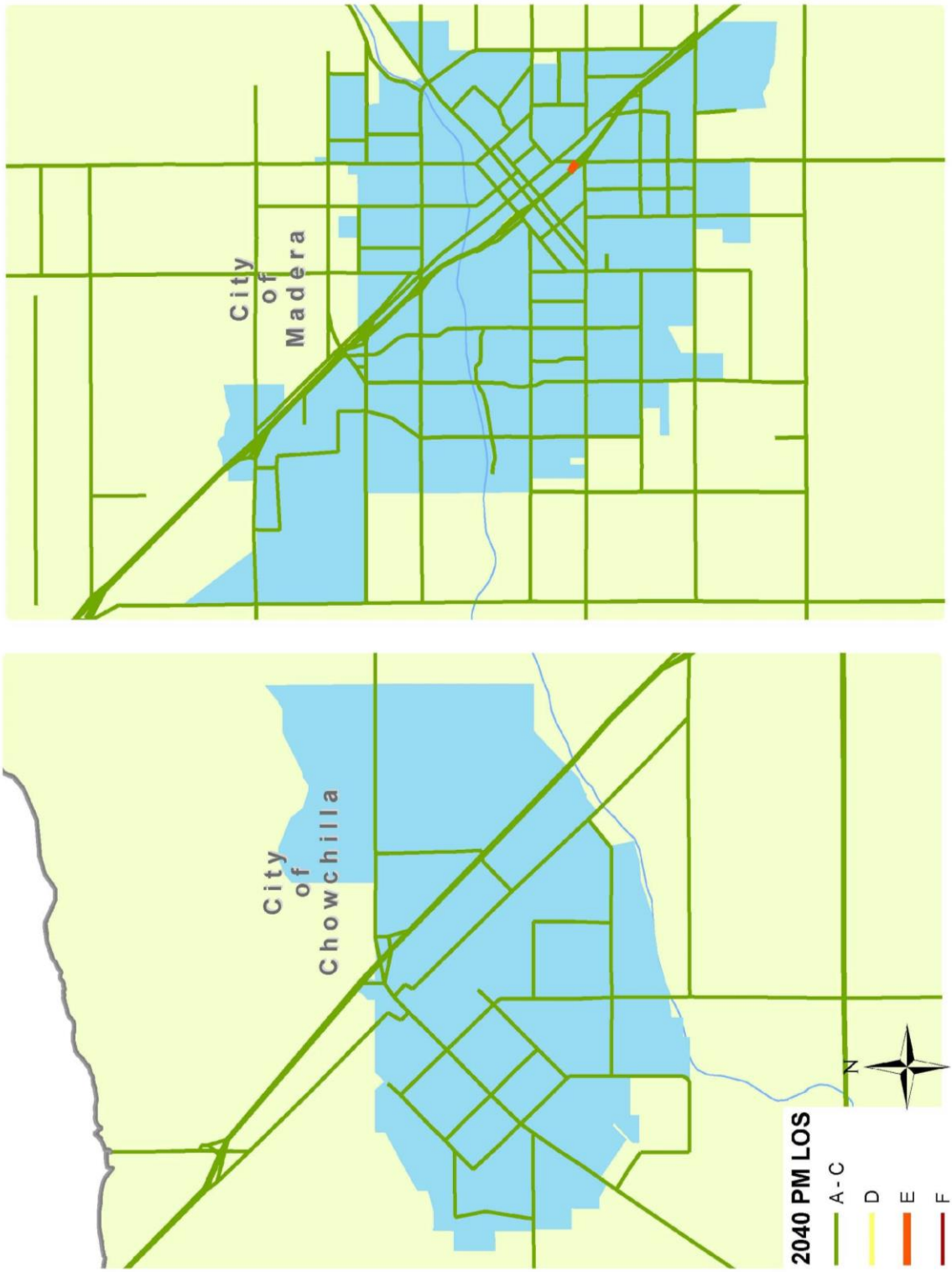
Year 2040 Projected AM Peak Hour Level of Service – Cities



your madera 2040

FIGURE 5-8

Year 2040 Projected PM Peak Hour Level of Service – Cities



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Major Corridor Deficiencies/Needs/Actions

Major deficiencies identified in the LOS analysis for Year 2040 without RTP projects include SR 41 north of the San Joaquin River, Avenue 12 between SR 41 and SR 99, and SR 99 between the San Joaquin River and the Merced County Line. These deficiencies/needs, together with other issues described below set the stage for a set of actions that will be carried out by MCTC and the affected local agencies and Caltrans over the next twenty-six years.

- *SR 99* – The deficiencies along SR 99 are considered an "inter-regional" issue or problem. The need for a 6-lane facility along SR 99 between Madera and Fresno County is primarily caused by the highway's position as the preeminent travel corridor for commuting, recreation, and goods movement purposes in the San Joaquin Valley. In addition, planned residential, industrial and commercial development is anticipated along the corridor. Continued development of the State Center Community College campus east of SR 99 on Avenue 12 will generate additional regional scale travel. In addition to mainline SR 99 widening, other interchange improvements are also planned including the completion of the Avenue 12/SR 99 interchange located south of the City of Madera, improvement of the Ellis Avenue Overcrossing at SR 99 in the City of Madera to a full interchange, improvements to the SR 99/Avenue 17 interchange north of the City of Madera, and improvement of the SR 233/SR 99 interchange in the City of Chowchilla.

- *SR 41 Fresno County Line to SR 145* – The severe deficiency along SR 41 between the San Joaquin River and Avenue 10 is in response to planned growth and development in southeastern Madera County. Caltrans and Madera County have been working together to address congestion along this segment with construction of a 4-lane freeway, which opened in 1999. Further, the County of Madera has approved a revised Road Impact Fee program to address appropriate improvements along the SR 41 corridor. The SR 41 bridge over the San Joaquin River can only accommodate 6 lanes (3 in each direction) and still meet federal design standards. It is this process, however, that must identify the issues that need to be resolved. Even with the financially constrained projects included in this RTP, the segment between the Madera County Line and Ave 12 will require lane widening and/or the identification of alternate routes of travel to relieve the projected LOS deficiencies. To address the LOS deficiencies, MCTC has identified future Measure T, traffic impact fee, and development mitigation funding to add capacity (travel lanes) that will address demand along the corridor. In addition, Caltrans is currently in the process of preparing the SR 41 Corridor Study focusing on that segment of the highway between Avenue 12 and SR 145. The study will identify the types and location of improvements.

- *North SR 41 Corridor* – The level of service will continue to deteriorate north of SR 145 to the Madera/Mariposa County Line (LOS D, E and F); however, funding realities dictate that improvements will be limited to necessary operational improvements and limited development of passing lanes, financed using Measure T, and traffic impact fees.

- *Avenue 12* - To address the LOS deficiencies along the Avenue 12 corridor, MCTC has identified future Measure T, traffic impact fee, and developer funding to add capacity (travel lanes) that will address vehicle congestion. That segment between Road 36 and Road 38 is not planned for improvement given the right-of-way constraints along that exist. That segment is built-up with residential, commercial, and other uses.

- *City of Madera Circulation Needs* – Maintaining east/west mobility across the Freeway 99/Union Pacific (UP) Railroad corridor is a continuing problem. Madera has developed and is implementing an effective program with projects on Cleveland Avenue, a full interchange with SR 99 at Ellis Avenue, and at SR 99/4th Street including the widening of 4th Street to 4-lanes. The need to study the relocation of SR 145 (Yosemite Avenue) in Madera is a priority given the deficiencies along the corridor and the inability to increase capacity given the right-of-way constraints. A first step in this process will be planned improvements along Avenue 17 between Road 23 and Golden State and Avenue 17 between Road 6 and Road 27, including interchange improvements at SR 99 and Avenue 17.

- *Local Facilities*

  Urban arterial, rural highway, and mountain arterial streets and roads within Madera County carry a majority of all traffic and account for a vast majority of the County's roadway system. As it becomes more difficult to add lanes to the SR 41 and SR 99 freeway systems, maximizing the capacity of the Region's arterials will become a priority.

  Referencing Table 5-2 and Figures 5-2 through 5-4, numerous arterial improvements within each subarea of the County are planned, including lane widening on Avenues 9, 12, and 17, the Oakhurst Midtown By-Pass, and others. Other major streets such as Gateway, Cleveland, Howard, Tozer in the Cities of Madera and Chowchilla are also planned.

  Finally, in addition to lane widening, interchange enhancements, and arterial widening projects, new traffic signals and signal coordination systems are planned within the County as part of the Transportation Systems Management (TSM) program.

  In addition to the SR 41 Fee Program, the County of Madera has a Countywide Local Transportation Impact Fee program and addresses corridors such as Avenues 9, 10, 12, Road 40 and 400, and others throughout the County.

- *Other Issues/Actions*

  - East/West Corridor

This RTP indicates that with the candidate projects in this RTP that add lanes to SR 145, and Avenues 9 and 12, will accommodate projected east-west traffic demand. Fresno COG is addressing travel demand in both counties with studies including the Herndon Avenue Specific Study and the Fresno-Madera County East/West Corridor Study. Phase 1 and 2 of the East-West Corridor Study have been completed. Phase 1 identified four corridor alternatives to be further evaluated as part of Phase 2. Phase 2 focused on an evaluation of a bridge crossing along the San Joaquin River between the SR 41 San Joaquin River Bridge and Rank Island to the north. No projects or a single preferred alignment has been chosen by either County.

The need for communication between Fresno agencies and Madera County regarding east/west circulation is recognized and continues through participation in many collaborative working groups referenced in this RTP. It is through involvement in these transportation planning groups and in special studies that MCTC ensures a comprehensive, coordinated transportation planning process.

  - Emergency Access in Mountain Communities

To address the issue of emergency access in the mountain communities of Madera County, the County prepared a study, which recommended projects to improve emergency access in the Oakhurst and a few other areas. The study was presented to the Board of Supervisors; however, direction was never given to implement the recommendations.

To address the issue of emergency access, the County:

- Requires new development to have two points of access
- Has established a maximum cul-de-sac length
- Implements projects to improve access as funds are available

It should be noted that there are many public right-of-way roads in the mountain areas that are not on the County maintained list of roads. They were built prior to when the design requirements listed above were established. The County has limited funding sources to address roads that are not on their maintained street and road listing.

➢ Land Use Coordination

Over the next twenty-six years, it will be important for MCTC and its member agencies (the cities and the County) to coordinate with responsible agencies (federal, State, and other local agencies, including those in other counties) to address requirements set forth by AB 32 and SB 375 and to ensure that issues regarding the impact of growth and development on the transportation system that connects the counties can be defined and addressed. It is important to note that MCTC is involved in various groups that ensure effective communication and coordination with other Valley counties on issues related to land use, air quality, and transportation. These groups include the Valley Councils of Government (COG) Directors' Association, the Valley Modelers Group, and others.

In addition, the eight San Joaquin Valley counties have already implemented an aggressive program of coordinated Valleywide planning. In September of 1992, the eight Valley Regional Transportation Planning Agencies (RTPAs), including MCTC, entered into a memorandum of understanding (MOU) to ensure a coordinated regional approach to transportation and air quality planning efforts. The MOU goes well beyond the requirements of state and federal transportation planning acts by establishing a system of coordination of plans, programs, traffic and emissions modeling, transportation planning, air quality planning, and consistency in data analysis/forecasting. Development of the MOU and the ongoing process of coordinated planning have improved upon an already close working relationship between the eight Valley RTPAs and the representatives of Caltrans, the California Air Resources Board (CARB), State Office of Planning and Research (OPR), the San Joaquin Valley Air Pollution Control District (SJVAPCD), and the Federal Highway Administration (FHWA).

➢ Private Development Improvements

Several street and road improvements listed in Table 5-2 will be financed through local development contributions as conditions of approval. Additional improvements to address LOS deficiencies identified in Table 5-2 will be necessary and are assumed to be addressed through private funding as new development in the respective plan areas takes place. Local agencies shall ensure that new development does not pay traffic impact fees for the same facilities that it is designing and constructing as conditions of project approval.

➢ Ramp Metering

Caltrans' primary concern is to maintain the best operating condition on the mainline highways. The use of ramp meters, according to Caltrans, helps to improve the flow of traffic on the mainline. There is concern however, that while improving the mainline freeways within Madera County, significant back-up or queuing of traffic will occur on the local streets and

roads that connect to the freeway system. Further coordination between Caltrans and affected local agencies should be provided regarding operations of the potential use of ramp meters along the State freeway system in Madera County.

✓ Street and Highway Rehabilitation/Safety Project Needs and Actions

In addition to LOS deficiencies, Caltrans and local agencies are also facing the difficult task of maintaining regional streets and highways with inadequate funding. With increased congestion expected in the future, the typical road will require some maintenance every five to ten (5-10) years, and major rehabilitation every ten (10) to 20 years. If rehabilitation and maintenance activities are not implemented, residents will continue to experience increased accident rates and reduced system-wide efficiency.

- *Enhanced Rehabilitation and Safety Improvements* - With the current backlog of highway and arterial maintenance and the pavement deterioration that goes with an aging roadway system, costs will increase dramatically through the RTP horizon year (2040) to keep the highway system operational. The RTP and SCS identifies additional funds principally for arterials that minimize roadway and bridge decay. Recent studies have also identified the increased cost to users as under-maintained roadways degrade tires and shock absorbers, creating wear and tear on engines and connections throughout the vehicle. Providing additional funding to improve pavement conditions before roadbed deterioration requires full rehabilitation would result in substantial maintenance savings to the Region. Preliminary analysis indicates that the benefits of an investment in proper ongoing maintenance would pay dividends of more than triple the cost. The funding estimates for this RTP and SCS call for $293 million in investments for rehabilitation and safety projects (reference Table 5-3).

  A variety of federal, state, and local funds are used for maintaining the existing transportation network. Approximately 20% of Regional Surface Transportation Program (RSTP) funds received by MCTC are allocated to ongoing maintenance of the County road network. Forty-seventy percent (47%) of funds collected under Measure T, Madera County's half-cent transportation sales tax program, are designated for maintenance and rehabilitation of existing roads.

TABLE 5-3
Street and Highway Rehabilitation/Safety Improvement Projects

AGENCY	PROJECT #	ROUTE	PROJECT LIMITS	PROJECT DESCRIPTION	ESTIMATED COST	FUNDING YEAR
Chowchilla						
CHOWCITY	1	Road 16	Ave 25 to Basin	Drainage Improvements	$430,000	2014-15
CHOWCITY	2	Various	Area bounded by 15th Street, Robertson, Mariposa Avenue, and Front Street	Storm Drain system serving Entire roadway network in sw quadrant of city	$600,000	2014-15
CHOWCITY	3	Humboldt 13th Street	3rd St to 6th St	Reconstruct	$345,000	2014-15
CHOWCITY	4	City Streets	3rd, 5th, 15th, & Ventura	Overlay, curb, gutter, sw	$465,000	2014-15
CHOWCITY	5	Ave 24 1/2	Various	Shoulder Paving	$300,000	2015
CHOWCITY	6	Chowchilla	Roberson Blvd District	Pave alleys	$301,000	2015
CHOWCITY	7	Humboldt Ave. 13th Street	6th St to 12th	Reconstruct	$852,066	2016-20
CHOWCITY	8	Humboldt Ave. 13th Street	12th to 13th	Reconstruct	$141,431	2016-20
CHOWCITY	9	Humboldt 13th Street	13th St to 15th St Mariposa Ave to Orange Ave	Reconstruct 2-Lane Collector incl. curb, gutter, sw, ramps etc.	$1,083,197	2021-25
CHOWCITY	10	13th Street	Orange Ave to Kings Ave	Majority Reconstruct 2-Lane Collector incl. curb, gutter, sw, ramps etc./Part Overlay	$421,990	2021-25
CHOWCITY	11	13th Street Monterey Ave	Kings Ave to Ventura Ave 3rd St to 4th St	Majority Reconstruct 2-Lane Collector incl. curb, gutter, sw, ramps etc./Part Overlay	$1,099,925	2026-30
CHOWCITY	12	Monterey Ave	4th St to 7th St	Reconstruct 2-Lane Collector incl. curb, gutter, sw, ramps etc.	$515,687	2026-30
CHOWCITY	13	Monterey Ave	7th St to 12th St	Reconstruct 2-Lane Collector incl. curb, gutter, sw, ramps etc.	$1,090,577	2026-30
CHOWCITY	14	Monterey Ave	12th St. to 15th St	Reconstruct	$680,832	2026-30
CHOWCITY	15	Various	To Be Determined	Regional Recon/Rehab	$500,000	2014-2025
CHOWCITY	16	Various	To Be Determined	Rehab/Maint/Operations	$3,000,000	2014-2025
CHOWCITY	17	Various	To Be Determined	Regional Recon/Rehab	$1,000,000	2026-2040
CHOWCITY	18	Various	To Be Determined	Rehab/Maint/Operations	$9,000,000	2026-2040
				Subtotal:	**$21,826,705**	
Madera						
MADCITY	22	Almond	Granada to Commerce	Rehab/Overlay	$160,000	2014-2019
MADCITY	20	Cleveland	Schnoor	Dual Left Turn Lanes	$342,000	2014
MADCITY	21	Clinton	Lilly to Fig	Rehab/Overlay & ADA facilities	$195,000	2014-2019
MADCITY	22	D Street	4th to 9th	Rehabilitate Roadway, Minor Concrete Repair, ADA facilities	$500,000	2014-2019
MADCITY	23	Granada	Almond to Howard	Rehab/Overlay	$310,000	2014-2019
MADCITY	24	Pecan	Schnoor to Pine	Reconstruct Roadway	$800,000	2014-2019
MADCITY	25	Pine Street	Howard to 4th	Reconstruct/Overlay, & Intersection Improvements, Ped Facilities	$600,000	2014-2019
MADCITY	26	Pine	Almond to Pecan	Rehab/Overlay Roadway	$310,000	2014-2019
MADCITY	27	Sunrise	Lilly to Tozer	Rehab/Overlay	$95,000	2014-2019
MADCITY	28	Various	To be Determined	Regional Rehab/Reconstruct & Safety	$1,000,000	2014-2019
MADCITY	29	Raymond Road	Various	Shoulder Paving	$304,000	2015
MADCITY	30	Tozer	Clinton to MID canal	Shoulder Paving	$70,000	2015
MADCITY	31	9th	B to Gateway	Rehab/Reconstruct/Overlay	$800,000	2020-2024
MADCITY	32	Kennedy	Lake to Adams	Reconstruct	$1,200,000	2020-2024
MADCITY	33	Central	Gateway to Lake	Rehab/Reconstruct/Overlay	$340,000	2020-2024
MADCITY	34	Almond	Stadium to Madera Ave (145)	Reconstruct/Rehab Roadway	$600,000	2020-2024
MADCITY	35	Various	To Be Determined	Regional Rehab/Reconstruct & Safety	$1,000,000	2020-2024
MADCITY	36	Cleveland	Sharon to Tozer	Rehabilitate & Overlay	$1,020,000	2025-2029
MADCITY	37	Owens	Cleveland to Adell	Rehabilitate & Overlay/Reconstruct	$1,000,000	2025-2029
MADCITY	38	Schnoor	Almond to Industrial	Rehab/Overlay	$195,000	2025-2029
MADCITY	39	Stadium	Almond to Pecan	Rehab/Overlay	$310,000	2025-2029
MADCITY	40	Avenue 17	Airport to E. city limits	Rehab/Overlay	$335,000	2025-2029
MADCITY	41	Riverside	Sharon	Rehab/Overlay & ADA facilities	$246,000	2025-2029
MADCITY	42	Sharon	Riverside to Cleveland	Overlay	$310,000	2025-2029
MADCITY	43	Various	To Be Determined	Regional Rehab/Reconstruct & Safety	$4,000,000	2014-2025
MADCITY	44	Various	To Be Determined	Rehab/Maint/Operations	$30,000,000	2014-2025
MADCITY	45	Various	To Be Determined	Regional Rehab/Reconstruct & Safety	$10,000,000	2026-2040
MADCITY	46	Various	To Be Determined	Rehab/Maint/Operations	$59,000,000	2026-2040
				Subtotal:	**$114,882,000**	

TABLE 5-3 (Cont.)
Street and Highway Rehabilitation/Safety Improvement Projects

AGENCY	PROJECT #	ROUTE	PROJECT LIMITS	PROJECT DESCRIPTION	ESTIMATED COST	FUNDING YEAR
MADCO	47	Ave 9	Road 23 to Road 23 1/2	Shoulder Paving	$99,000	2014
MADCO	48	Ave 9	Road 23 to Road 23 1/2	Shoulder Paving	$99,000	2014
MADCO	49	Ave 15	Road 29 to Road 36	Shoulder Paving	$1,017,000	2014
MADCO	50	Road 23	Ave 8 1/2 to Ave 9 1/2	Shoulder Paving	$187,000	2014
MADCO	51	Road 406	Road 400 to 2.5 miles east	Pave dirt roads	$534,000	2014
MADCO	52	Ave 15	SR 41 to Road 36	Shoulder Paving	$895,000	2015
MADCO	53	Ave 25	Road 8 to Road 11	Shoulder Paving	$522,000	2015
MADCO	54	Road 28	at Ave 14 1/2	Left Turn Lane	$564,000	2015
MADCO	55	Road 30	Ave 12 to 500 ft north	Shoulder Paving	$72,000	2015
MADCO	56	Rd 36	Ave 9 - Ave 12	PE/Realign & Reconstruct	$2,400,000	2015
MADCO	57	Ave 18 1/2	Golden State and Rd 24	PE/Reconstruct 2 lanes	$724,546	2015-20
MADCO	58	Ave 7 1/2	"Y" Ave 12 - Firebaugh	Overlay	$1,391,129	2016-20
MADCO	59	Rd 16	Ave 12 - Ave 18 1/2	Overlay	$1,565,020	2016-20
MADCO	60	Robertson Blvd.	SR 152 - Ave 18 1/2	Overlay	$579,637	2016-20
MADCO	61	North Fork	Road 274	Roundabout at Road 274 and Road 225	$485,000	2018
MADCO	62	Ave 12	Rd 16 - Rd 23	PE & Reconstruct 2 Lns	$10,751,331	2021-25
MADCO	63	Ave 9	SR 99 - Rd 33 1/2	Overlay	$1,557,967	2026-30
MADCO	64	Rd 26	Ave 18 - Ave 19	PE/Reconstruct 2 lanes/widen	$1,869,561	2026-30
MADCO	65	Various	To Be Determined	Regional Recon/Rehab	$3,516,137	2014-2025
MADCO	66	Various	To Be Determined	Rehab/Maint/Operations	$31,645,230	2014-2025
MADCO	67	Various	To Be Determined	Regional Recon/Rehab	$9,576,879	2026-2040
MADCO	68	Various	To Be Determined	Rehab/Maint/Operations	$86,191,907	2026-2040
				Subtotal:	**$156,243,343**	
				TOTAL:	**$292,952,049**	

- *Projected Operation and Maintenance Costs* - There are currently an estimated 2,157 lane miles of streets and highways in the Madera County region, including 1,600 lanes miles on the regionally significant road network. By 2040, the lanes miles will increase to 1,952 miles.

  In FY 2007/08, the California Statewide Local Streets and Roads Needs Assessment was conducted by the California State Association of Counties (CSAC), League of California Cities (League), and the County Engineers Association of California (CEAC). The results of the study provided pavement conditions and funding needs for Madera County, including an assessment of the overall County road network. Using the pavement condition index (PCI) as a metric to rate the quality of the pavement area, the study determined a statewide average PCI of 68 on a scale of 0 (failed) to 100 (excellent). In Madera County, the average PCI rating of 48 indicates "poor" pavement conditions.

  The Assessment also included a 10-year estimate of pavement funding needs for Madera County of approximately $933 million. The 25-year estimate of available revenues for maintenance and rehabilitation activities is $373.9 million, indicating a total funding shortfall of $559.1 million. MCTC will continue to seek leveraging opportunities through the Measure T local sales tax program in an effort to maximize and prioritize available funding for local road maintenance and operations.

Mass Transportation

Mass transportation is a transportation mode that moves large numbers of people from one destination to another. It provides an economical means of travel that reduces single-occupancy vehicle trips, improves air quality, and enhances the overall quality of life. Mass transportation in Madera County consists of public transit services provided by both the public and private sectors and Amtrak passenger rail service. Amtrak rail improvements are coordinated by Madera County. The Cities of Madera and Chowchilla and Madera County provide a total of seven different public transit services—three fixed-route and four demand-responsive, as shown in Table 5-4.

TABLE 5-4

Public Transit services in Madera County

PROVIDER	FIXED-ROUTE	DEMAND-RESPONSE	DESCRIPTION
City of Madera:			
✓ Madera Area Express (MAX)	X	X	City of Madera
✓ Madera Dial-A-Ride			Madera Urbanized Area
City of Chowchilla:			
✓ Chowchilla Area Transit Express (CATX)		X	City of Chowchilla
✓ CatLinx	X		Inter-City
Madera County:			
✓ Madera County Connection (MCC)	X		Inter-City
✓ Senior Bus Program		X	Eastern Madera County
✓ Escort Service		X	Inter-City

The Mass Transportation Action Element provides an overview of the following:

- Mass transportation accomplishments
- Mass transportation needs and issues

✓ Mass Transportation Accomplishments

Progress has been made over the past four years to enhance public transportation services for residents throughout Madera County. Transit improvements have been and continue to be addressed through a structured planning process coordinated through the MCTC. Most recently, fixed-route and demand-responsive service changes within the County have evolved through a series of proactive actions to implement both operating and capital improvements. These actions, combined with MCTC's commitment to ensure unmet transit needs are effectively addressed, have resulted in the following key service improvements, as summarized below.

- *City of Madera*
  - The City of Madera enhanced its MAX operations with additional service to address high ridership peak periods.
  - Planning was initiated and funding identified for the refinement and addition of service on Route 1 to reduce headways and to improve on-time performance.
  - The City kicked off development of a new transit and maintenance facility as part of a larger joint public works facility project.
  - MAX and Dial-A-Ride improved its fleet with the addition and/or replacement of ten new buses.
  - Forty new bus shelters were installed throughout the City; and eleven existing shelters were renovated.
  - The City enhanced it operations with key capital projects, including the installation of on-board surveillance cameras; a new Downtown Intermodal Center fence and surveillance cameras; and development of designated stroller areas on buses.

- *City of Chowchilla*
  - The City of Chowchilla initiated CatLinx, a pilot inter-city, fixed-route transit service from the City of Chowchilla to the City of Merced in November 2012.
  - The City contracted CATX and CatLinx services and increased services in FY2012/13.
  - Capital assets for CATX and CatLinx were enhanced with the expansion of vehicles operated and implementation of on-board surveillance cameras.
  - Planning has been initiated and funding identified for the consolidation and expansion of its transit maintenance facility.

- *Madera County*
  - Madera County improved MCC operations with restructured and expanded fixed-route service to Yosemite Lakes Park and North Fork.
  - Additional hours of operation were initiated to Children's Hospital of Central California.
  - A new MCC replacement vehicle was purchased.
  - A Bus Shelter Improvement Plan was developed; and a new bus shelter was installed in the community of Fairmead.
  - A new bus maintenance shelter was constructed at the County Road Yard to accommodate up to four buses.
  - Improvements to the Senior Bus and Escort services include an increase in daily trips and a new replacement van.

- *Other Accomplishments*

  - Bus Service from Fresno-Madera to Yosemite National Park - MCTC participated in a feasibility study of bus service from the Cities of Fresno and Madera to Yosemite National Park. One of the objectives of the study was to determine the potential market for transportation to the Park from Fresno and Madera, including demand from key origins and destinations, such as the Fresno Air Terminal and Amtrak stations. The results of the feasibility assessment indicate that substantial amounts of demand exist for both the Fresno-Yosemite route and the Fresno-Sequoia/Kings Canyon route.

  - Short-Range County-Wide Transportation Needs - The Madera County Short-Range Transit Development Plan was updated in 2009. This plan provides an overview of the status of existing public transit services and identifies issues and concerns, operational and capital strategies and approaches for consideration over the next five years, and proposed funding of existing and new transit services. MCTC has indicated the Short Range Transit Plan will be updated as part of the 2014/2015 fiscal year Overall Work Program.

  - Unmet Transit Needs within Madera County - The Unmet Transit Needs within Madera County are evaluated annually through the MCTC's Social Services Transportation Advisory Council (SSTAC). Requests, comments, and testimony are formally documented in the fourth quarter of each fiscal year and closely considered in the development of transit services.

- *Passenger Rail* - Madera County, in close coordination with Caltrans, Amtrak, and the BNSF railway, relocated the Amtrak station from Avenue 15 ½ and Road 29 and constructed a new station at Road 26 with ample parking, lighting, and other passenger amenities. Relocation of the station was undertaken to increase visibility, access, and security and to encourage higher usage to ensure continuity of Amtrak service to the community.

  MCTC, the Cities of Madera and Chowchilla, and Madera County are participating in the California High-Speed Rail Authority's implementation of a high-speed rail system from Southern California to the Bay Area via the San Joaquin Valley. This system will be designed to accommodate rail speeds up to 220 miles per hour. The High-Speed Rail Authority identified a preferred high-speed rail corridor alignment on SR 99 and proposes to initiate construction in Madera County; however, the high-speed rail system will not have a dedicated stop in Madera County.

  The Authority's 2014 Business Plan and the 2013 California State Rail Plan state that high-speed rail passenger service from Merced to the San Fernando Valley will begin in 2022. Therefore, construction of high-speed rail through Madera County is scheduled for completion by the end of 2022.

The Final Environmental Impact Report/Environmental Impact Statement for the Merced to Fresno high-speed rail service was certified by the Authority's Board of Directors on May 3, 2012. The Final EIR/EIS is available at http://www.hsr.ca.gov.

✓ Mass Transportation Needs and Actions

Madera County has made notable progress in addressing many public transit needs throughout the Region. MCTC's "Unmet Transit Needs" process has determined that transit services within the Madera County are meeting the reasonable transit needs of the public. These transit systems provide vital transportation services while reducing single-occupancy vehicle trips, improving air quality, and enhancing the overall quality of life for residents throughout the County.

Mass transportation services, however, must respond effectively in the context of projected growth and development throughout Madera County and as the population and character of the region evolves. The level of public transit services should reflect the County's demand for mobility, typically related to population growth, population densities, age and income characteristics, accessibility to key origins and destinations, trip lengths, design and condition of streets and highways, etc.

Madera County's projected population growth over the next 26 years, combined with the number of transit-dependent residents, rising fuel costs, and changing demographics and travel patterns, undoubtedly will impact the demand for transit services. While public transit will continue to play an important role in the mobility of those who are dependent on transit as a lifeline service and increasingly for those residents seeking transportation options, delivery of transit services must be reliable, convenient, and cost-effective.

Table 5-5 reflects a total of $238.4 million in planned transit improvements over the 26-year timeframe of the Plan. This is a 121% increase over transit funding shown in the 2011 RTP ($107.8 million). Of this total, $61.4 million or 26% of transit expenditures is projected for transit enhancements above and beyond current operating and fleet costs projected through 2040. These cost projections assume implementation of the "Hybrid Scenario," continuation at a minimum of current levels of transit services for all systems in the County, and initiation of enhanced transit service in core growth areas. These areas are identified through population and household growth derived from the MCTC transportation model.

Short-term and long-term mass transportation needs and actions have been identified and should be addressed through a coordinated and collaborative process. The proposed improvements and projected costs are summarized below. The RTP is consistent with the Public Transit-Human Services Plan.

TABLE 5-5
Planned Transit Improvements

Agency Identifier	Project #	System	Description	Funding Year	Projected		TOTAL
					Operating	Capital	
CHOWCITY	1	CATX	Operating Assistance	2014	$425,000		$425,000
CHOWCITY	2	CATX	Operating Assistance	2015	$446,250		$446,250
CHOWCITY	3	CATX	Operating Assistance	2016	$468,563		$468,563
CHOWCITY	4	CATX	Transit Enhancements	2016		$100,000	$100,000
CHOWCITY	5	CATX	Transit Enhancements	2016		$43,000	$43,000
CHOWCITY	6	CATX	Transit Enhancements	2016		$30,000	$30,000
CHOWCITY	7	CATX	Operating Assistance	2017	$491,991		$491,991
CHOWCITY	8	CATX	Buses (1)	2017		$121,551	$121,551
CHOWCITY	9	CATX	Operating Assistance	2018	$516,591		$516,591
CHOWCITY	10	CATX	Replacement Bus (1)	2018		$127,628	$127,628
CHOWCITY	11	CATX	Operating Assistance	2019	$542,420		$542,420
CHOWCITY	12	CATX	Operating Assistance	2020	$569,541		$569,541
CHOWCITY	13	CATX	Operating Assistance	2021	$598,018		$598,018
CHOWCITY	14	CATX	Operating Assistance	2022	$627,919		$627,919
CHOWCITY	15	CATX	Operating Assistance	2023	$659,314		$659,314
CHOWCITY	16	CATX	Buses (1)	2023		$162,889	$162,889
CHOWCITY	17	CATX	Transit Enhancements	2023		$10,000	$10,000
CHOWCITY	18	CATX	Operating Assistance	2024	$692,280		$692,280
CHOWCITY	19	CATX	Buses (1)	2024		$171,034	$171,034
CHOWCITY	20	CATX	Operating Assistance	2025	$726,894		$726,894
CHOWCITY	21	CATX	Operating Assistance	2026	$763,239		$763,239
CHOWCITY	22	CATX	Operating Assistance	2027	$801,401		$801,401
CHOWCITY	23	CATX	Operating Assistance	2028	$841,471		$841,471
CHOWCITY	24	CATX	Operating Assistance	2029	$883,544		$883,544
CHOWCITY	25	CATX	Buses (1)	2029		$218,287	$218,287
CHOWCITY	26	CATX	Operating Assistance	2030	$927,722		$927,722
CHOWCITY	27	CATX	Buses (1)	2030		$229,202	$229,202
CHOWCITY	28	CATX	Operating Assistance	2031	$974,108		$974,108
CHOWCITY	29	CATX	Operating Assistance	2032	$1,022,813		$1,022,813
CHOWCITY	30	CATX	Operating Assistance	2033	$1,073,954		$1,073,954
CHOWCITY	31	CATX	Operating Assistance	2034	$1,127,652		$1,127,652
CHOWCITY	32	CATX	Operating Assistance	2035	$1,184,034		$1,184,034
CHOWCITY	33	CATX	Buses (1)	2035		$292,526	$292,526
CHOWCITY	34	CATX	Operating Assistance	2036	$1,243,236		$1,243,236
CHOWCITY	35	CATX	Replacement Bus (1)	2036		$307,152	$307,152
CHOWCITY	36	CATX	Operating Assistance	2037	$1,305,398		$1,305,398
CHOWCITY	37	CATX	Operating Assistance	2038	$1,370,667		$1,370,667
CHOWCITY	38	CATX	Operating Assistance	2039	$1,439,201		$1,439,201
CHOWCITY	39	CATX	Operating Assistance	2040	$1,511,161		$1,511,161
				SUBTOTAL:	**$23,234,382**	**$1,813,269**	**$25,047,651**

TABLE 5-5 (Cont.)
Planned Transit Improvements

Agency Identifier	Project #	System	Description	Funding Year	Projected		TOTAL
					Operating	Capital	
MADCITY	40	MAX/DAR	Operating Assistance	2014	$1,768,000		$1,768,000
MADCITY	41	MAX/DAR	Operating Assistance	2015	$1,856,400		$1,856,400
MADCITY	42	MAX/DAR	Buses (7)	2015		$897,750	$897,750
MADCITY	43	MAX/DAR	Operating Assistance	2016	$1,949,220		$1,949,220
MADCITY	44	MAX/DAR	Transit Enhancements	2016		$1,085,000	$1,085,000
MADCITY	45	MAX/DAR	Transit Enhancements	2016		$140,000	$140,000
MADCITY	46	MAX/DAR	Transit Enhancements	2016		$110,000	$110,000
MADCITY	47	MAX/DAR	Operating Assistance	2017	$2,046,681		$2,046,681
MADCITY	48	MAX/DAR	Operating Assistance	2018	$2,149,015		$2,149,015
MADCITY	49	MAX/DAR	Buses (5)	2018		$638,141	$638,141
MADCITY	50	MAX/DAR	Operating Assistance	2019	$2,256,466		$2,256,466
MADCITY	51	MAX/DAR	Operating Assistance	2020	$2,369,289		$2,369,289
MADCITY	52	MAX/DAR	Buses (2)	2020		$281,420	$281,420
MADCITY	53	MAX/DAR	Tr Enhancemts-Op Assistance	2020	$312,577		$312,577
MADCITY	54	MAX/DAR	Tr Enhancements-Buses (1)	2020		$180,913	$180,913
MADCITY	55	MAX/DAR	Operating Assistance	2021	$2,487,754		$2,487,754
MADCITY	56	MAX/DAR	Buses (10)	2021		$1,772,947	$1,772,947
MADCITY	57	MAX/DAR	Tr Enhancemts-Op Assistance	2021	$328,206		$328,206
MADCITY	58	MAX/DAR	Operating Assistance	2022	$2,612,142		$2,612,142
MADCITY	59	MAX/DAR	Tr Enhancemts-Op Assistance	2022	$344,616		$344,616
MADCITY	60	MAX/DAR	Operating Assistance	2023	$2,742,749		$2,742,749
MADCITY	61	MAX/DAR	Tr Enhancemts-Op Assistance	2023	$361,847		$361,847
MADCITY	62	MAX/DAR	Transit Enhancements	2023		$1,160,000	$1,160,000
MADCITY	63	MAX/DAR	Operating Assistance	2024	$2,879,885		$2,879,885
MADCITY	64	MAX/DAR	Tr Enhancemts-Op Assistance	2024	$379,940		$379,940
MADCITY	65	MAX/DAR	Buses (5)	2024		$855,170	$855,170
MADCITY	66	MAX/DAR	Operating Assistance	2025	$3,023,880		$3,023,880
MADCITY	67	MAX/DAR	Tr Enhancemts-Op Assistance	2025	$398,937		$398,937
MADCITY	68	MAX/DAR	Operating Assistance	2026	$3,175,074		$3,175,074
MADCITY	69	MAX/DAR	Buses (2)	2026		$377,129	$377,129
MADCITY	70	MAX/DAR	Tr Enhancemts-Op Assistance	2026	$418,883		$418,883
MADCITY	71	MAX/DAR	Tr Enhancements-Buses (1)	2026		$242,441	$242,441
MADCITY	72	MAX/DAR	Operating Assistance	2027	$3,333,827		$3,333,827
MADCITY	73	MAX/DAR	Buses (10)	2027		$2,375,918	$2,375,918
MADCITY	74	MAX/DAR	Tr Enhancemts-Op Assistance	2027	$439,828		$439,828
MADCITY	75	MAX/DAR	Operating Assistance	2028	$3,500,519		$3,500,519
MADCITY	76	MAX/DAR	Tr Enhancemts-Op Assistance	2028	$461,819		$461,819
MADCITY	77	MAX/DAR	Operating Assistance	2029	$3,675,545		$3,675,545
MADCITY	78	MAX/DAR	Tr Enhancemts-Op Assistance	2029	$484,910		$484,910
MADCITY	79	MAX/DAR	Operating Assistance	2030	$3,859,323		$3,859,323
MADCITY	80	MAX/DAR	Tr Enhancemts-Op Assistance	2030	$509,155		$509,155
MADCITY	81	MAX/DAR	Buses (5)	2030		$1,146,009	$1,146,009
MADCITY	82	MAX/DAR	Operating Assistance	2031	$4,052,289		$4,052,289

TABLE 5-5 (Cont.)
Planned Transit Improvements

Agency Identifier	Project #	System	Description	Funding Year	Projected		TOTAL
					Operating	Capital	
MADCITY	83	MAX/DAR	Tr Enhancemts-Op Assistance	2031	$534,613		$534,613
MADCITY	84	MAX/DAR	Operating Assistance	2032	$4,254,903		$4,254,903
MADCITY	85	MAX/DAR	Buses (3)	2032		$505,390	$505,390
MADCITY	86	MAX/DAR	Tr Enhancements-Buses (1)	2032		$324,894	$324,894
MADCITY	87	MAX/DAR	Tr Enhancemts-Op Assistance	2032	$561,344		$561,344
MADCITY	88	MAX/DAR	Operating Assistance	2033	$4,467,648		$4,467,648
MADCITY	89	MAX/DAR	Buses (10)	2033		$3,183,957	$3,183,957
MADCITY	90	MAX/DAR	Tr Enhancemts-Op Assistance	2033	$589,411		$589,411
MADCITY	91	MAX/DAR	Operating Assistance	2034	$4,691,030		$4,691,030
MADCITY	92	MAX/DAR	Tr Enhancemts-Op Assistance	2034	$618,882		$618,882
MADCITY	93	MAX/DAR	Operating Assistance	2035	$4,925,581		$4,925,581
MADCITY	94	MAX/DAR	Tr Enhancemts-Op Assistance	2035	$1,299,652		$1,299,652
MADCITY	95	MAX/DAR	Tr Enhancemts-Buses (1)	2035		$376,105	$376,105
MADCITY	96	MAX/DAR	Operating Assistance	2036	$5,171,861		$5,171,861
MADCITY	97	MAX/DAR	Buses (5)	2036		$1,535,762	$1,535,762
MADCITY	98	MAX/DAR	Tr Enhancemts-Op Assistance	2036	$1,364,634		$1,364,634
MADCITY	99	MAX/DAR	Operating Assistance	2037	$5,430,454		$5,430,454
MADCITY	100	MAX/DAR	Tr Enhancemts-Op Assistance	2037	$1,432,866		$1,432,866
MADCITY	101	MAX/DAR	Operating Assistance	2038	$5,701,977		$5,701,977
MADCITY	102	MAX/DAR	Buses (2)	2038		$677,271	$677,271
MADCITY	103	MAX/DAR	Tr Enhancemts-Op Assistance	2038	$1,504,509		$1,504,509
MADCITY	104	MAX/DAR	Tr Enhancemts-Buses (1)	2038		$435,388	$435,388
MADCITY	105	MAX/DAR	Operating Assistance	2039	$5,987,075		$5,987,075
MADCITY	106	MAX/DAR	Buses (10)	2039		$4,266,807	$4,266,807
MADCITY	107	MAX/DAR	Tr Enhancemts-Op Assistance	2039	$1,579,735		$1,579,735
MADCITY	108	MAX/DAR	Operating Assistance	2040	$6,286,429		$6,286,429
MADCITY	109	MAX/DAR	Buses (1)	2040		$480,016	$480,016
MADCITY	110	MAX/DAR	Transit Enhancements	2040		$250,000	$250,000
MADCITY	111	MAX/DAR	Tr Enhancemts-Op Assistance	2040	$2,488,082		$2,488,082
				SUBTOTAL:	**$113,069,462**	**$23,298,428**	**$136,367,890**
MADCO	112	MADCO	Operating Assistance	2014	$772,000		$772,000
MADCO	113	MADCO	Operating Assistance	2015	$810,600		$810,600
MADCO	114	MADCO	Buses (4)	2015		$441,000	$441,000
MADCO	115	MADCO	Operating Assistance	2016	$851,130		$851,130
MADCO	116	MADCO	Buses (1)	2016		$50,715	$50,715
MADCO	117	MADCO	Transit Enhancements	2016		$4,000,000	$4,000,000
MADCO	118	MADCO	Operating Assistance	2017	$893,687		$893,687
MADCO	119	MADCO	Buses (1)	2017		$121,551	$121,551
MADCO	120	MADCO	Operating Assistance	2018	$938,371		$938,371
MADCO	121	MADCO	Transit Enhancements (Amtrak Station Expansion)	2018		$692,975	$692,975
MADCO	122	MADCO	Operating Assistance	2019	$985,289		$985,289
MADCO	123	MADCO	Operating Assistance	2020	$1,034,554		$1,034,554
MADCO	124	MADCO	Operating Assistance	2021	$1,086,282		$1,086,282

TABLE 5-5 (Cont.)
Planned Transit Improvements

Agency Identifier	Project #	System	Description	Funding Year	Projected		TOTAL
					Operating	Capital	
MADCO	125	MADCO	Buses (8)	2021		$360,219	$360,219
MADCO	124	MADCO	Tr Enhancemts-Op Assistance	2021	$428,462		$428,462
MADCO	125	MADCO	Tr Enhancemts-Buses (3)	2021		$443,237	$443,237
MADCO	126	MADCO	Operating Assistance	2022	$1,140,596		$1,140,596
MADCO	127	MADCO	Tr Enhancemts-Op Assistance	2022	$449,885		$449,885
MADCO	128	MADCO	Operating Assistance	2023	$1,197,625		$1,197,625
MADCO	129	MADCO	Buses (1)	2023		$162,889	$162,889
MADCO	130	MADCO	Tr Enhancemts-Op Assistance	2023	$472,380		$472,380
MADCO	131	MADCO	Transit Enhancements	2023		$2,390,000	$2,390,000
MADCO	132	MADCO	Operating Assistance	2024	$1,257,506		$1,257,506
MADCO	133	MADCO	Tr Enhancemts-Op Assistance	2024	$495,999		$495,999
MADCO	134	MADCO	Operating Assistance	2025	$1,320,382		$1,320,382
MADCO	135	MADCO	Tr Enhancemts-Op Assistance	2025	$520,798		$520,798
MADCO	136	MADCO	Operating Assistance	2026	$1,386,401		$1,386,401
MADCO	137	MADCO	Buses (1)	2026		$82,609	$82,609
MADCO	138	MADCO	Tr Enhancemts-Op Assistance	2026	$546,838		$546,838
MADCO	139	MADCO	Operating Assistance	2027	$1,455,721		$1,455,721
MADCO	140	MADCO	Buses (4)	2027		$395,986	$395,986
MADCO	141	MADCO	Operating Assistance	2027	$574,180		$574,180
MADCO	142	MADCO	Tr Enhancemts-Buses (3)	2027		$593,979	$593,979
MADCO	143	MADCO	Operating Assistance	2028	$1,528,507		$1,528,507
MADCO	144	MADCO	Tr Enhancemts-Op Assistance	2028	$602,889		$602,889
MADCO	145	MADCO	Operating Assistance	2029	$1,604,933		$1,604,933
MADCO	146	MADCO	Buses (1)	2029		$207,893	$207,893
MADCO	147	MADCO	Tr Enhancemts-Op Assistance	2029	$633,033		$633,033
MADCO	148	MADCO	Operating Assistance	2030	$1,685,178		$1,685,178
MADCO	149	MADCO	Tr Enhancemts-Op Assistance	2030	$664,686		$664,686
MADCO	150	MADCO	Operating Assistance	2031	$1,769,438		$1,769,438
MADCO	151	MADCO	Buses (1)	2031		$105,433	$105,433
MADCO	152	MADCO	Tr Enhancemts-Op Assistance	2031	$697,920		$697,920
MADCO	153	MADCO	Operating Assistance	2032	$1,857,910		$1,857,910
MADCO	154	MADCO	Tr Enhancemts-Op Assistance	2032	$732,816		$732,816
MADCO	155	MADCO	Operating Assistance	2033	$1,950,806		$1,950,806
MADCO	156	MADCO	Buses (4)	2033		$530,660	$530,660
MADCO	157	MADCO	Tr Enhancemts-Op Assistance	2033	$1,325,385		$1,325,385
MADCO	158	MADCO	Tr Enhancemts-Buses (5)	2033		$1,326,650	$1,326,650
MADCO	159	MADCO	Operating Assistance	2034	$2,048,346		$2,048,346
MADCO	160	MADCO	Tr Enhancemts-Op Assistance	2034	$1,391,654		$1,391,654
MADCO	161	MADCO	Operating Assistance	2035	$2,150,762		$2,150,762
MADCO	162	MADCO	Buses (1)	2035		$292,526	$292,526
MADCO	163	MADCO	Tr Enhancemts-Op Assistance	2035	$1,461,238		$1,461,238
MADCO	164	MADCO	Operating Assistance	2036	$2,258,372		$2,258,372

TABLE 5-5 (Cont.)
Planned Transit Improvements

Agency Identifier	Project #	System	Description	Funding Year	Projected		TOTAL
					Operating	Capital	
MADCO	165	MADCO	Buses (1)	2036		$134,562	$134,562
MADCO	166	MADCO	Tr Enhancemts-Op Assistance	2036	$1,534,299		$1,534,299
MADCO	167	MADCO	Operating Assistance	2037	$2,371,217		$2,371,217
MADCO	168	MADCO	Tr Enhancemts-Op Assistance	2037	$1,611,014		$1,611,014
MADCO	169	MADCO	Operating Assistance	2038	$2,489,777		$2,489,777
MADCO	170	MADCO	Tr Enhancemts-Op Assistance	2038	$1,691,565		$1,691,565
MADCO	171	MADCO	Operating Assistance	2039	$2,614,266		$2,614,266
MADCO	172	MADCO	Buses (4)	2039		$711,134	$711,134
MADCO	173	MADCO	Tr Enhancemts-Op Assistance	2039	$1,776,143		$1,776,143
MADCO	174	MADCO	Tr Enhancemts-Buses (5)	2039		$1,981,017	$1,981,017
MADCO	175	MADCO	Operating Assistance	2040	$2,744,980		$2,744,980
MADCO	176	MADCO	Transit Enhancement	2040		$310,000	$310,000
MADCO	177	MADCO	Tr Enhancemts-Op Assistance	2040	$1,864,950		$1,864,950
				SUBTOTAL:	**$61,680,770**	**$15,335,035**	**$77,015,805**
				GRAND TOTAL:	**$197,984,614**	**$40,446,732**	**$238,431,346**

- *City of Madera* - Transit services and improvements in the City of Madera are projected at $136.4 million. This cost reflects on-going operating and capital replacements for MAX and Dial-A-Ride services and transit enhancements totaling $25.1 million, including:

  - Development of a new Transit Operations and Maintenance Facility
  - Fleet expansion (i.e., use of compressed natural gas; zero-emissions vehicles)
  - Bus shelters and amenities
  - Bus stop and station lighting and security
  - Installation of schedule kiosks and signage
  - Computerized dispatching
  - Upgraded on-board technology (i.e., electronic fareboxes; GPS system; refined Google Transit information; on-line real-time transit data; wi-fi service; etc.)

- *City of Chowchilla* - A total of $25.0 million is projected for public transit services in the City of Chowchilla. This includes on-going operating and capital replacement costs for CATX and CatLinx and approximately $180,000 in transit enhancements, including:

  - Transit facility renovations
  - Bus shelters and amenities
  - Bus stop lighting
  - Upgraded on-board technology

- *Madera County* - A total of $77.0 million in transit services and improvements is projected for Madera County. This cost includes on-going operating and capital replacements for MCC, and Dial-A-Ride services and transit enhancements totaling $36.0 million, including:

  - Development of a new Transit Operations and Maintenance Facility
  - Fleet expansion (i.e., use of compressed natural gas; zero-emissions vehicles)
  - Bus shelters and amenities
  - Bus stop lighting
  - Installation of schedule kiosks and signage
  - Upgraded on-board technology (i.e., electronic fareboxes; GPS system; refined Google Transit information; on-line real-time transit data; wi-fi service; signal synchronization; etc.)

- *Other Future Transit Improvements* - The transit cost projections through 2040 assume continuation of existing federal, State, and local funding sources inflated by 5%. The use of additional traditional and non-traditional transit funding sources would allow for even more diverse and increased service improvements warranted by increased population growth and densities and demand and cost effectiveness.

  For example, County transit operators could pursue the use of competitive federal Congestion Mitigation and Air Quality (CMAQ) funds, new State and local proposition funds dedicated to transit and/or transportation, new Federal Transit Administration programs, and potential future funds earmarked for public transit to further advance their services through 2040.

  A wide range of future improvements may be considered, including:

  - Operations Improvements
    - Increased days and hours of operation
    - Increased number of routes
    - Improved headways/bus frequencies
    - Expanded service area
    - Accessible real-time internet schedule information
    - Express bus service
    - Commuter service
    - Feeder service
    - Bus rapid transit (BRT)

  - Capital Improvements
    - Larger vehicles
    - Bus shelters and amenities
    - Alternative-fuel/zero emission vehicles

- Upgraded on-board technology
- Improved scheduling technology
- Automated passenger counters

Long-term commitments to transit services and allocated funding will evolve through the planning development process. Given the shortfall in funds for all transportation improvements identified in the RTP, local government bodies must continue to prioritize projects based on valid criteria, combined with major community input and collaboration. If there is a significant shift in public sentiment for transit services, the transit planning process must prioritize improvements and identify feasible federal, State, and local funding sources. This process, ultimately, will lead to increased levels of transit services based on broad community support and acceptance.

Aviation

Increased air service demand will continue to occur in Madera County. This projected demand will increase the need for airport improvements. A number of these improvements are identified in the RTP including land acquisition for future improvements, runway and taxiway renovations and extensions, etc. These improvements have been identified to address aviation system needs described in *the Regional Aviation System Plan* prepared by MCTC in 2011.

✓ Aviation System Needs and Actions

Table 5-6 provides a list of the planned improvement projects identified from each of the cities' Airport Master Plans. Other future activities, studies, and improvements are also listed below.

- Continue to seek funding of airport projects
- Maintain and improve existing airport facilities. Review and revise the Airport Master Plans
- Provide for the interface of airport systems planning with other transportation networks to insure a balanced, multi-modal system
- Support development of the City of Madera and City of Chowchilla airports per actions outlined in their respective Master Plans
- Support land use policies and special projects aimed at mitigating structural, noise and other environmental limitations associated with the Region's airports
- Pursue sophisticated approach and landing systems for the Madera Municipal Airport
- Support expansion of capital improvement funds and sources for rural airports

- Both the City of Madera and the City of Chowchilla are taking action to avoid noise conflicts concerning their respective airports

- Local airport managers in Madera County consider the current regulations adequate for ensuring a safe aviation environment. The Division of Aeronautics inspects all public airports in the Madera Region on a yearly basis

TABLE 5-6
Airport Master Plan Improvement Projects
City of Madera

	Eligible Improvements	Cost/Program Year
1	Engineering Design - Projects No. 2 & 4	$120,000/ 2014
2	Reconstruct General Aviation Apron - Phase II (58,000 sq. ft.)	$820,000 / 2014
3	Engineering Design - Projects No. 2 & 4	$75,000 / 2014
4	Runway, Taxiway, & Apron Crack Seal	$ 657,000 / 2015
5	Tee Hangar Development - Phase I: Collector Taxiway (35' x 405'); Tee Hangar Taxiway (25' x 1,935')	$682,000 / 2015
6	Engineering Design - Projects No. 7	$65,000 / 2015
7	Tee Hangar Development - Phase II: Collector Taxiway (35' x 360'); Tee Hangar Taxiway (25' x 980')	$520,000 / 2016
8	Engineering Design - Projects No. 9	$136,000 / 2017
9	Extend Hangar Development Area - Phase III (201,000 sq. ft.)	$1,537,500 / 2018
10	Engineering Design - Projects No. 11	$122,000 / 2018
11	Reconstruct General Aviation Apron - Phase III (127,300 sq. ft.)	$1,355,000 / 2019
12	Engineering Design - Projects No. 16 & 17	$620,000 / 2020
13	Pavement Maintenance/Management Program Update	$65,000 / 2020
14	Airport Layout Plan Narrative Including ALP Updated Plans	$100,000 / 2020
15	Environmental Assessment (EA) - Projects 17, 21, and 23	$310,000 / 2020
16	Runway 12-30 Rehabilitation	$ 5,924,000 / 2021
17	Extend Runway 12-30 - 150' x 856', Extend Taxiway P (50' x 1,210')	$2,876,000 / 2022
18	Engineering Design - Projects No. 19, 20, 21, 22 & 24	$650,000 / 2022
19	Reconstruct General Aviation Apron - Phase IV (183,160 sq. ft.)	$ 1,164,000 / 2023
20	Taxiways P, A, B, C, D, & E Rehabilitation	$ 2,500,500 / 2024
21	Reconstruct General Aviation Apron - Phase V (106,750 sq. ft.)	$1,101,000 / 2024
22	West Corporate Area Development Access Road (6,900' x 36')	$2,261,000 / 2025
23	Pavement Maintenance/Management Program Update	$90,000 / 2025
24	West Hangar Area Development Access Road (4,500' x 36')	$1,440,000 / 2026
	MADERA TOTAL:	**$25,191,000**

TABLE 5-6 (Cont.)
Airport Master Plan Improvement Projects
City of Chowchilla

Eligible Improvements	Cost/Program Year
ALP Narrative	$160,000 / 2012-2013
Airfield electrical upgrades including Rwy 30 PAPI, beacon, runway lighting upgrades, guidance signs.	$250,000 / 2013-2014
Runway pavement rehabilitation: localized remove & reconstruct, slurry seal & pavement markings (design only).	$75,000 / 2014-2015
No project this year	$0.00 / 2015-2016
Runway pavement rehabilitation: localized remove & reconstruct, slurry seal & pavement markings.	$500,000 / 2016-2017
Above ground fuel facility: Av-Gas and Jet-A	$450,000 / 2017-2018
CHOWCHILLA TOTAL:	**$1,435,000**

✓ Airport Land Use Commission

The purpose of an Airport Land Use Commission (ALUC) is to provide for the orderly development of public airports and to ensure compatible land uses in the vicinity of airports. The ALUC consists of seven members, representing each of the Cities, County and Airports within the County. The Madera County ALUC meets on as needed basis, generally to review the airport master plans, general plans developed by the cities and proposed land use changes within two miles of the airports.

To ensure compatible land uses in Madera County, the Madera County ALUC has developed the *Madera County Comprehensive Airport Land Use Plan*. This plan, which was approved in 1993 and is currently in the process of being updated, consists of:

- Policies which guide height restriction, safety, noise, and other land use considerations
- Individual airport compatibility maps
- Plan implementation procedures
- Other information

✓ Forecasts

Based on the forecasts for airport operations, none of the airports in the County will exceed operation capacity over the next 26 years.

Non-Motorized Systems

MCTC recognizes that increased bicycling, walking and equestrian activities can reduce traffic congestion, air and noise pollution and fuel consumption. As a result, these modes effectively contribute to the quality of life in the region. Bicycle travel has emerged as an increasingly popular form of recreation in the region. Commuting to work has also increased in the urbanized areas of Madera County. Bicycles are essentially pollution-free, use no fossil fuels, are quiet, and take up very little space either in operation or in storage. Bicycling is of interest to the individual because it promotes health, is enjoyable and inexpensive, and, in the congested of the County, bicycling can be the fastest way of getting to work or to any destination, especially during the peak periods.

These same advantages can be said for those who travel by walking. Bicycle and pedestrian mode disadvantages include almost no protection in case of collision, limited carrying capacity, increased travel time for longer trips, and direct exposure to inclement weather, especially during fog in the winter and high temperatures in the summer months.

It is particularly important to improve bicycle and pedestrian access to intermodal facilities (rail stations and transit centers). Using non-motorized forms of transportation reduce engine cold starts and short vehicle trips, which contribute significantly to air pollution. The provision of new or improved access to such facilities could be made by bicycle or pedestrian modes and replace short automobile trips. To increase the bicycle mode share, in particular, significant publicity and marketing efforts are necessary, as well as a new approach by transportation agencies to planning facilities for both bicyclists and pedestrians. This approach increases attention to these modes and focuses on intermodal connections.

✓ Non-Motorized System Accomplishments

- *City of Madera*
  - Fresno River Trail Schnoor Undercrossing, south bank
  - Fresno River Trail, Westberry to Road 24

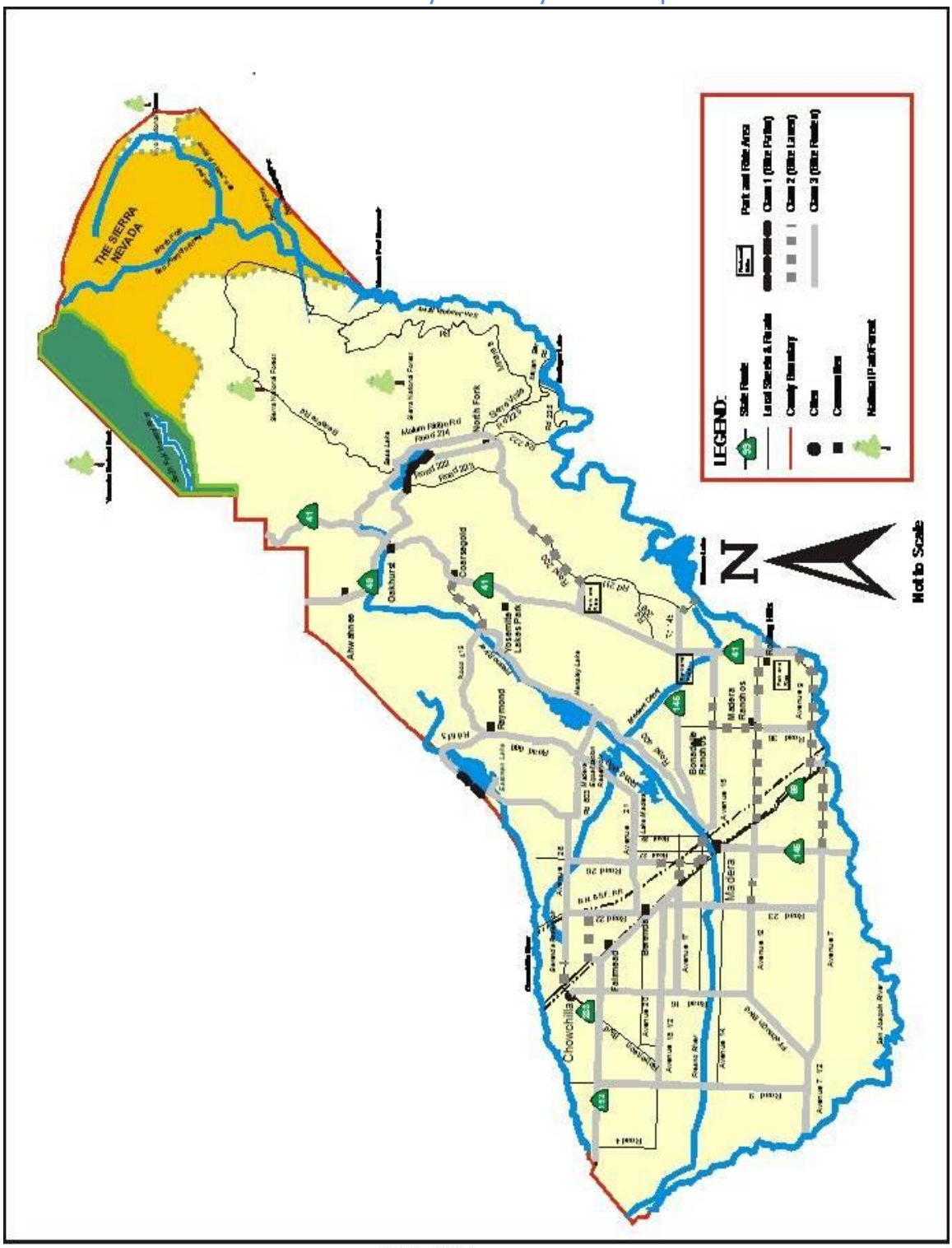
- *County of Madera*
  - Cesar Chavez Pedestrian Path
  - Desmond/Nishimoto Path and Sidewalk
  - Road 426 Sidewalk

✓ Non-Motorized System Needs and Actions

The Cities of Chowchilla and Madera and Madera County have prepared bicycle plans. Figures 5-9 through 5-11 identify the planned routes for bike lanes and paths. The plans stress the importance of making the road system compatible for bicycle and pedestrian transportation. In addition, the State of California has been working to improve and promote on-street bicycle commuting to urban cores and to support bicycle access to transit and passenger rail modes.

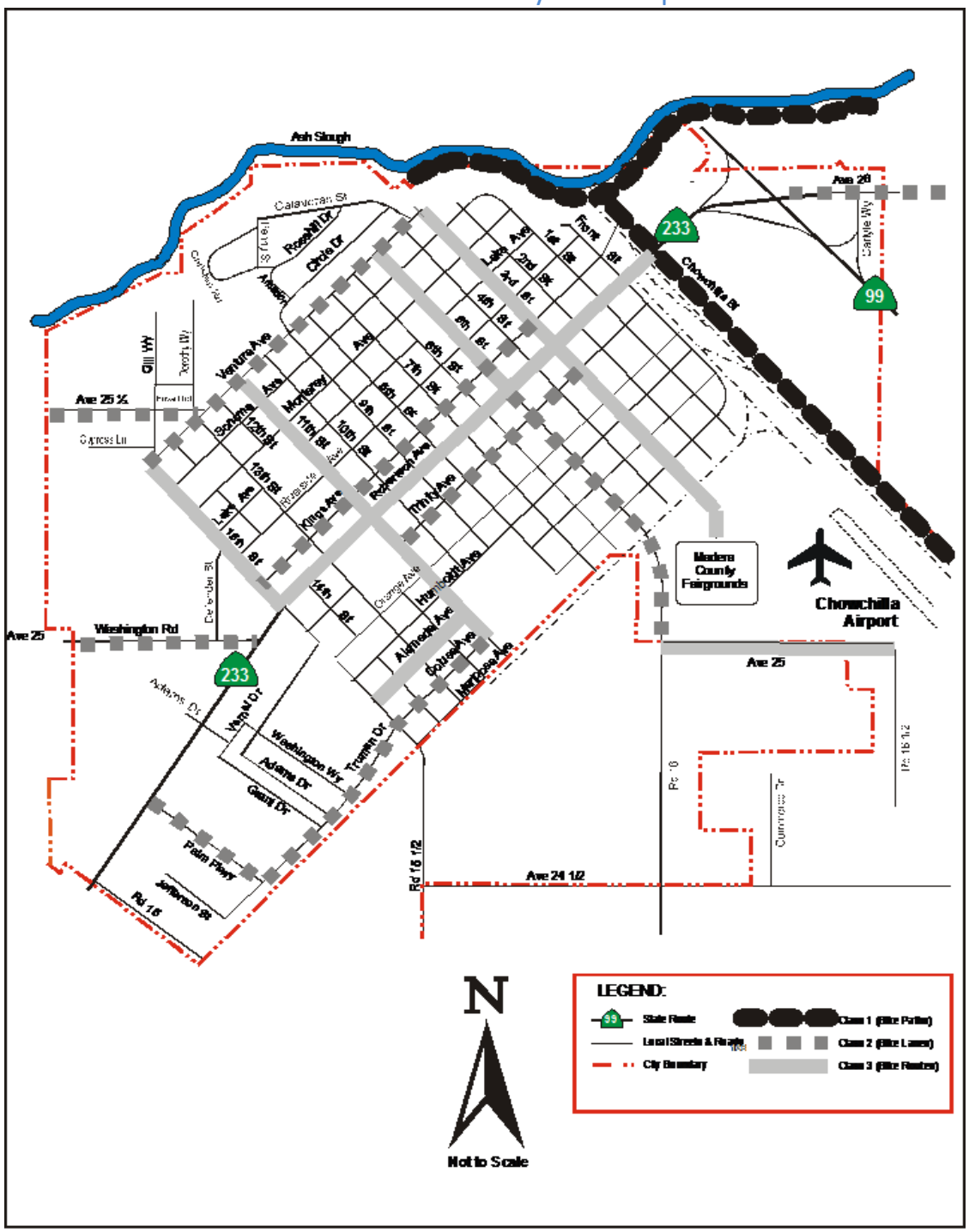
FIGURE 5-9

Madera County Bikeway Plan Map



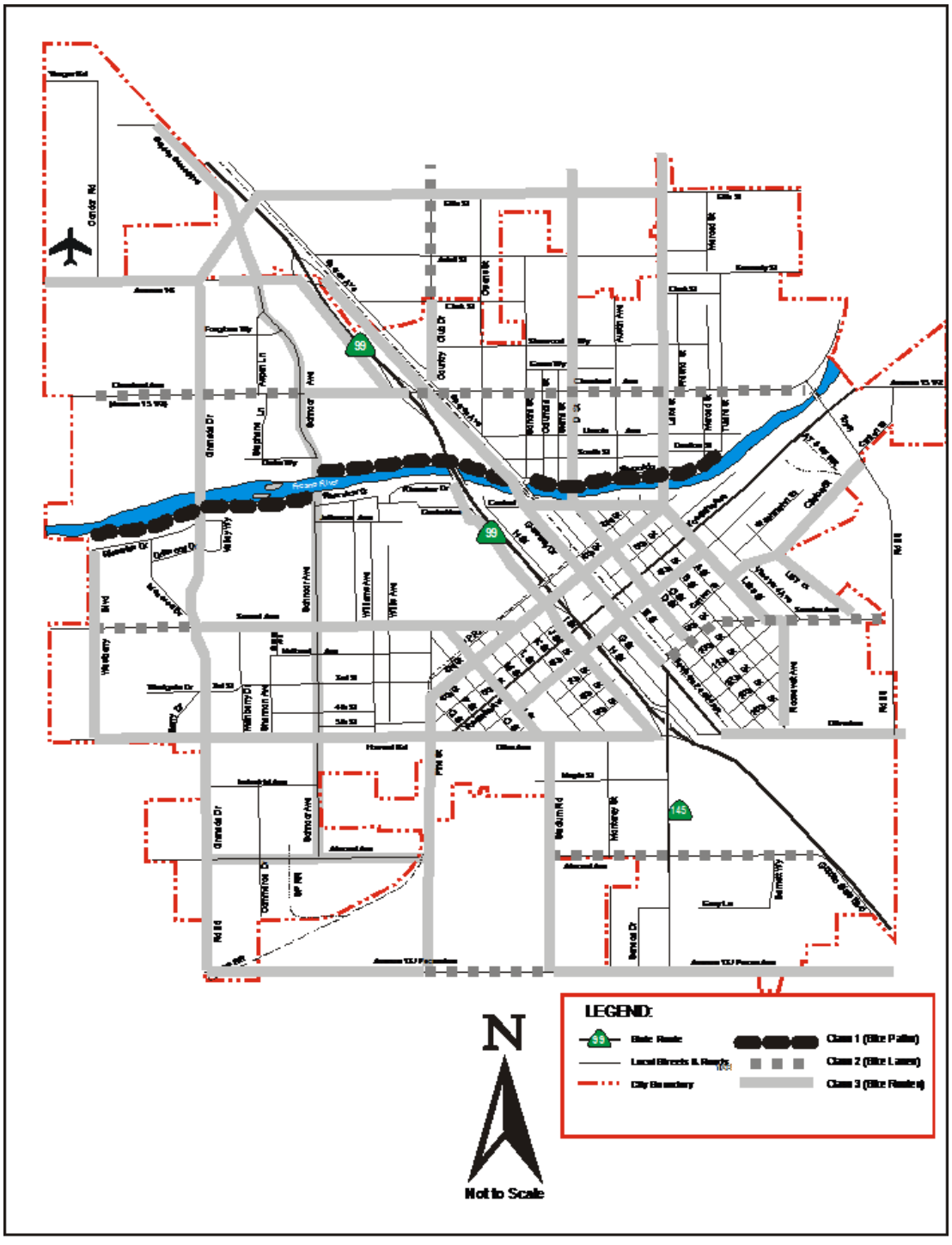
your madera 2040

FIGURE 5-10
Chowchilla Bikeway Plan Map



your madera 2040

FIGURE 5-11
Madera Bikeway Plan Map



The Madera County 2004 Bicycle Transportation Plan addresses the needs of both commuting and recreational cyclists throughout the county, identifies safe and convenient routes to key locations throughout the county, and suggests needed improvements and additions to the bikeway routes and facilities. MCTC staff will focus on the implementation program of the plan.

Although it is difficult to prioritize proposed bikeway and pedestrian projects countywide due to funding fluctuations, coordination with larger street improvement projects and relative private development schedule changes, the plan divides proposals into short-term (5 to 10 years from implementation) or long-range (more than 10 years) implementation priority.

The plan proposes a regional bikeway network to connect urban areas and communities in Madera County with adjoining County systems in Fresno, Merced and Mariposa County. The focus of the internal network in Madera County includes the City of Madera, City of Chowchilla, the urban unincorporated communities of Madera and Bonnadelle Ranchos, and the foothill/mountain community of Oakhurst.

The Madera County 2004 Bicycle Transportation Plan will serve as the basis for future investment in bicycle and pedestrian infrastructure. The plan identifies development priorities, funding sources, and grant opportunities.

Non-motorized travel should continue to increase in popularity due to public awareness of health and environmental benefits. There are four needs related to bike facilities the implementation plan:

- Need for education and enforcement programs to ensure safe and proper use of proposed bike lanes and routes
- Lack of adequate shoulders to allow for safe bicycle travel on State Highways 41, 49 and 145 (and similar constraints on other State Highways and County roadways of regional significance)
- Provision of bike route facilities and services, particularly in rural areas
- Bike parking and storage facilities in urban centers and air and water supplies at rural stops were generally suggested

✓ Bicycle and Trail Improvements

To enable the vision of non-motorized linkages to activity centers within the region, the local agencies have requested approximately $36.2 million for non-motorized projects in the 2014 RTP and SCS (reference Table 5-7), representing a 70% increase in funding for non-motorized improvement projects from the 2011 RTP. Regional decision makers should continue to promote the integration of non-motorized modes into the transportation planning process; the County should continue to implement the County Bikeway Plan; agencies should work together to continue implementation of the Fresno River Trail; and all responsible agencies should take steps to move beyond conceptual planning and development to implementation of plans and strategies.

The following actions are recommended to facilitate the achievement of these goals:

- Determine the status of existing non-motorized system to achieve the desired vision, goals, objectives and update and implement the existing Bikeway Plans as appropriate
- Implement recreational trails within the mountain communities that connect major activity centers and provide alternatives to driving between the communities\
- As part of the Bikeway Plan Update process, identify and develop strategies to address institutional, transportation, funding, infrastructure and other barriers to the effective use of non-motorized transportation for commute purposes
- Identify strategies to link non-motorized transportation funding programs to standards for transit programs
- Fund the development and implementation of bicycle safety and education programs aimed at cyclists of all ages, potential bike commuters and motorists
- Sponsor legislation and or ordinances to increase enforcement of bicycling and driving laws to provide a safer climate for bicycle use
- Develop and implement bicycle incentive programs that recognize and reward employees for bicycle use similar to those that reward transit use
- Assist local governments in the implementation of nonmotorized facilities consistent with the Madera County 2004 Bicycle Transportation Plan
- Encourage the use of nonmotorized facilities as a transportation control measure

TABLE 5-7

Non-Motorized Transportation Improvement Projects

Agency	Project #	Route	Project Limits	Project Description	Estimated Cost	Funding Year
Chowchilla						
CHOWCITY	1	Robertson Blvd	8th St to UP Rail Crossing	Streetscape	$1,000,000	2025
CHOWCITY	2	Chowchilla Neighborhoods	Various	Pedestrian Facilities	$2,000,000	2025
CHOWCITY	3	Ash Slough	North Chowchilla	Riverwalk	$2,000,000	2020
CHOWCITY	4	City of Chowchilla	Sidewalk Construction Near Wilson School	Pedestrian Facilities	$339,000	2016
CHOWCITY	5	City of Chowchilla	Expand sidewalk Replacement for additional 4 blocks	Pedestrian Facilities	$131,100	2020
CHOWCITY	6	City of Chowchilla	Construct school pedestrian facilities	Pedestrian Facilities	$466,000	2016
CHOWCITY	7	Monterey Ave	3rd to 13th Street	Construct Pedestrian Facilities	$158,333	2014
CHOWCITY	8	School	Various	Construct Pedestrian Facilities	$325,000	2020
				Subtotal:	**$6,419,433**	
Madera						
MADCITY	9	Tulare St, Cleveland, Raymond Rd	Fresno River to City Limits via Cleveland and Raymond	Class I, II Bicycle Facilities	$311,000	2014
MADCITY	10	Cleveland Ave	Schnoor Ave to Granada Ave	Construct Bike/Ped Facilities	$339,000	2015
MADCITY	11	Madera	D St to Sierra St	Construct Pedestrian Facilities	$140,000	2015
MADCITY	12	Rotary Park	Various	Construct Pedestrian Facilities	$314,200	2011
MADCITY	13	Laurel Street	Various	Construct Class I Bicycle	$267,700	2014
MADCITY	14	Fresno River Trail	Gateway & UPRR	Construct Bike/Ped	$560,000	2011
MADCITY	15	Fresno River Trail	Schnoor Ave	Construct Bike/Ped	$384,000	2011
MADCITY	16	Fresno River Trail	Gateway & UPRR	Construct Bike/Ped Undercrossing	$560,000	2011
MADCITY	17	Schnoor Ave	Various	Construct Pedestrian Facilities	$150,000	2017
MADCITY	18	Fresno River Trail	Schnoor to MID North Bank	PHASE II - Class I Bike Facilities	$145,000	2017
MADCITY	19	Various	City Schools	Construct Pedestrian Facilities	$266,000	2016
MADCITY	20	Fresno River Trail	Gateway and UPRR Undercrossing	Class I Bicycle Facilities	$534,000	2015
MADCITY	21	Various	Bounded by Gateway, Central, 3rd and E Street	Construct Pedestrian Facilities	$315,000	2015
MADCITY	22	Laural Street	Sunset to Fresno River Trail	Construct Bicycle Path	$457,000	2015
MADCITY	23	Cleveland Ave	Granada to Schnoor	Construct Bicycle and Pedestrian Facilites	$379,000	2016
				Subtotal:	**$5,121,900**	
Madera County						
MADCO	24	Road 225	Creek Dr to Road 228	Construct Pedestrian Facilities	$181,550	2014
MADCO	25	Road 426	SR 41 to Road 427	Construct Pedestrian Facilities	$89,000	2014
MADCO	26	Ave 12	Road 37 to Road 37.5	Construct Pedestrian Facilities	$122,932	2020
MADCO	27	Various	Fairmead	Streetscape	$3,000,000	2025
MADCO	28	Various	North Fork	Streetscape	$1,000,000	2025
MADCO	29	Various	Oakhurst Mid-town Connector	Streetscape/Pedestrian/Bicycle Facilities	$2,000,000	2025
MADCO	30	Various	2004 Bike Plan	Class I, II, III Bicycle Facilities	$2,960,373	2011-2020
MADCO	31	Various	2004 Bike Plan	Class I, II, III Bicycle Facilities	$15,309,782	2021-2035
				Subtotal:	**$24,663,637**	
				TOTAL:	**$36,204,970**	

- Continue to allocate funds for nonmotorized projects promoting both bicycle and pedestrian facilities

- Encourage local jurisdictions to consider adopting land use policies that promote non-motorized transportation and reduce dependence on the automobile for work, shopping, social and recreational purposes consistent with the *Madera County 2004 Bicycle Transportation Plan*. The SJVAPCD's Air Quality Guidelines for General Plans is available for use by local agencies to assist in the efforts to coordinate transportation, land use and air quality planning

Bikeways and pedestrian facilities, including trails, have become increasingly important to the Madera County region over the past several years largely because of air quality, economic development and quality of life (health) considerations. Consequently, MCTC has become more involved in integrating active transportation into the regional transportation planning processes. Recognizing walking and bicycling as healthy, accessible and sustainable forms of transportation, MCTC will embark on a new effort to develop a Regional Active Transportation Plan (ATP), which will integrate member agency complete Bicycle Master Plans combined with targeted pedestrian and safe routes to school planning efforts. The Regional ATP will guide efforts to improve bicycling and walking conditions at the local level throughout the Madera County region and will serve as a blueprint for the future of walking and bicycling in the region. The Plan will provide a countywide understanding of existing conditions and countywide priority bicycle and pedestrian networks as well as existing conditions analysis and recommended network for the unincorporated areas in Madera County and each of the MCTC member agencies. Developing an ATP will require coordination and collaboration with a variety of active transportation stakeholders and elected officials that will essentially form an Active Transportation Subcommittee. The Regional ATP will be the roadmap for developing pedestrian and bicycle infrastructure in the region, with an emphasis on promoting walking and bicycling as viable transportation options and fostering a practical, safe, and enjoyable environment that will encourage walking and bicycling for recreational and commuter trips with the goal to establish specific policies and programs.

✓ Pedestrian Improvements

There are several strategies that will serve to improve conditions for existing pedestrians and to induce others to join them. These measures include:

- Routine maintenance of existing sidewalks and curbing, including smoothing uneven surfaces, improving drainage, trimming vegetation, removing intrusive street furniture, including signs, sweeping and shoveling

- Building new sidewalks to provide continuity

- Providing 'pedestrian-friendly' intersection design (appropriate signal-head placement, signal intervals, curb ramps, signed and painted crosswalks, adequate lighting, etc.)

- Increased emphasis on access to transit. In all these areas, access for people with disabilities must also be part of the program

- Providing safe and direct pedestrian routes and bikeways between places

- Promoting walking and bike riding for transportation and recreation

There are several strategies that will serve to improve conditions for existing pedestrians and to induce others to join them. In general, all new roadway projects and all reconstruction projects should be constructed so as to provide increased safety and mobility for all users, including people who walk and bicycle. In addition, local agencies have identified general streetscape projects within their jurisdictions to promote walkability within activity centers; especially in downtown areas and along major corridors. These and other projects that will reduce greenhouse gas (GHG) emissions may be funded through the SCS Funding Program.

Goods Movement

Goods movement in Madera County is primarily made along the network of highways and railroads. After many years of decline due to increased competition from trucks, rail freight is reasserting itself as an important component of the transportation system. While cartage by truck will remain an important component of a competitive and multimodal freight network, an efficient, high capacity freight rail system is also essential to ensure the seamless movement of goods between Madera County and markets and manufacturers in the north, south and east. While local freight distribution within the San Joaquin Valley, including Madera County, will continue to be handled mostly by trucks, railroads will serve some industries along the railroad lines. Improvements made to rail rights-of-way, generally for passenger travel, should also help the freight railroads by allowing faster, smoother travel.

✓ Goods Movement Needs and Actions

An important goal of the 2014 RTP and SCS is to ensure smooth connections between regional communities, the rest of the Valley, the State, and the nation. The purpose of the regional goods movement program is to improve the efficiency of all modes—truck, rail freight, and air cargo; and for all kinds of freight—domestic import/export, container, break-bulk, and bulk cargo. In addition, the Region recognizes the importance of ancillary facilities such as airports and intermodal terminals and supporting functions including freight forwarding, parcel consolidation, and warehousing. The intent is to ensure a more efficient system, with greater throughput, elimination of bottlenecks, reduced congestion, lower environmental impacts, and corresponding economic benefits for the Region.

Improvements to the regional goods movement transportation, terminal, and intermodal transfer facilities will require a combination of traditional public sector and private sector funding. For instance, introduction of new and more powerful but lower-polluting railroad locomotives, main line track capacity, and railyard operational improvements are the responsibility of the private freight railroads. Most roadway and traffic signaling improvements used by trucks are provided by the public sector and financed by fuel taxes, other user fees, and private development. Still other improvements to transportation infrastructure serving airports may be funded using a mix of airport revenues, other public funds, and privately generated capital.

Development of a modern, efficient goods movement system for the Region is a cooperative venture, including all of the freight modal providers, airport operators, the federal, State, and local governments, and many other parties. While air cargo operations at the Chowchilla and Madera Municipal Airports are desirable, the feasibility of transporting goods by air is questionable. According to *the Regional Aviation System Plan* for Madera County prepared by MCTC in June 1994, most of the products from agribusiness are transported by truck or by train. In addition to those actions contained in this RTP and SCS, the following actions are also recommended to address improvements in the area of rail-highway grade crossings and goods movement modeling.

The most obvious issues related to goods movement include the following:

- Trucking will continue to be the most inexpensive form of goods movement and will continue to add highway congestion
- Air and rail services are under-utilized for the movement of goods
- It is anticipated that rail transport will continue to increase because of its flexibility and speed

✓ Grade Separation Improvements

Regional rail freight movements often conflict with highway commuter and goods movement traffic. With the anticipated increase in truck and train movements, substantial additional delay for passenger vehicles and trucks can be expected at grade crossings. To avoid these delays, grade separations carrying arterials under or over rail lines carrying substantial amounts of freight is recommended along critical routes such as SR 99 near SR 152. In order to support rail/highway grade crossing conflicts, MCTC intends to support the local agencies' in obtaining funds for grade crossing studies, support the construction of grade separations where streets and highways cross regional rail lines, and recognize the need for additional funding for grade crossing improvement projects to relieve truck and other highway congestion because current program funding needs exceed available public and private funding.

✓ Goods Movement Modeling

The Regional Transportation Planning Agencies in the San Joaquin Valley have developed Phase 1 of the *San Joaquin Valley Goods Movement Study*, which focused on issues related to the movement of goods from farm to market, congestion, railroad crossings, roadway geometry, parking/rest area problems, route restriction, and signal timing. Phase 2 of the Study focused on building a Valleywide truck model that can be integrated into the Traffic Modeling process. The following list of actions is designed to address regional needs related to goods movement:

- Continue to evaluate and designate truck routes
- Coordinate and consult with private sector providers to identify obstacles to the efficient movement of goods and develop alternative strategies
- Identify funding sources in support of the transport of goods from farm to market
- Identify and implement railroad crossing safety improvements
- Assist in implementing state and federally-funded rail projects, as required
- Seek strict enforcement of transportation regulations concerning the transport of hazardous substances
- Consider locating industrial development near railroads, airports, and major highways in the land-use element of local general plans
- Encourage the use of rail, air and buses for the transportation of goods
- Provide technical assistance to local jurisdictions for industrial and wholesale land use and transportation planning
- Coordinate planning efforts to ensure efficient, economical and environmentally sound movement of goods
- Encourage the use of rail, air and buses for the transportation of goods
- Encourage coordination and consultation between the public and private sectors to explore innovative strategies for the efficient movement of goods
- Support intermodal linkage of truck on rail as a technique of reducing traffic on selected corridors

- Pursue additional funding for street, road, highway, and air and rail projects by working with the league of California cities and the county supervisors association of California to ensure the efficient movement of goods

- Oppose higher cargo weights for trucking industry

- Encourage and support strict enforcement of transportation regulations concerning the transportation of hazardous material

- Support and work with districts, local jurisdictions, regional agencies and the private sector to provide improved intermodal freight transfer facilities and access at major airports and rail terminals

- Assess and incorporate, where appropriate, innovative intermodal linkage of truck on rail as a technique of reducing truck annual average daily traffic on select highway corridors

- Encourage more stringent emissions controls on trucks, buses, trains, and airplanes operating in California

Transportation Demand Management

Transportation demand management (TDM) is the all-inclusive term given to a variety of measures used to improve the efficiency of the existing transportation system by managing travel demand. Referencing Table 5-8, approximately $56.8 million has been allocated toward TDM improvement projects. Travel behavior may be influenced by mode, reliability, frequency, route, time, and costs, support programs/facilities and education. TDM strategies encourage the use of alternatives to the single occupant vehicle such as carpools, vanpools, bus, rail, bikes, and walking. Alternative work hour programs such as compressed work week programs, flextime, and telecommuting (teleworking) are also TDM strategies as are parking management tactics such as preferential parking for carpools and parking pricing; as well as other strategies to improve traffic flow.

TABLE 5-8
Other Improvement Projects

Agency	Project #	Route	Project Limits	Project Description	Estimated Cost	Funding Year
Madera						
MADCITY	4	Madera	1 Diesel Front End Loader	Fleet Conversion	$158,000	2014
MADCITY	6	Madera	1 CNG replacement Water Truck	Fleet Conversion	$187,000	2014
MADCITY	7	Madera	1 CNG replacement Heavy Duty Dump Truck	Fleet Conversion	$188,000	2014
MADCITY	8	Madera	Purchase and Install 1 CNG Compressor	Fleet Conversion	$338,000	2014
MADCO	12	Children's Blvd	at Peck Ave	Traffic Signal	$373,000	2015
				Subtotal:	$1,244,000	
Madera County						
MADCO			County Government Center and County Campus at Road 28	Electric Vehicle Charging Stations (2)	170000	2016
MADCO		County of Madera		Purchase ZEV RAV 4 - Replacement	50000	2016
MADCO		North Fork	Road 274	Roundabout at Road 274 and Road 225	$485,000	2020
				Subtotal:	**$705,000**	
MCTC						
MCTC	33	Various	To Be Determined	TCMs/TSMs	$8,881,118	2014-2025
MCTC	34	Various	To Be Determined	TCMs/TSMs	$45,929,346	2026-2040
				Subtotal:	**$54,810,464**	
				TOTAL:	**$56,759,464**	

✓ Transportation Demand Management Needs and Actions

To make the most of TDM in reducing travel demand in Madera County, MCTC should:

- Work with Caltrans to develop a master plan for the region's park and ride system
- Support the implementation of strategies to enhance the use of under-utilized park and ride lots focusing on increased security, marketing and outreach, lot siting and transit service
- Support the development and implementation of marketing and outreach strategies for the park and ride system
- Provide for adequate funding for park and ride lots to ensure proper system operation and safety, maintenance, marketing and development
- Establish an on-going mechanism to explore park-and-ride lot funding and to assure that the Region's facilities will continue to be fully integrated with transit, ridesharing, and bicycling programs
- Support the maintenance of the existing carpool market share and an increase in ridesharing

- Continue to support Central Valley Ridesharing operations and services provided by Fresno COG
- Continue to support funding for education and outreach to the general public in order to increase awareness and participation in ridesharing
- Support the allocation of funding toward the conversion of fleet vehicles from gasoline powered engines to other cleaner burning energy sources, including compressed natural gas (CNG) and electric-powered vehicles
- Support development of telecommunications infrastructure in new residential developments to facilitate reductions in peak hour trips
- Ease traffic flow through the use of traffic signals, bus turn-outs, intersection turn lanes, and other strategies.

Intelligent Transportation Systems

In addition to traditional lane widening and signal system improvements, the need to further enhance the capacity of the existing and future system using ITS will be important.

ITS represents a means of applying new technological breakthroughs in detection, communications, computing and control technologies to improve safety and performance of the surface transportation system. This can be done by using the technologies to manage the transportation system to respond to changing operating conditions, congestion or accidents. ITS technology can be applied to arterials, freeways, transit, trucks and private vehicles. ITS includes Advanced Traffic Management Systems (ATMS), Advanced Vehicle Control Systems (AVCS) and Commercial Vehicle Operations (CVO).

Today, applications of ITS technologies allow the monitoring of traffic conditions and the dynamic adjustment of traffic signals to reduce unnecessary delay, the automated collection of tolls, advanced detection and television cameras to detect, assess and respond to traffic accidents and incidents. In the future, ITS technologies will automate transit fare collection and parking payments, use vehicle location systems to track trains and buses to give users “real time” arrival and departure information and use onboard systems to detect and avoid collisions.

✓ Intelligent Transportation Systems Needs and Actions

The *San Joaquin Valley Strategic Deployment Plan*, a collaborate effort between the eight Valley counties and Caltrans, was completed in 2001. The plan includes specific strategies and implementation program for ITS applications in Madera County.

MCTC continues to participate in the deployment of 511 traveler information technology in the San Joaquin Valley.

Land Use and Transportation Planning Coordination

Madera County participated with Caltrans, Fresno County, the Cities of Fresno and Clovis, and various stakeholder groups in Phase III of the San Joaquin Valley Growth Response Study. Phase III of the Study focused on development of a land use allocation model and a visualization/indicator model for use with the current transportation demand models. These modeling tools will assist the cities of Fresno and Clovis and the counties of Fresno and Madera in reviewing the urban landscape, considering alternative growth scenarios, and making policy changes to successfully implement their planning documents. The tools will provide information on the land use patterns that could enhance transit, reduce vehicle miles traveled, and address air quality issues.

In 2006, the eight regional planning agencies in the San Joaquin Valley came together in an unprecedented effort to develop a coordinated valley vision – the San Joaquin Valley Regional Blueprint. This eight county venture was conducted in each county, and was ultimately integrated to form a preferred vision for future development throughout the Valley to the year 2050. On April 1, 2009, the San Joaquin Valley Regional Policy Council adopted a preferred growth scenario for the Valley along with 12 Smart Growth Principles to guide development and promote the livable and sustainable communities mentioned above. A discussion of the Blueprint planning process in Madera County can be found in Chapter 6 – "*Creating a Sustainable Future*," and a summary of the work completed Valleywide is included in Appendix B – Valleywide Information.

Other Projects

In addition to projects identified in the mode categories described above, a number of additional projects that do not necessarily fit into any one category or mode are described in Table 5-8.

Environmental Review

Following the provisions and requirements of the California Environmental Quality Act (CEQA), MCTC has prepared a programmatic environmental impact report (PEIR) for the 2014 RTP and SCS that describes strategy-level mitigation measures, which could avoid or minimize significant adverse impact of implementing the 2014 RTP and SCS. In doing so, the 2014 RTP and SCS PEIR identifies measures that will restore and maintain the environmental functions affected by the metropolitan transportation plan to the maximum extent feasible. The adopted mitigation measures are typical for transportation and development projects and have been demonstrated to be effective.

Summary

The preceding discussion of the components of the regional transportation system helps to frame the choices that must be made in this plan. The system is mature and will require regular investments to preserve its capabilities, but there will be opportunities to improve efficiency through the use of new technology and increased TDM and TSM strategies. Other additions, such as bikeways and increased transit use, will assume greater importance in the future system. Clearly, each mode has an important role to play in the current and future system. The overall vision for the RTP and SCS is to identify investments and projects that can support a multimodal system.

6. Creating a Sustainable Future

Introduction

The MCTC 2014 RTP and SCS details how the region will reduce greenhouse gas (GHG) emissions to state-mandated levels over time. The inclusion of the SCS is required by Senate Bill 375, and stresses the importance of meeting GHG per capita emission reduction targets set by the California Air Resources Board (CARB). MCTC has approached development of the SCS as an "opportunity" to enhance the integration of transportation, land use and the environment in the Madera region.

This chapter of the RTP and SCS outlines the approach to develop the Sustainable Communities Strategy (SCS). Sections included in this chapter include the following:

- ✓ What the SCS is and how the targets were established – *SCS Requirements*
- ✓ Defining the SCS scenarios for evaluation – *Alternative SCS Scenarios,* including:
  - Identifying the base data utilized to build each alternative scenario
  - The methodology applied to interpret the base data as inputs for the UPLAN land use allocation modeling process
  - The process applied to develop the alternative scenario transportation multi-modal systems or networks using CUBE traffic modeling software
  - Scenario performance measure and greenhouse gas (GHG) target results
- ✓ An overview of why Madera County is different than other Valley Counties and why the targets could not be met – *SCS/Alternative Planning Strategy (APS)Problem Statement*
- ✓ The impact of the 2014 RTP and SCS on natural resources and agriculture – *Preserving Our Resources*
- ✓ The stakeholder and public review and input process undertaken to develop and select the alternative and preferred SCS scenarios – *Capturing Public &Stakeholder Input*
- ✓ Identification of the preferred SCS scenario by the MCTC 2014 RTP and SCS Roundtable and the MCTC Policy Board – *The Choice Scenario*
- ✓ Consideration of the Madera County Regional Housing Needs Assessment (RHNA) – *RHNA Consistency*

- ✓ Consistency with the Madera County Local Agency Formation Commission (LAFCO) policies – *Consistency with LAFCO Policies*
- ✓ Consideration of social equity during the SCS development process – *Social Equity Considerations*
- ✓ How the public health will be improved as a result of the SCS development process – *Public Health Benefits*
- ✓ Senate Bill (SB) 375 (Steinberg) California Environmental Quality Act (CEQA) streamlining allowances and how they will be applied – *CEQA Streamlining*
- ✓ A review of the next steps in the RTP and SCS implementation and monitoring process – *RTP and SCS Implementation and Monitoring Program*

SCS Requirements

Background

This is the first time that this chapter has been included in the RTP and is provided in response to SB 375 requirements. SB 375 requires that MCTC incorporate the SCS into the RTP. The SCS:

- ✓ Is intended to show how integrated land use and transportation planning can lead to lower GHG emissions from autos and light trucks
- ✓ Resulted in increased transit use and mode share, all of which have led to both mobility and air quality improvements
- ✓ Encourages changes to the urban form that improve accessibility to transit, and create more compact development, thereby yielding a number of transportation benefits to the region. These include reductions in:
  - Travel time
  - Vehicle miles traveled (VMT)
  - Vehicle hours traveled (VHT)
  - Vehicle hours of delay

SB 375 was passed by the California Legislature, signed by the Governor, and became law effective September 30, 2008. The legislation requires regions within California to work together to reduce GHG emissions from cars and light trucks. SB 375 requires the integration of transportation, land use, and housing planning with the next updates of the RTPs and (RHNAs). The goal of the SCS is to plan for more sustainable communities that will result in transportation modes that reduce the use of single occupant vehicles. Transportation strategies contained in the RTP including Transportation System Management,

Transportation Control Measures and multi-modal transportation system improvements, are major components of the SCS, along with the preferred land use scenario. Transportation and land use integrated together results in less vehicle trip making, especially resulting from increased density, mixed-use, and land use intensity.

SB 375 requires the California Air Resources Board (CARB) to develop regional reduction targets for automobiles and light trucks GHG emissions. Using the targets, each region in California is required to develop its SCS by integrating transportation and land use policies and programs that meet the emissions reduction target, if feasible. Key components of SB 375 are the incentives it allows for local governments in the way of regulatory and other incentives that help encourage more compact new development and transportation mode alternatives. In order to achieve the greenhouse gas reduction goals set out in California Assembly Bill 32: *The Global Warming Solutions Act of 2006* (AB 32), SB 375 focuses on reducing VMT and urban sprawl. AB 32 was the nation's first law to limit greenhouse gas emissions and SB 375 was enacted thereafter to more specifically address the transportation and land use components of greenhouse gas emissions. Through the implementation of regional SCS plans by 2020, the goal of SB 375 is to see a significant decrease in greenhouse gas emissions for the environment and an increase in quality of life for residents.

Referencing California Government Code Section 65080(b)(2)(B)(vii), SB 375 requires that the SCS "sets forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the state Air Resources Board." Based upon the legislation, the 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 short- and long-term housing needs
- ✓ Consider resource and farmland areas

In addition to the new requirements listed above, preparation of the RTP is the same as it has been in previous updates and must include:

- ✓ A long-range growth forecast of at least 20 years
- ✓ Estimate where growth and development will realistically occur consistent with market demand within the region

- ✓ Develop a list of multi-modal transportation improvements considering projected revenues
- ✓ Address federal Clean Air Act requirements resulting from the air quality conformity analysis of the list of improvement projects

SB 375 does not require that MCTC dictate land use patterns and policies at the local level. The SCS is only intended to provide a regional policy foundation that local governments may build upon as they choose. This includes quantitative growth projections for each city and for Madera County. The major difference between this RTP update and previous updates is the inclusion of the SCS and the goal of reducing GHG emissions from cars and light trucks. In addition to the SCS objectives, the State is also reducing GHG emissions from these sources through two other laws including an increase in vehicle fuel efficiency and an increase in the use of alternative, lower carbon transportation fuels.

The SCS only shows how future growth and development could be allocated to planned growth areas consistent with the general plans of the cities and the County of Madera. As growth and development occurs, it will be the cities and the County that review and approve development proposals and determine consistency with their plans, programs, and policies; not MCTC. MCTC has no land use authority to approve future growth development as it occurs over the life of the RTP (Year 2040).

Madera County GHG Targets

In 2011, the CARB issued a 5% reduction target to each of the eight (8) Metropolitan Planning Organizations (MPOs) in the San Joaquin Valley including MCTC. CARB agreed that the targets would be applicable to each MPO independently of other Valley MPOs. The targets included a percentage reduction of greenhouse gas emissions from 2005 of 5% by the year 2020 and a reduction in GHG emissions of 10% by the year 2035. Developing the SCS requires meaningful collaboration with each of the local agencies, as well as stakeholders to identify land use and transportation planning opportunities around the region that will address the needs of the growing population and ensure compliance with State and Federal requirements.

Alternative SCS Scenarios

MCTC began with the land use modeling process developed under the Blueprint process using UPLAN. MCTC had developed several land use scenarios (*Status Quo, Low Change, Moderate Change*, and *Major Change*), which were modeled and presented to the local agencies, stakeholders and the public. The result of this effort was the selection of the preferred *Low Change* Blueprint scenario. Since the Blueprint process is now a familiar concept within the county, MCTC decided to use the Blueprint scenarios as the basis for the 2014 RTP SCS scenario development process.

Using the Blueprint as the foundation for the alternative SCS scenarios, MCTC coordinated with the cities and the County, as well as stakeholders and the general public to develop a realistic and implementable

RTP and SCS. The first steps were to form the Roundtable Committee in November 2012, meet with each of the local agencies, and conduct a series of workshops with stakeholders and the public to identify their priorities for growth and development within the Madera region. This provided a "bottoms-up" approach that led to development of each of the scenarios for further refinement and analysis. Chapter 8 – "*Public Involvement for Change*," provides a thorough understanding of the RTP and SCS Roundtable and public outreach process undertaken to develop the RTP and the SCS. Based upon the input received, data requirements and inputs for the updated UPLAN software were prepared, utilizing the parcel-based databases from the Blueprint process, as well as the Blueprint scenario definitions.

Blueprint Background Data

For the Blueprint process, extensive spatial datasets were developed and created using existing development information from the Madera County Assessor's rolls at the parcel level; generalizing and standardizing all land use policy information for jurisdictions within the county; and other physical and environmental constraints. The processing of the datasets resulted in the creation of new data that identified land available for development under the different Blueprint Scenarios.

The Blueprint Study developed four scenarios that were modeled for future growth until the horizon year of 2050. The scenarios were defined as *Status Quo*, *Low Change*, *Moderate Change*, and *Major Change*. Table 6-1 outlines the parameters that define the Blueprint scenarios, highlighting the demographic shares, land use intensities, and spatial location preferences.

Developing the SCS Scenarios

The basic land use and transportation modeling steps undertaken to develop the alternative SCS scenarios included the following:

- ✓ Step 1 - Determine Base Year 2005 GHG Emissions
- ✓ Step 2 – Calibrated/Validated Traffic Model - Base Year 2010
- ✓ Step 3 – Growth Forecast (Base Year 2010 & Future Year (2020, 2035, and 2040) Traffic Analysis Zones (TAZ) Socioeconomic Data
- ✓ Step 4 - UPLAN Growth (Year 2010 – 2040) Allocation Modeling for 3 Alternative Scenarios
- ✓ Step 5 - Add Scenario Growth to 2010 Base Year and create TAZ Datasets for each Scenario
- ✓ Step 6 - Run Scenario Datasets using the Traffic Model for Years 2020, 2035, and 2040
- ✓ Step 7 - Using EMFAC (Emission FACtors Model)– Determine GHG Emissions for each Scenario for Years 2020 and 2035

TABLE 6-1
Parameters of the Madera Blueprint Scenarios

	PARAMETERS	Status Quo				Low Change				Moderate Change				Major Change			
1	**Demographic Shift in Housing Share**	(82150 HH)				(82150 HH)				(82150 HH)				(82150 HH)			
	Very Low	**0.5% (1)**				0.5%				0.5%				0.25%			
	Low	**11% (1)**				11.0%				8.5%				1.0%			
	Medium	**75.75% (2)**				68.5%				63.5%				62.75%			
	High	**12.75% (2)**				20.0%				27.5%				30.0%			
2	**Change in Lot Sizes**																
	Very Low	871,200sf (20 ac)				871,200sf (20 ac)				871,200sf (20 ac)				2,178,000sf (50 ac)			
	Low	43,560sf (1 ac)				43,560sf (1 ac)				43,560sf (1 ac)				217,800sf (5 ac)			
	Medium	**7,000sf (0.16 ac)**				5,600sf (.13 ac)				4,700sf (.11 ac)				4,300sf (.1 ac)			
	High	**3,500 (0.08 ac)**				3,000sf (.07 ac)				2,200sf (.05 ac)				1,700sf (.04 ac)			
3	**Persons Per Household**	3.284				3.284				3.284				3.284			
	Employees Per Houshold	1				1				1				1			
4	**Demographic Shift in Employment Share**	(82150 jobs)				(82150 jobs)				(82150 jobs)				(82150 jobs)			
	Industrial	22%				22%				25%				28%			
	Commercial Low	63%				63%				52%				44%			
	Commercial High	7%				7%				15%				20%			
5	**Change in Intensities**																
	Industrial	0.2 FAR (825 sf/emp)				0.22 FAR				0.25 FAR				0.3 FAR			
	Commercial Low	0.2 FAR (500 sf/emp)				0.25 FAR				0.25 FAR				0.25 FAR			
	Commercial High	0.4 FAR (400 sf/emp)				0.4 FAR				0.45 FAR				0.5 FAR			
6	**Spatial Shift in Jobs and Households (1=most attractive, 6= least attractive)**	**Jobs (priority)**		**HH (priority)**		**Jobs (priority)**		**HH (priority)**		**Jobs (priority)**		**HH (priority)**		**Jobs (priority)**		**HH (priority)**	
		I*	**C***	**MH***	**L***	**I**	**C**	**MH**	**L**	**I**	**C**	**MH**	**L**	**I**	**C**	**MH**	**L**
	Ahwanee	6	6	6	6	5	4	5	5	5	4	5	5	5	4	5	5
	Chowchilla	3	4	3	4	3	3	3	3	2	2	2	2	2	2	2	2
	Fairmead	3	4	4	4	3	4	4	4	3	3	3	3	3	3	3	3
	Madera City	2	2	2	2	2	2	2	2	1	1	2	2	1	1	1	1
	Madera CC	4	3	2	3	2	2	2	2	2	2	2	2	2	2	2	2
	North Fork	6	6	6	6	6	4	5	5	6	5	6	6	6	5	6	6
	Oakhurst	5	5	5	5	4	4	4	4	4	3	4	4	4	3	4	4
	Rio Mesa	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1
7	**Transportation Enchancements**	New Freeway Ramps				Regional Transit Network				RTN, BRT routes				RTN, BRT, LRT routes			
						Enhanced Existing Transit				possible BRT on SR 99 & SR 41				Possible BRT on SR 99, SR 41. Transit upto Oakhurst; LRT from Rio Mesa into Fresno			
8	**Change in General Plan**	No Change. Used old GP for Madera City and Chowchilla				Use new GP for City of Madera and Chowchilla				Use new GP for City of Madera and Chowchilla				Use new GP for City of Madera and Chowchilla			
9	**Infill Consideration**	Urban Non Res: <50% of GP FAR & >25 yrs; Improvement Value =< Land Value				Urban Non Res: <50% of GP FAR & >25 yrs; Improvement Value =< Land Value				Urban Non Res: <70% of GP FAR & >10 yrs; Improvement Value =< Land Value				Urban Non Res: <80% of GP FAR & >1.25 yrs; Improvement Value =< Land			
		Urban Res: Imp Value =< 50% of Land Value & Land Area >1 Acre in Urban Areas				Urban Res: Imp Value =<50% of Land Value & Land Area >1 Acre in Urban Areas				Urban Res: Imp Value =<70% of Land Value & Land Area >0.75 Acre in Urban Areas				Urban Res: Imp Value =<80% of Land Value & Land Area >0.50 Acre in Urban Areas			
	Demand Characterization	Status Quo				Demand for unit types stays the same				Shift to higher density				More shift towards attached			
		Status Quo				Lot size decreases				Lot size decreases				Ag/forest & rural are less dense. Attached and detached are more dense			

* **I = Industrial**
C= Commercial
MH= Medium & High Density Residential
L= Low Density Residential

your madera 2040

- ✓ Step 8 – Compare GHG Results to 2005 Base Year GHG Emissions and determine if results meet the GHG Emission Reduction Targets from 2005 Base Year of 5% by 2020 and 10% by 2035

Each of these steps in the modeling process are further described below.

Step 1 - Base Year Emissions

The Base Year 2005 GHG emissions were estimated using the 2005 MCTC Traffic Model. Base Year annual GHG emissions estimated by MCTC are 482.1. This is the 2005 emission inventory used to determine the percentage reductions associated with each of the alternative scenarios for years 2020 and 2035.

Step 2 - Transportation Model Calibration/Validation

The most recent MCTC Traffic Model was calibrated and validated for the year 2010 in December 2013. The existing and future year model reflects the transportation network consisting of existing and planned street/road and highway system within the Madera region. The 2010 Traffic Model reflects the existing street/road and highway system as of the year 2010 considering traffic monitoring results, origin and destination survey results, data obtained from the U.S. 2010 Census, other data provided by the Calorie Employment Development Department, and other applicable data sources.

Step 3 – Growth Forecast (Base Year 2010 & Future Year (2020, 2035, and 2040) TAZ Socioeconomic Data

Development of the 2014 RTP and SCS considers growth and development to the year 2040. Table 6-2 identifies the total population, housing and employment for each of the growth areas for the base year or year 2010 and each of the SCS analysis years including 2020 and 2035, and the RTP horizon year of 2040. Projections were held constant for each of the alternative scenarios analyzed.

Step 4 - UPLAN Growth (Year 2010 – 2040) Allocation Modeling for 3 Alternative Scenarios

Land use patterns that provide for mixed-use or a mixture of goods and services in combination with residential uses have been shown to reduce VMT and thereby reduce GHG. Combining mixed-use development with infill development, rather than building on the urban fringe, results in reduced GHG emissions by reducing the distance that people have to travel to get their basic needs met.

Based upon input from each of the local jurisdictions, the Roundtable Committee, other stakeholders, and the public, three land use and transportation scenarios were developed for the Madera region including the:

- ✓ Status Quo Scenario– Which reflects growth consistent with how growth has occurred in the past. This scenario assumes improvements to the transportation network consistent with the 2014 RTP lists of improvement projects that have been reflected in the traffic model. Other improvements include existing and future transit system improvements for each of the three transit providers

TABLE 6-2
Madera County Development Projections
2010, 2020, 2035, and 2040

Year	Socioeconomic Condition	Growth Area					Year
		Chowchilla	Madera	Mountain Area	Madera County SE New Growth Area	Remaining Rural Area	
2010	Population	13810	76516	41535	1509	17496	150865
	Households	3964	21963	11922	433	5022	43304
	Employment	5298	19834	7432	2878	7413	42855
2020	Population	16078	88741	43973	16305	18079	183176
	Households	4893	27006	13382	4962	5502	55745
	Employment	6201	24855	8961	7363	7815	55195
2035	Population	20489	112681	50760	38319	20281	242530
	Households	6286	34570	15573	11756	6222	74407
	Employment	7556	32387	11255	14092	8418	73708
2040	Population	22199	121984	53617	46109	21252	265161
	Households	6750	37091	16303	14020	6462	80626
	Employment	8007	34897	12020	16334	8619	79877

Source: MCTC Regional Traffic Model Socioeconomic Profile, April 2014

- ✓ Low Change Scenario– This scenario is reflective of the Blueprint Low Change scenario and applied similar parameters used for the Blueprint land use allocation process (reference Table 6-3). This scenario is also consistent with the 2014 RTP lists of improvement projects that have been reflected in the traffic model. Other improvements include existing and future transit system improvements for each of the three transit providers, as well as enhanced transit services along major corridors within the region including State Route (SR) 4, SR 99, SR 145, and Avenue 12. Finally, this scenario assumed enhanced densities across all growth areas in the County consistent with the low change parameters reflected in Table 6-3 below.

- ✓ Hybrid Scenario- This scenario is reflective of a combination of the Blueprint Low Change and Moderate Change scenarios and applied similar parameters used for the Blueprint effort. Specifically, the Low Change parameters were applied to the City of Chowchilla General Plan Area or Sphere of Influence, as well as the remaining unincorporated area [except within the Southeast Madera County New Growth Area (NGA)]. The Moderate Change parameters were applied as reflected in Table 6-3 to the City of Madera and the NGA. This scenario is also consistent with the 2014 RTP lists of multi-modal improvement projects that have been reflected in the traffic model or in the RTP. Other improvements include existing and future transit system improvements for each of the three transit providers, as well as enhanced transit along major corridors within the region including SR 4, SR 99, SR 145, and Avenue 12. Finally, this scenario assumed enhanced densities across all growth areas in the County and even higher residential densities in the City of Madera and the NGA consistent with the General, Area, and Specific Plans for all jurisdictions.

TABLE 6-3
2014 RTP and SCS UPlan Land Use Allocation Model Parameters

Parameters	City of Madera			City of Chowchilla		Southeast Madera County New Growth Area			Remaining Madera County Unincorporated Area	
	Status Quo	Low Change	Moderate	Status Quo	Low Change	Status Quo	Low Change	Moderate	Status Quo	Low Change
Demographic Shift in Housing Share	15,233	15,233	15,233	2,784	2,784	13,581	13,581	13,581	5,821	5,821
Very Low	0.0%	0.0%	0.0%	0.25%	0.25%	0.1%	0.1%	0.1%	3.0%	3.0%
Low	1.8%	1.8%	1.0%	6.50%	6.50%	4.2%	4.2%	3.0%	53.0%	53.0%
Medium	82.0%	71.0%	65.0%	80.00%	80.00%	82.0%	74.8%	70.8%	42.0%	42.0%
Medium High	13.0%	20.0%	22.0%	12.50%	12.50%	12.0%	18.2%	20.2%	2.0%	2.0%
High	3.2%	7.2%	12.0%	0.75%	0.75%	1.8%	2.8%	6.0%	0.0%	0.0%
Total:	100.0%	100.0%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Change in Lot Sizes										
Very Low	871,200sf (20 ac)	871,200sf (20 ac)	871,200sf (20 ac)	871,200sf (20 ac)	871,200sf (20 ac)	871,200sf (20 ac)	871,200sf (20 ac)	871,200sf (20 ac)	871,200sf (20 ac)	871,200sf (20 ac)
Low	43,560sf (1 ac)	43,560sf (1 ac)	43,560sf (1 ac)	43,560sf (1 ac)	43,560sf (1 ac)	43,560sf (1 ac)	43,560sf (1 ac)	43,560sf (1 ac)	43,560sf (1 ac)	43,560sf (1 ac)
Medium	7,000sf (0.16 ac)	5,600sf (.13 ac)	6,220sf (0.1428 ac)	7,000sf (0.16 ac)	5,600sf (.13 ac)	7,000sf (0.16 ac)	5,600sf (.13 ac)	4,700sf (.11 ac)	7,000sf (0.16 ac)	5,600sf (.13 ac)
Medium High	3,500 (0.08 ac)	3,000sf (.07 ac)	2,905sf (0.068 ac)	3,500 (0.08 ac)	3,000sf (.07 ac)	3,500 (0.08 ac)	3,000sf (.07 ac)	2,750sf (.063 ac)	3,500 (0.08 ac)	3,000sf (.07 ac)
High	2,200 (0.05 ac)	2,000 sf (0.045)	1,800sf (0.04 ac)	2,200 (0.05 ac)	2,000 sf (0.045)	2,200 (0.05 ac)	2,000 sf (0.045)	1,800sf (.04 ac)	2,200 (0.05 ac)	2,000 sf (0.045)
Persons Per Household	3.284	3.284	3.284	3.284	3.284	3.284	3.284	3.284	3.284	3.284
Employees Per Household	0.86	0.86	0.82	0.85	0.85	0.77	0.77	0.77	0.85	0.85
Demographic Shift in Employment Share	13,085	13,085	13,085	2,353	2,353	10,395	10,395	10,395	4,938	4,938
Industrial	30.0%	30.0%	30.0%	24.00%	24.00%	16.220%	16.220%	18.000%	23.9%	23.9%
Commercial Low	60.0%	60.0%	55.0%	67.80%	67.80%	76.170%	76.170%	72.170%	75.1%	75.1%
Commercial High	10.0%	10.0%	15.0%	8.20%	8.20%	7.610%	7.610%	9.830%	1.0%	1.0%
Total:	100.00%	100.00%	100.00%	100.0%	100.0%	100%	100%	100.000%	100.00%	100.00%
Change in Intensities										
Industrial	0.25 FAR (825 sf/emp)	0.25 FAR (825 sf/emp)	0.25 FAR (825 sf/emp)	0.2 FAR (825 sf/emp)	0.22 FAR (825 sf/emp)	0.2 FAR (825 sf/emp)	0.25 FAR (825 sf/emp)	0.25 FAR (825 sf/emp)	0.2 FAR (825 sf/emp)	0.22 FAR (825 sf/emp)
Commercial Low	0.3 FAR (500 sf/emp)	0.325 FAR (500 sf/emp)	0.325 FAR (500 sf/emp)	0.2 FAR (500 sf/emp)	0.25 FAR (500 sf/emp)	0.2 FAR (500 sf/emp)	0.3 FAR (500 sf/emp)	0.3 FAR (500 sf/emp)	0.2 FAR (500 sf/emp)	0.25 FAR (500 sf/emp)
Commercial High	0.425 FAR (400 sf/emp)	0.45 FAR (400 sf/emp)	0.45 FAR (400 sf/emp)	0.4 FAR (400 sf/emp)	0.4 FAR (400 sf/emp)	0.4 FAR (400 sf/emp)	0.45 FAR (400 sf/emp)	0.45 FAR (400 sf/emp)	0.4 FAR (400 sf/emp)	0.4 FAR (400 sf/emp)
Transportation Enhancements	New Freeway Ramps	Regional Transit Network (RTN)		New Freeway Ramps	Regional Transit Network (RTN)	New Freeway Ramps	Regional Transit Network (RTN)		New Freeway Ramps	Regional Transit Network (RTN)
Change in General Plan	Use new GP for City of Madera and Chowchilla			Use new GP for City of Madera and Chowchilla		Use new GP for City of Madera and Chowchilla			Use new GP for City of Madera and Chowchilla	
Infill Consideration	Urban Non Res: <50% of GP FAR & >25 yrs; Improvement Value =< Land Value		Urban Non Res: <70% of GP FAR & >10 yrs; Improvement Value =< Land Value	Urban Non Res: <50% of GP FAR & >25 yrs; Improvement Value =< Land Value	Urban Non Res: <50% of GP FAR & >25 yrs; Improvement Value =< Land Value	Urban Non Res: <50% of GP FAR & >25 yrs; Improvement Value =< Land Value		Urban Non Res: <70% of GP FAR & >10 yrs; Improvement Value =< Land Value	Urban Non Res: <50% of GP FAR & >25 yrs; Improvement Value =< Land Value	Urban Non Res: <50% of GP FAR & >25 yrs; Improvement Value =< Land Value
	Urban Res: Imp Value =< 50% of Land Value & Land Area >1 Acre in Urban Areas		Urban Res: Imp Value =<70% of Land Value & Land Area >0.75 Acre in Urban Areas	Urban Res: Imp Value =< 50% of Land Value & Land Area >1 Acre in Urban Areas	Urban Res: Imp Value =<50% of Land Value & Land Area >1 Acre in Urban Areas	Urban Res: Imp Value =< 50% of Land Value & Land Area >1 Acre in Urban Areas		Urban Res: Imp Value =<70% of Land Value & Land Area >0.75 Acre in Urban Areas	Urban Res: Imp Value =< 50% of Land Value & Land Area >1 Acre in Urban Areas	Urban Res: Imp Value =<50% of Land Value & Land Area >1 Acre in Urban Areas
Demand Characterization	Status Quo	Demand for unit types stays the same	Shift to higher density	Status Quo	Demand for unit types stays the same	Status Quo	Demand for unit types stays the same	Shift to higher density	Status Quo	Demand for unit types stays the same
	Status Quo	Lot size decreases	Lot size closers to General Plan average	Status Quo	Lot size decreases	Status Quo	Lot size decreases	Lot size decreases	Status Quo	Lot size decreases

The Low Change and Hybrid scenarios do reflect smart growth strategies such as increased densities but increased densities alone are not enough to encourage people to switch modes of travel from single occupant vehicles to transit, bicycling or walking. For this reason, MCTC also reflected transportation infrastructure improvements in each of the scenarios to make alternative modes more attractive by assuming that increased density, infill development and mixed-use development will be located along existing and future multi-modal corridors.

By reflecting increased density and accessibility to transit along existing and future transit routes and major street/road and highway corridors, there is a greater potential that residents and employees will chose to use transit rather than drive to their destination.

In addition, streets and roads that connect to these corridors and major residential, commercial, service and employment centers have been planned to accommodate complete streets, or streets and roads that accommodate multiple modes including bicycle, pedestrian and transit services. These also result in reduced auto vehicle trips.

✓ Updated UPLAN Data Development

Due to updates in demographic projections, General Plans, existing conditions, and the multi-modal transportation network, the different jurisdictions' General Plan land use categories had to be translated into a standardized land use category set to be used by the UPLAN software. Table 6-4 outlines the standard generalized land use definitions developed for the SCS.

✓ Distributing Growth Allocations to Use Categories and Jurisdictions

MCTC coordinated with the local jurisdictions to allocate the projected housing growth to the different jurisdictions. The UPLAN model allows for modeling growth by sub-areas within a county wherein the model will limit growth by the identified allocation for each area. Table 6-2 highlights the distribution for housing and employment for the overall county and each sub-area. The sub-areas are defined as *Madera City Plan Area, Chowchilla City Plan Area, Southeast Madera County New Growth Area* and *Remainder County* or the remaining unincorporated areas of the County.

The land use definitions and shares for the cities reflect a greater tendency for relatively compact development in comparison to other County areas. The share and land use definitions were modified to develop the *Low* and *Hybrid* scenarios as alternatives to the *Status Quo* Scenario. The *Hybrid Scenario* was modified to match the City of Madera's General Plan desire to have new housing average between six (6) to eight (8) dwelling units per acre for future growth density. The scenario manages to be just above 8 units per acre for new housing growth within the Madera City Plan Area.

During development of this step, all socioeconomic data (SED) related to government, educational, and healthcare employment was subtracted from the TAZs so that this employment would not be "reallocated" during the UPLAN runs for each of the scenarios.

TABLE 6-4
UPlan General Plan Categories

Residential Allocation Uses			
General Plan Residential Land Use Designations	Density Range (units/acre)	Lots Size Range Gross (Sq.Ft.)	Average Lot Size Gross (Sq.Ft.) *
Very Low Density	<2	> 22,000	75,000
Low Density	2.01-6.5	6,700-22,000	10,750
Medium Density	6.51-12.00	3,600-6,700	5,500
Medium High Density	12.00-15.00	2,900 -3,600	3,200
High Density	>15.00	2,000-2,900	2,400
Mixed Use	>15.00	2,000-2,900	2,400
Employment Allocation Uses			
General Plan Residential Land Use Designations	F.A.R.*	Density Range (jobs/acre)	Square Feet (building) per Employee*
High Density Commercial	0.4	36.00-48.00	400
Low Density Commercial	0.2	15.00-35.99	500
Industrial	0.2	10.65	825
Mixed Use	0.4	36.00-48.00	400
Other Allocation Uses			
Urban Reserve			
Government Jobs			
Education			
Agriculture			
Public Lands and Open Space			
Water Bodies			
** Columns in Orange are UPLAN inputs*			

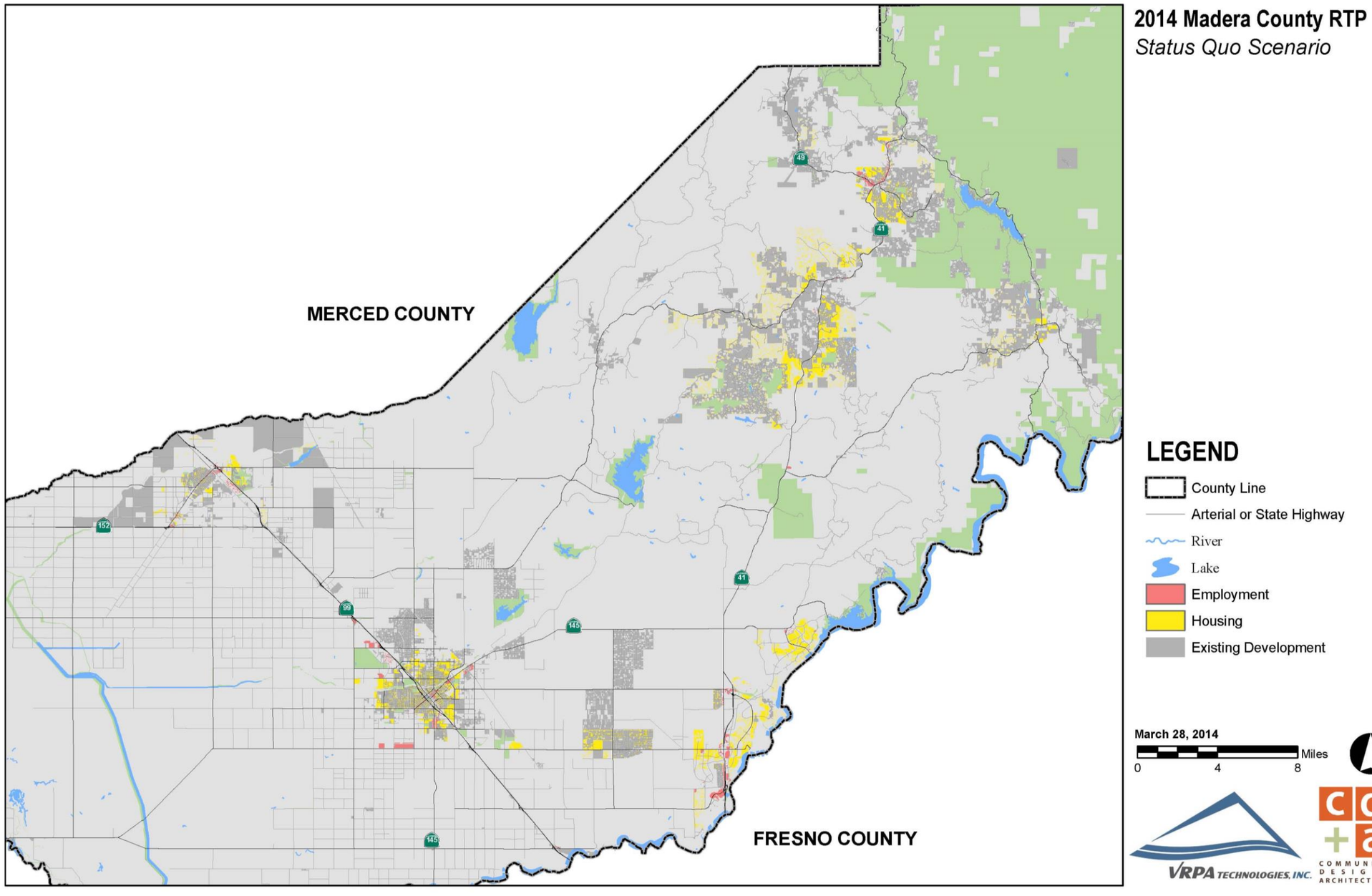
The resulting difference between SED for year 2010 and 2040 (less the employment growth referenced above) was then applied as "growth" and reallocated across the region consistent with growth controls and UPLAN model parameters reflected in Tables 6-2 and 6-3.

Results of the land use allocation process using UPLAN for each of the three alternative SCS scenarios are graphically displayed in Figures 6-1 through 6-3.

Step 5 - Add Scenario Growth to 2010 Base Year and Create TAZ Datasets for each Scenario

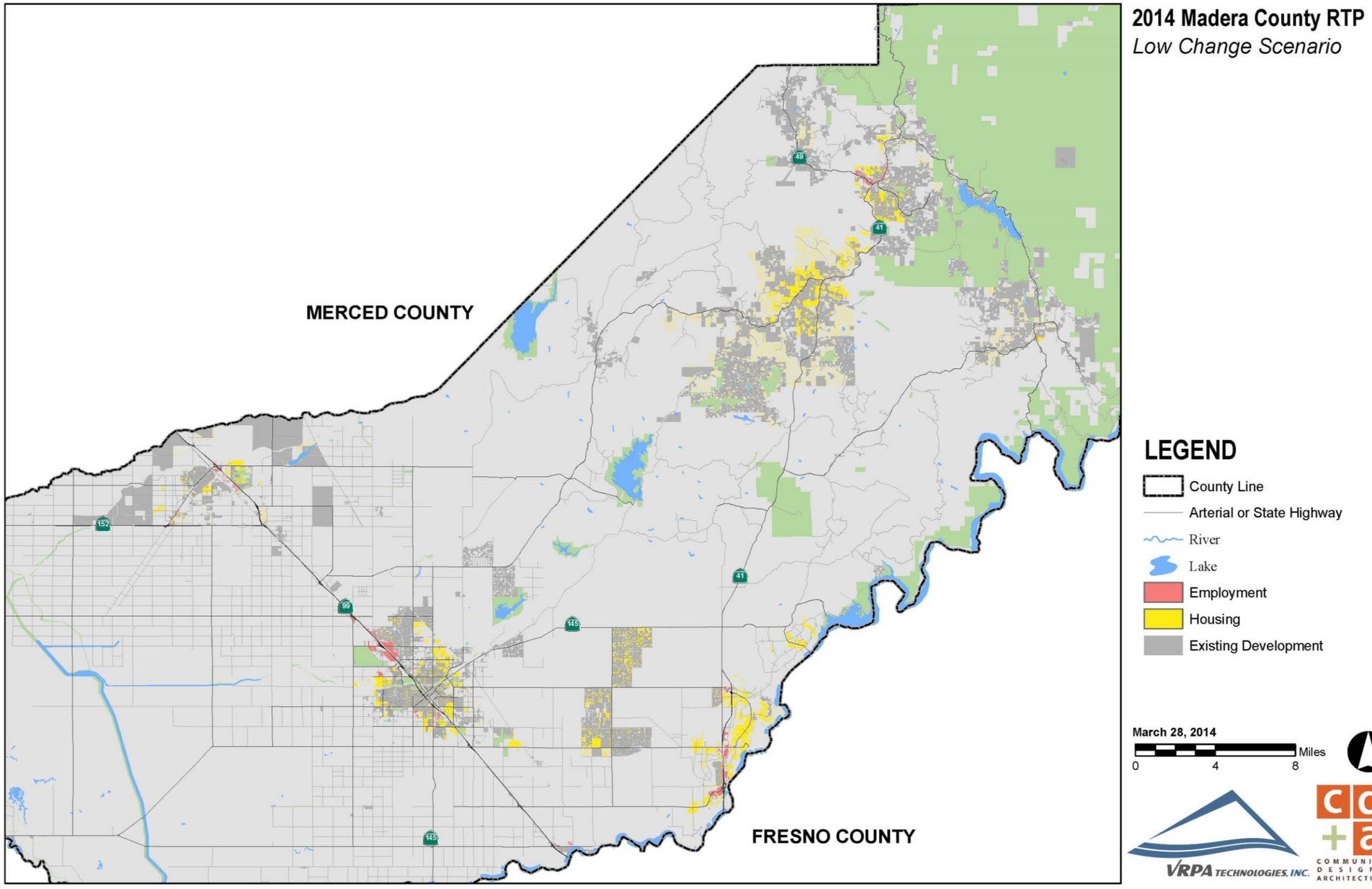
The results of the UPLAN scenario model runs for each of the three SCS scenarios were mapped and processed into the input format for the Cube transportation (traffic) model. This growth was adjusted consistent with the TAZ SED formats required to run the traffic model. UPLAN creates spatial mapping for the growth allocation as well as housing and employment distribution by TAZ. The UPLAN model output must be translated into SED categories typically used by the Cube traffic model. Government, healthcare and education jobs were not modeled through UPLAN, and were added following each UPLAN scenario run by adding the jobs directly to the TAZ dataset as they were allocated in the original TAZ SED dataset.

FIGURE 6-1
Status Quo Scenario Land Use Allocation



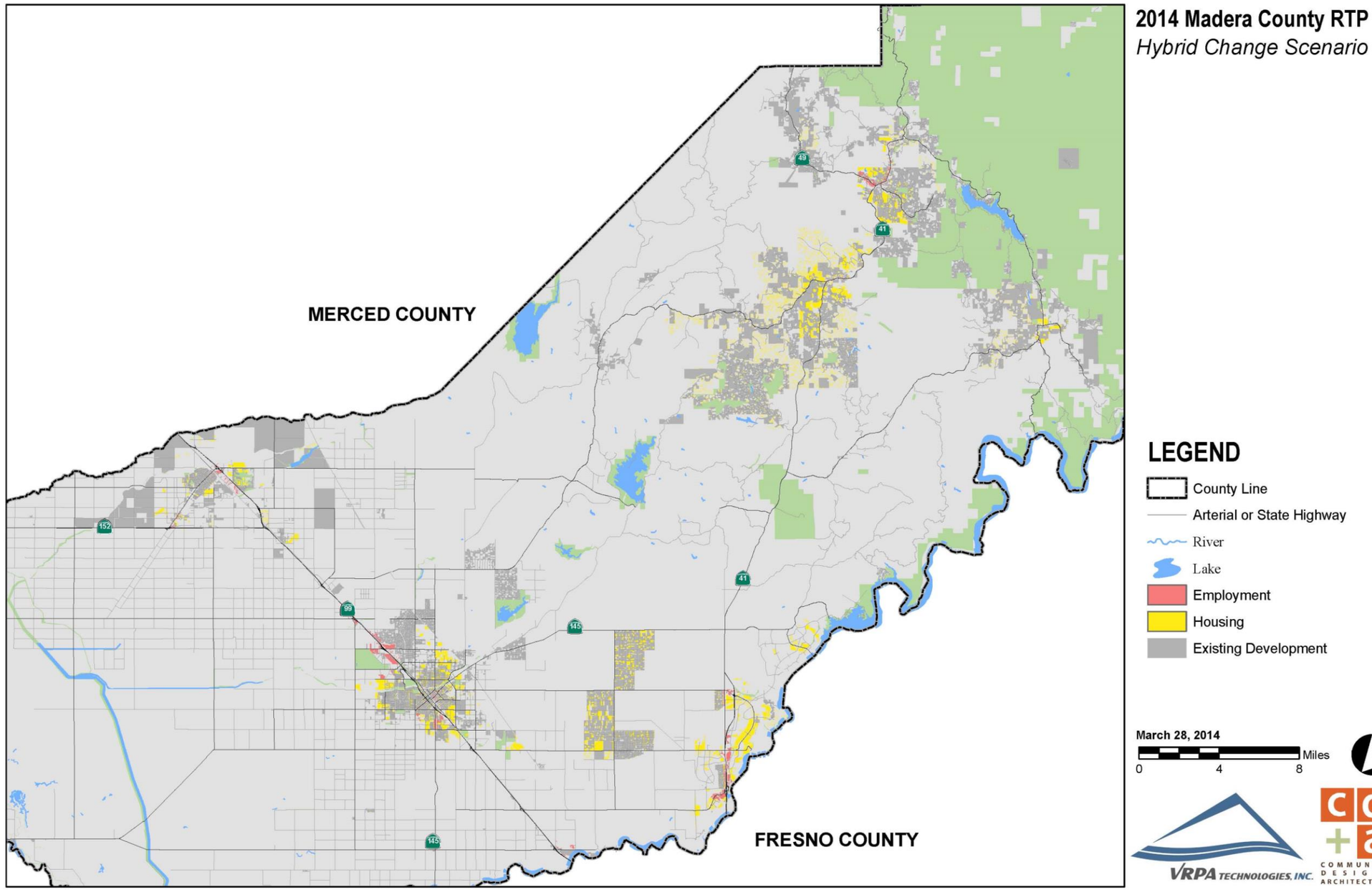
your madera 2040

FIGURE 6-2
Low Change Scenario Land Use Allocation



your madera 2040

FIGURE 6-3
Hybrid Scenario Land Use Allocation



your madera 2040

Step 6 - Run Scenario Datasets using the Traffic Model for Years 2020, 2035, and 2040

This section outlines the traffic modeling process conducted once the RTP and SCS land use alternatives were finalized. In general, the process consisted of:

- ✓ Developing **inputs** needed by the MCTC travel forecast model
- ✓ R**unning the model** for each future land use scenario and developing forecasts for horizon years required for the RTP (2020, 2035 and 2040)
- ✓ Checking and formatting the **model outputs** for analysis and to serve as inputs to the emissions modeling

Inputs to the model include socioeconomic data by TAZ, e.g.; average income, land use data and densities, vehicle ownership or vehicle availability; and transportation network characteristics, including type of facility, speed, and capacity, and average transit headways, where applicable. The model runs entail calculation of trip generation, distribution, assignment and mode shares. Model outputs include TAZ-level and network trip data by mode; roadway level of service data by road segment; and trip and VMT data by speed category for EMFAC emissions analysis.

Roadway improvement project lists were developed by MCTC with input from the County and the Cities of Madera and Chowchilla. All regionally significant transportation network improvements were reflected in the MCTC travel forecast model. A regionally significant improvement may be defined as one that could affect the destination, route or transportation mode chosen by travelers using motorized transportation. Typical improvements added to the model consist of street and highway widenings and roadway extensions. Several proposed improvements were removed from the model because funding sources could not be definitively identified.

Roadway improvements added to the model are systematically identified by location, project limits, the nature of the improvement, and the projected opening year. Transit improvements are not coded separately, since public transportation in the Madera region is rubber-tired and uses roadways. Transit travel times and attractiveness were updated in the model to reflect faster travel times on improved roads, as well as improved transit headways where applicable.

Effort was made to ensure that the land use forecasts would be compatible with MCTC's transportation forecast model. To this end, the land use forecasts were developed using the same zone system as the travel demand model. Once the future land use scenarios were finalized the results were translated to match the categories used in the travel demand model. Other TAZ data, such as income and household types and size were based on Census data and official forecasts for the Madera region.

The MCTC model underwent a major upgrade as part of the Valley-wide Model Improvement program in 2011-12 and the model was revalidated to 2010 conditions in 2013. Thus there was no need for adjustments to the underlying transportation models. Vehicle operating costs, vehicle ownership factors were unchanged from the calibration model. No post-modeling adjustments were made to represent

employer-based ridesharing or transit incentive programs, or to reflect possible effects of fine-scale mixture of interdependent land uses to the RTP forecasts.

The future model run outputs were reviewed for accuracy and reasonableness. For example, total population and employment and total trip generation for the Madera region was compared to total VMT assigned to the network to ensure that the volume of additional traffic assigned to the network was roughly proportional to the increased level of development in the region. Roadway volumes were checked across key facilities and screen lines to ensure that traffic was being assigned to the network in a reasonable manner, e.g., that new and improved facilities were attracting traffic appropriate to their speed, capacity and activity concentrations they serve.

The final step was to provide model dataset files to MCTC. The types of files provided include land use and socioeconomic data for the base year and each future scenario, as well as a master roadway file used with each future land use scenario.

Videos documenting key steps taken to produce each model run and outputs were also provided to MCTC. These short videos document and demonstrate several common model update procedures: how to edit the model's roadway networks; how to set up and run model scenarios using alternative land use and network files; and how to interpolate land use and external station traffic to estimate any year between the base year (2010) and RTP horizon year (2040).

Step 7 - Using EMFAC – Determine GHG Emissions for each Scenario for Years 2020 and 2035

This step focused on processing traffic model datasets or output for each scenario through the CARB-developed Emissions FACtor (EMFAC) model to estimate GHG emissions for years 2020 and 2040, as well as other Air Quality Conformity emission results for these and other years related to the State Implementation Pan (SIP) and the RTP horizon year of 2040.

Step 8 – Compare GHG Results to 2005 Base Year GHG Emissions and determine if results meet the GHG Emission Reduction Targets from 2005 Base Year of 5% by 2020 and 10% by 2035

Table 6-5 provides the results of the SCS Scenario GHG reductions from the 2005 Base Year for year 2020 from the 2005 Base Year of 5 percent by 2020 and 10 percent by the year 2035. Results show that the RTP and SCS will NOT meet the established emission reduction targets. As a result, an APS may be required to address the target reductions.

TABLE 6-5
Demonstration of GHG Emission Reduction Targets

Year	GHG Per Capita Reduction Targets	MCTC Per Capita GHG Reduction
2020	5.0%	+13.7%
2035	10.0%	+9.1%

The scenarios were also evaluated or compared using a set of performance measures. Results of the performance measures for each alternative scenario are reflected in Table 6-6. For most of the measures, the scenarios resulted in improvements with more compact growth options. However, the Status Quo scenario does perform better for the consumption of land in environmentally sensitive areas. This is due to the fact that the other scenarios infill vacant and underdeveloped parcels in the Ranchos area between SR 145 and Avenue 15. The same area is also classified by the Federal Emergency Management Agency (FEMA) as being within a designated floodplain area.

SCS/APS Problem Statement

SB 375 requires MCTC to develop the SCS for the Madera region. If the GHG emissions reduction targets cannot be met through the SCS, an APS may be developed showing how those targets would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. There are two mutually important facets to the SB 375 legislation: reducing VMT and encouraging more compact, complete, and efficient communities for the future.

Based upon the results of the alternative scenario development process, Madera County is not able to meet the SCS GHG 5 and 10 percent GHG emission reduction targets. Given this situation, and in anticipation of the requirement to develop an APS, a preliminary analysis has been undertaken in order to better understand issues related to meeting the targets and why Madera County has not been able to satisfactorily comply. This analysis ultimately will involve a detailed evaluation of the traffic model and model inputs. However, one factor that is immediately apparent is the disparity between the two primary geographic regions that comprise Madera County and, parenthetically, the absence of this distinction in those counties which are able to demonstrate compliance with the targets.

TABLE 6-6

Type	Performance Measure/Indicator	Definition	Status Quo	Low Change	Hybrid
Land Use (Location Efficiency)	Residential density	Average residential density for new growth	2.9	3.2	3.3
	Percent of work trips less than 10 miles	Share of total work trips which are fewer than 10 miles	31%		31%
	Work trip length distribution - Minutes (Miles)	Statistical distribution of work trip length in the region	30.09 (24.14)		30.17 (24.23)
	Percent of work trips crossing county boundaries	Share of total work trips which are crossing county boundaries for jobs	52%		52%
	Housing	Percent of housing by types	87.1%/12.9%	80.0%/20.0%	75.4%/24.6%
	Compact development	Growth in population compared with acres developed	8.5	9.3	9.7
	Access to transit line	New housing development within half-mile of transit stops	N.A.	4,374/11.7%	4,864/13.0%
Transportation (Mobility, Accessibility, and Reliability)	(Recurrent) person delay per capita	Daily delay per capita in minutes	0.0038		0.0036
	Average distance for work trips in minutes and miles	Work average distribution in minutes and miles (excluding through): Minutes (Miles)	W - 30.09 / NW - 24.14		W - 30.17 / NW 24.23
	Average distance for non-work trips in minutes and miles	Non-work average distribution in minutes and miles (excluding through): Minutes (Miles)	W - 14.08 / NW - 8.17		W - 14.19 / NW - 8.29
	Percent of work trips accessible in 30 minutes	% of work opportunities (trip ends) within 30 minutes of household (home-based work)	86%		87%
	Percent of non-work trips accessible in 15 minutes	% of non-work opportunities (trip ends) within 15 minutes of household (home-based other)	81%		81%
	Vehicle miles traveled (VMT)	Total VMT and per capita VMT	5,312,578 / 20.04	5,253,752 / 19.81	5,241,875 / 19.77
	Congested vehicle miles traveled (VMT)	Congested VMT total and per capita, percentage of total auto/transit travel in congested conditions (peaks, all day)	218,149		241,857
	Commute travel (work trip) mode share	Weekday trips by mode - Peak (Off Peak)			
		Drive Alone	37.56% (36.93%)		37.54% (36.92%)
		Shared-Ride 2	32.28% (31.74%)		32.31% (31.77%)
		Shared Ride 3+	28.58% (28.11%)		28.58% (28.1%)
		Transit	0.18% (0.33%)		0.17% (0.31%)
		Walk	0.12% (0.26%)		0.12% (0.26%)
		Bike	1.28% (2.63%)		1.29% (2.63%)
Healthy Environment	Criteria pollutants emissions	CO, NOX, PM2.5, PM10, and VOC	7.89, 2.32, 0.17, 0.37, 0.79	7.81, 2.29, 0.17, 0.36, 0.78	7.79, 2.29, 0.17, 0.36, 0.78
	Greenhouse gas reduction	Per capita greenhouse gas reduction against 2005	+10.32%	+9.7%	+9.1%
	Fuel consumption	On-road fuel consumed in gallons per capita	1.41		1.39
	Active transportation and transit travel	Weekday person trips by transit, walk and bike modes	33,923	32,571	33,101
	Near-roadway exposures	Percent of new housing within 1,000 feet of freeway or major roadway	19,392 / 52.0%	23,100 / 61.7%	23,403 / 62.5%
	Percent investment in active transportation	Investment in active transportation (sidewalks, bike lanes, etc.) as compared to total plan			24%
Social Equity	Accessibility	Average A.M. peak work trip time by mode by Environmental Justice (EJ) and Non-EJ Traffic Analysis Zones (TAZ)			
	All Zones to All Zones:				
	Peak Drive Alone Travel Time		19.7		19.78
	Peak Shared Ride Travel Time		17.28		17.37
	Peak Transit Travel Time		43.07		43.65
	Off-Peak Drive Alone Travel Time		13.65		13.79
	Off-Peak Shared Ride Travel Time		13.95		14.1
	Off-Peak Transit Travel Time		43.38		44.23
	All Zones to EJ Zones:				
	Peak Drive Alone Travel Time		11.33		11.79
	Peak Shared Ride Travel Time		9.76		10.13
	Peak Transit Travel Time		36.19		36.42
	Off-Peak Drive Alone Travel Time		8.83		9.14
	Off-Peak Shared Ride Travel Time		8.78		9.12
	Off-Peak Transit Travel Time		35.64		36.2
	EJ Zones to All Zones:				
	Peak Drive Alone Travel Time		14.2		14.25
	Peak Shared Ride Travel Time		11.22		11.4
	Peak Transit Travel Time		38.06		37.9
	Off-Peak Drive Alone Travel Time		8.81		9.13
	Off-Peak Shared Ride Travel Time		8.77		9.1
	Off-Peak Transit Travel Time		37.65		37.43
	Equity	Comparison of percentage of person-miles of travel with percentage of transportation investment for EJ and non-EJ TAZ			
	*** Transit person miles traveled (PMT) for all zones - Daily PMT		7,166		6,570
	*** Transit PMT for EJ zones - Daily PMT		6,024		5,455
Resource Conservation	Land consumption	Acres of land consumed due to new development	14,503	13,145	12,652
	Important farmland	Total acres of important farmland (prime, unique and state-wide importance) consumed due to new growth	146	142	136
	Environmental resource land	Total acres of resource areas (CNDDB, critical habitat, FEMA, habitat connectivity, riparian forest, vernal pools & wetlands)	975 *1	1,255 *2	1,233 *3
	Water consumption	Daily water consumption by new housing development based on national average rates	2,597,713	2,443,487	2,376,819

*1 This scenario perfoms better than the Low Change or Hybrid scenarios because most of the the unincorporated County land use allocations were within the Coarsgold area rather than allocated to the Ranchos Area between Ave 15 and Hwy 145.

*2 All land use allocations to the existing Ranchos area north of Ave 15 are located within a flood zone.

*3 All of the land use allocations to the existing Ranchos area north of Ave 15 are located within a flood zone.

Two Counties in One

As noted in the general discussion of Madera County in the RTP introduction, Madera County has three distinct geographic regions – the valley, the western county area generally below the 500' elevation contour (easily delineated by the Madera Canal); the foothills, generally between the 500' and 3,500' elevation contours; and the mountains, the area above the 3,500' elevation contour. The mountain area is largely uninhabited and mostly under public jurisdiction (US Forest Service, etc.) and not a consideration for further analysis. Therefore the analysis was structured to evaluate differences between the "valley" and the "foothills". Since the SCS targets are expressed in "per capita" terms, using model VMT outputs expressed in per capita terms would provide a suitable basis of comparison.

The differences are directly attributable to the unique character of development in each area. The valley is primarily a rural agricultural area with generally flat topography and with relatively large scale farming operations. Orchards, vineyards, irrigated pasture, dairies, and some row crops predominate. The valley has three existing urbanized areas – the cities of Madera and Chowchilla, and a large-lot rural residential development known as the Ranchos. There is a large urban development proposed in what is known as the Southeast Madera County NGA – generally in the SR 41 corridor south of SR 145. Urbanized development in the valley is similar to that of similar sized San Joaquin Valley communities. The range of development controls, traffic management measures, and transit services reasonably available are utilized in plan development and perform as expected.

Approximately two-thirds of the County's population is found in the valley.

The foothills present a substantially different development pattern. Agriculture is primarily limited to extensive cattle grazing operations. Urban development is centered in the communities of Oakhurst/Ahwahnee, Coarsegold, and North Fork. These communities are characterized by moderate commercial activity and generally lower density residential development. There are two larger residential subdivisions, Yosemite Lakes Park and Indian Lakes, but lot sizes are one acre and over. Two exceptions would be the Bass Lake recreational area which has a much denser residential pattern; however, this is largely a seasonal use area of second homes and with limited permanent occupancy. The Chukchansi Gold Casino also presents a unique character in terms of traffic generation.

Approximately one-third of the County's population is found in the foothills.

Development in the foothills is best characterized as diverse and not necessarily oriented to urban centers. Much of the existing residential development is found either in large-lot subdivisions (one acre and up) or on parcels created through the parcel map process (2.5, 5, 10, 20 acres and up). There is a substantial inventory of vacant parcels suitable for residential development and it is expected that additional lots will be added as demand warrants. This is a legal and accepted process and there is no proposal to change it. There are no active proposals for large-scale higher density residential developments.

The disbursed development pattern, not surprisingly, results in much longer trips as noted above. Further, traditionally applied traffic management and transit strategies are not reasonably available in this setting. This is the unique nature of the area and most residents don't perceive this as a problem. In fact most have chosen to live here primarily because of the distinct difference between the foothills and the "City".

Comparison to Other San Joaquin Valley Counties

How does Madera County compare to the other San Joaquin Valley counties? Starting in the North, San Joaquin and Stanislaus counties are clearly "valley" in character. Agricultural patterns become more intense, but land utilization is still large scale. Both counties have large urbanized populations with future growth largely limited to those urbanized areas.

Because of scale, both have available a range of traffic management and transit options as well as more potential for application of residential development options. In addition, both counties have a large commuter component which is particularly amenable to transit and rideshare options. Neither county has a "foothill" component. While there is certainly an analogous situation to Madera, development-wise, all of it is located in the adjacent Calaveras and Tuolumne counties and only tangentially considered through application of external nodes in the traffic model. Additionally, the size of the valley urbanized areas relative to their respective foothill neighbors is such that it would tend to suppress the observed effects.

Merced County is more similar to Madera County, both in terms of development patterns and size. However, in the case of "foothill" development, Merced is "valley". Its comparable "foothill" development is located in adjacent Mariposa County. A further difference is Mariposa County is roughly one half the population of Eastern Madera County. The fact that Merced County is also experiencing difficulty meeting the 5 percent/10 percent targets is probably a function of scale (size) relative to reasonably available measures for land use development, transit, and traffic management.

Fresno County is similar to Madera County in terms of rural and agricultural patterns. It is substantially different in terms of urbanization. Fresno/Clovis is a major metropolitan area with a large population and a much broader range of land development, traffic management, and transit options reasonably available. The scale of the Fresno County Metropolitan Area (FCMA) is such that it overwhelms measurable impacts from the adjoining rural cities and communities. Unlike the two northern counties, Fresno does not have a significant external commute component; therefore, its strategies tend to be more internally focused. While Fresno County does have a "foothill" component, it is much smaller than Madera County's and even more so relative to the scale of the FCMA.

Tulare County is similar to Fresno County except smaller. Kings County has no "foothill" component. Kern County does have a distinct "East County" component with the foothill community of Tehachapi and the desert communities of Mojave, Ridgecrest, and California City. County is also within two Air Basins – east county vs. west county. As is the case with the other large counties, the scale of the Bakersfield metro area overwhelms the smaller rural communities. Kern acknowledges this difference by differentiating between the metro area and the rural areas in its strategy.

Conclusion & Recommendations

Madera County is unique in that it:

- ✓ Has a relatively large "foothill" component wholly contained within the county and more precisely within the traffic modeling domain
- ✓ The "foothills" have a distinct development pattern not amenable to the traditional menu of land use controls found in more urbanized areas
- ✓ This results in a disproportionately higher VMT per capita ratio for the county as a whole
- ✓ Other San Joaquin Valley (SJV) Counties do not have this issue, either because of county boundaries, urban scale, or both
- ✓ The relative size of the "foothill" component is sufficient to suppress the sensitivity of the traffic model in terms of analyzing the effectiveness of SCS measures applied in the "valley"
- ✓ County population and the relative scale of urban development play an important role in the availability of SCS measures

MCTC should:

- ✓ Request that the CARB formally acknowledge that Madera County has a unique issue, which limits its ability to show compliance with the 5 and 10 percent SCS reduction targets
- ✓ Request that CARB provide a waiver to limit the analysis area for SCS compliance to the "valley" area of Madera County consistent with the geographic setting of the three northern counties.
- ✓ Structure the Madera County Traffic Model so that all future model outputs clearly make the distinction between "valley" and "foothills," regardless of CARB action
- ✓ Support legislation to, for SCS purposes, differentiate between counties based upon population and the scale of urbanization
- ✓ Request that CARB formally recognize that all counties within an Air Basin are not the same; should not be treated the same; and should not be held to the same performance standard – specifically the 5 and 10 percent SCS reduction targets. Targets should be scaled to match the reasonable capabilities of smaller counties to comply.

Resource Areas and Farmland

The Madera region has a very strong attachment to its open spaces and agricultural areas and is economically dependent the agricultural industry. The region's economic wellbeing is dependent upon the vast amount of farmland that produces billions of dollars' worth of agricultural products. In addition to identifying areas where development is projected to occur, the SCS identified protected parklands and open space, natural resource areas, and farmland during application of the UPLAN land use allocation modeling process.

UPLAN utilized geographic information system layers to identify resource lands and keep growth and development from encroaching or consuming such sites to the extent possible. Referencing Table 6-4, the Hybrid or preferred transportation and land use scenario will impact or consume approximately 136 acres of agricultural or resource lands as growth and development occurs between now and the year 2040. Figures 6-4 through 6-6 depict the farmland that will be impacted or consumed as a result of each of the alternative SCS scenarios.

An important tool that will document how natural resources support the region's economy, health and quality of life, and to identify strategies to guide stewardship of land, water and living resources the Strategic Growth Council has funded the San Joaquin Valley Greenprint project. The project covers the eight (8) counties within the San Joaquin Valley.

A Steering Committee has been formed that consists of individuals representing the public and private sector and a diverse range of interests in the Valley's resources. The Greenprint project will be completed in mid-2015. The first phase identified and compiled data for the natural resources in the San Joaquin Valley. The second phase will develop principles to guide resource management options and strategies.

FIGURE 6-4

Status Quo SCS Scenario Farmland Consumed

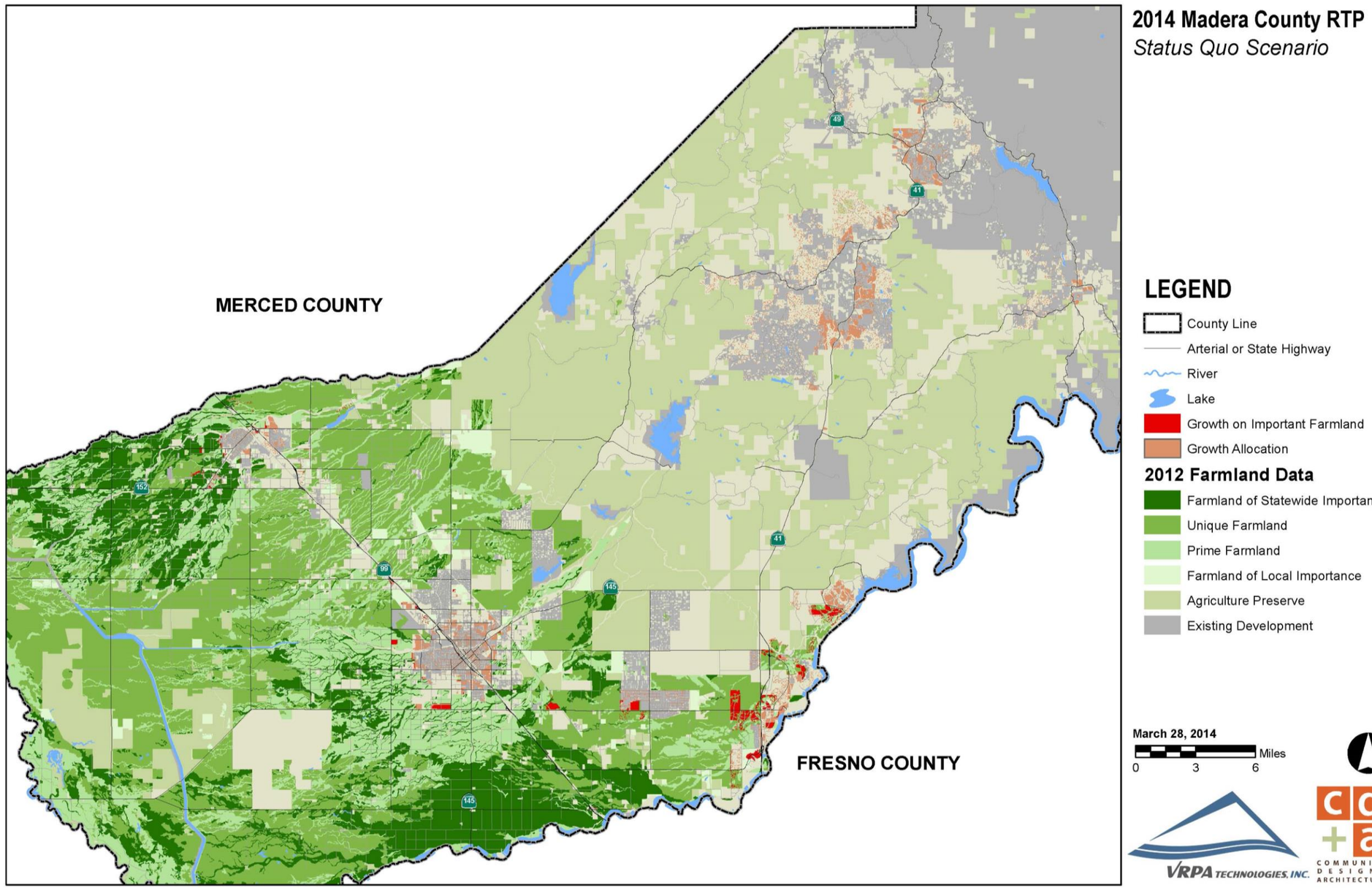


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FIGURE 6-5

Low Change SCS Scenario Farmland Consumed

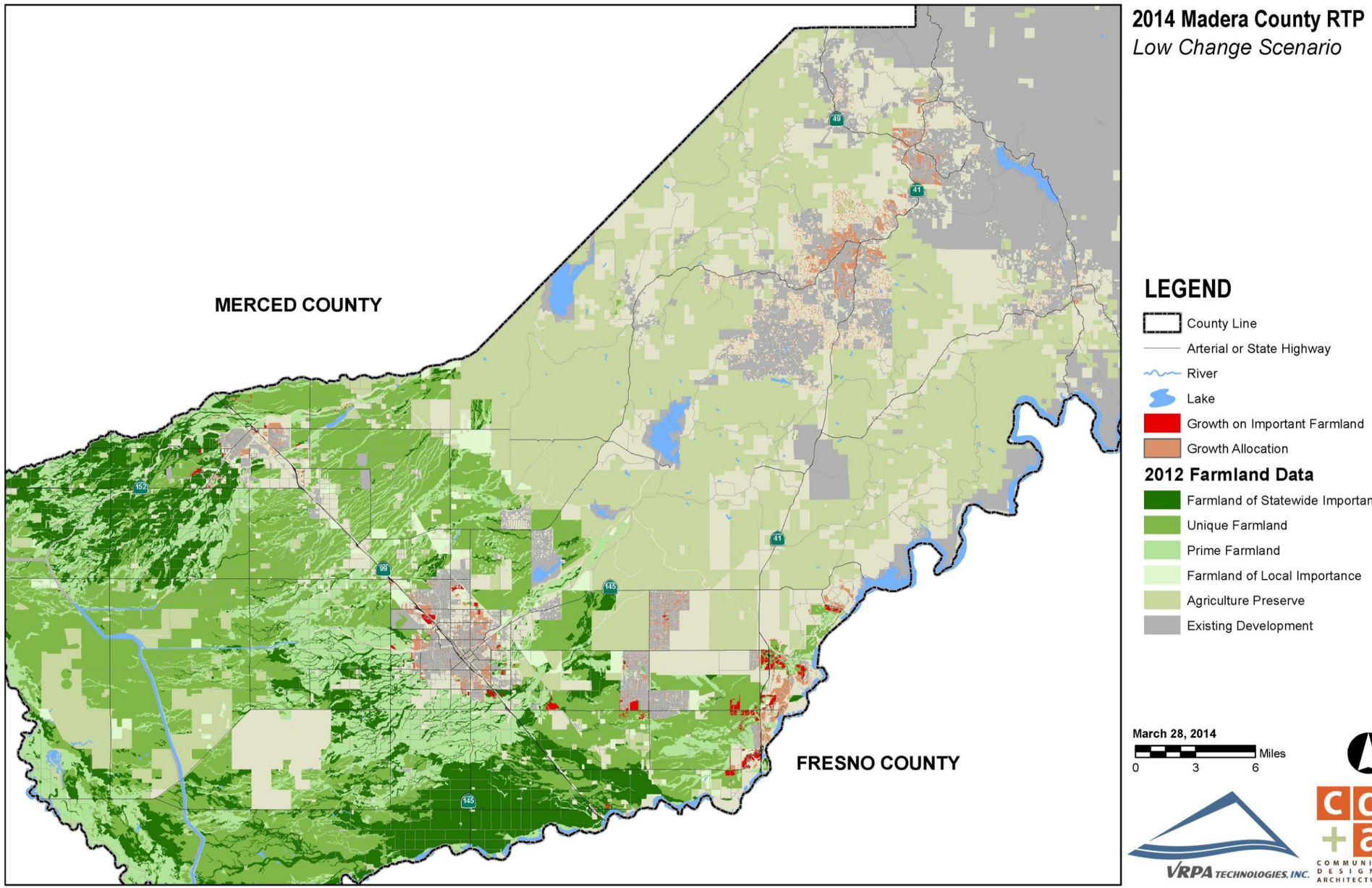
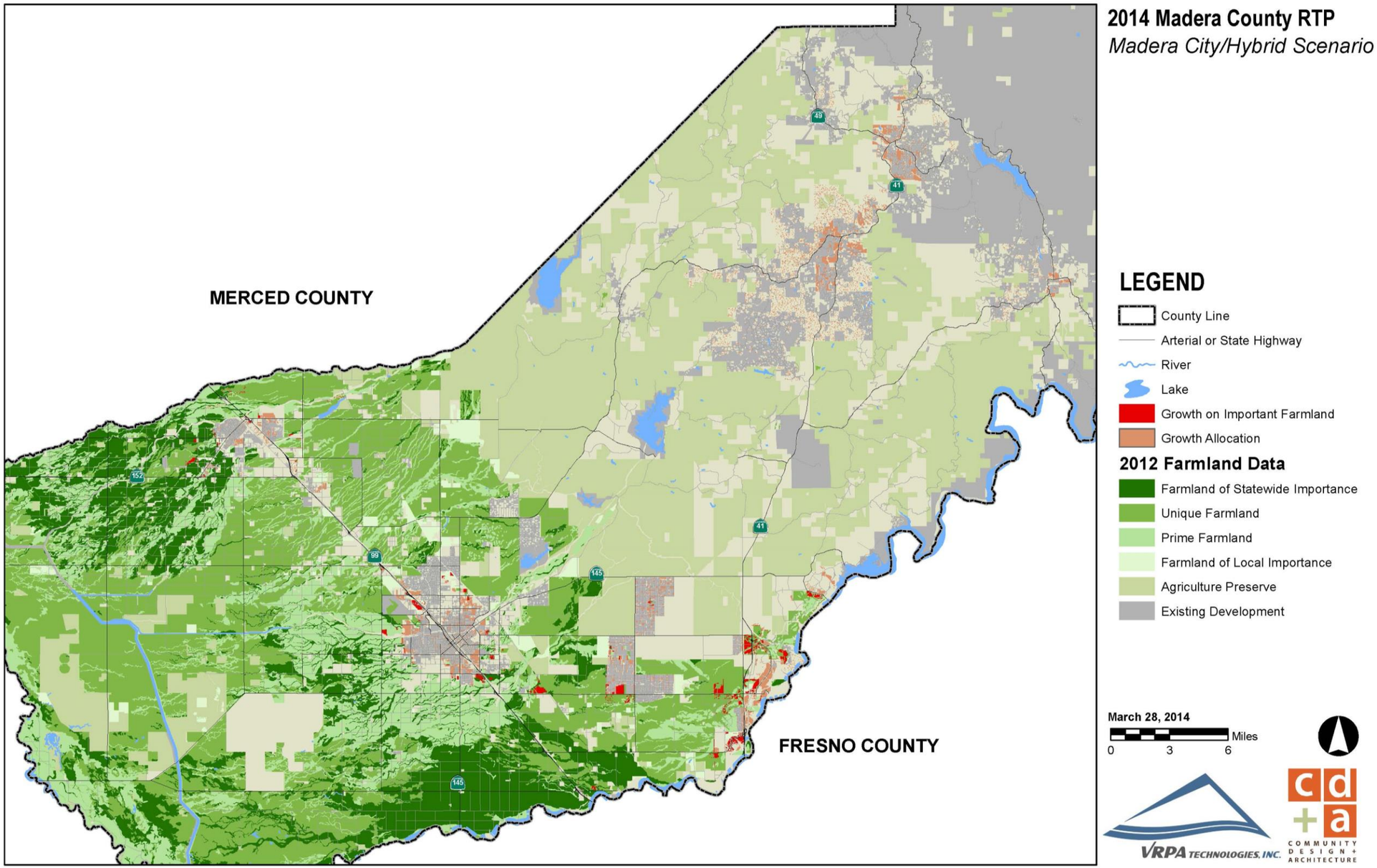


FIGURE 6-6

Hybrid SCS Scenario Farmland Consumed



Capturing Public & Stakeholder Input

Between February and April 2013, MCTC held the ***first series*** of public workshops regarding the 2014 RTP/SCS throughout Madera County on the following dates and within the following subregions February 12, Oakhurst Community Center, Oakhurst, CA

- ✓ February 13, 2013, Madera Ranchos, CA
- ✓ February 19, 2013, Madera, CA
- ✓ February 21, 2013, Chowchilla, CA
- ✓ April 6, 2013, Camarena Health Center, Madera, CA (Environmental Justice Workshop)
- ✓ April 21, 2013, Madera Community Garden Earth Day Event, Madera, CA (Environmental Justice Workshop)

VRPA Technologies, Inc. (VRPA), the prime consultant working with MCTC to develop the RTP and SCS, conducted each of the workshops considering the following objectives:

- ✓ Educate the public about the purpose of the RTP and SCS and why it is being prepared by MCTC
- ✓ Provide information about the MCTC 2014 RTP and SCS including population, housing and employment growth expected between 2013 and 2040, and the RTP and SCS development process and schedule
- ✓ Give the public an opportunity to speak with the MCTC/VRPA Project Team members about the RTP and SCS development and associated legislation
- ✓ Identify how the role of the public and stakeholders is important to the success of the RTP and SCS
- ✓ Receive feedback on:
  - Demographics of attendees
  - Attendee knowledge of livable communities concepts and potential strategies using polling
  - Transportation and land use needs/issues and environmental constraints/benefits identified by attendees using a mapping exercise

Between November 2012 and March 2014, MCTC and VRPA Technologies, Inc. conducted five (5) Roundtable meetings to assist with preparation of the 2014 RTP and SCS. In addition, VRPA Technologies, Inc. and MCTC conducted a workshop on March 25, 2014 in Madera to review the alternative SCS scenarios with stakeholders and the public prior to selection of the preferred SCS scenario by the MCTC Policy Board. In addition, MCTC developed a web-based tool to gather input on each of the alternative scenarios from the general public within and adjacent to the Madera region. As of March 26, 2014, 312 persons had accessed the English version of the web-based tool and 91 accessed the Spanish version of

the tool to provide their opinion about how Madera County should grow, the important issues that should be the focus of local and regional agencies, and to select a preferred SCS scenario.

On March 24, 2014, MCTC held a ***second series*** of workshops (1 public workshop) at MCTC offices to review the alternative land use and transportation scenarios with the public and stakeholders prior to approval of a preferred scenario by the MCTC Policy Board.

Between May and June 2014, MCTC held the ***third series*** of public workshops regarding the 2014 RTP/SCS throughout Madera County on the following dates and within the following subregions

- ✓ June 10, 2014 – City of Madera, CA
- ✓ June 11, City of Chowchilla, CA
- ✓ June 12, Oakhurst, CA – Foothill Communities

Two public hearings were also held and noticed including:

- ✓ June 18, 2014 at MCTC offices, Madera, CA
- ✓ June 23, 2014 at MCTC offices, Madera, CA

The following events or presentations were also held to review the Draft RTP and SCS:

- ✓ June 21, 2014, Camarena Health Center, Madera, CA (Environmental Justice Workshop)
- ✓ June 26, 2014, Oakhurst Community Alliance, Oakhurst, CA (Presentation)

Finally, the MCTC Board will consider certification of the PEIR, FTIP, Conformity Finding, and the 2014 RTP and SCS on July 23, 2014, MCTC Offices, Madera CA.

The Choice Scenario

On March 20, 2014, the RTP and SCS Roundtable reviewed results of the alternative scenario modeling process and agreed that the Hybrid scenario was the preferred SCS scenario. The Roundtable's recommendation to incorporate the Hybrid Scenario in the 2014 RTP was forwarded to the MCTC Policy Board for its consideration on March 26, 2014. On March 25, 2014, VRPA Technologies, Inc. and MCTC conducted a public visioning workshop to review and discuss the alternative SCS scenarios with the general public and stakeholders. At the March 26 MCTC Board meeting, the Policy Board reaffirmed the

Roundtable's recommendation and approved the Hybrid scenario as the scenario that should be reflected in the RTP and implemented to reduce GHG emissions in Madera County.

During review of the Draft 2014 RTP and SCS and Draft Program Environmental Impact Report (EIR), VRPA Technologies, Inc. and MCTC will conduct another set of public workshops throughout the Madera region and meet with the RTP and SCS Roundtable to receive additional input. Such input will be incorporated into the Final 2014 RTP and SCS and Final PEIR.

RHNA Consistency

MCTC is in the process of preparing the RHNP and has ensured that the population and housing projections developed for each of the planning processes were consistent. The RTP and SCS focus on a longer-term period or through to the year 2040. The Regional Housing Needs Allocation (RHNA) is a sort-term planning process focusing on the next eight (8) years determines the region's housing needs considering four (4) income categories including very low, low, moderate, and above moderate. The RHNA process takes place prior to the development of general plan housing elements by each of the local agencies. Previously, the RHNA process adhered to a five (5) cycle; however, SB 375 increased the cycle to 8 years. Linking the RHNA and SCS processes enhances the ability to integrate housing, land use, and transportation planning and meet the state's housing goals.

MCTC has been working very closely with each of the local agencies and the California State Department of Housing and Community Development (HCD) to develop the housing needs allocations to ensure that the RHNA and SCS are consistent and that the mix of housing types developed as part of the SCS Hybrid scenario can accommodate the mix of housing required to comply with RHNA allocations and address each of the economic segments of the population. This will ensure that the SCS will help the region address RHNA housing allocation needs over the next 8 years.

Once the RHNA is complete and each local agency begins preparation of its housing element, the agencies will need to identify adequate sites to address its RHNA allocations. Housing elements are due no later than 18 months after the MCTC Board adopts the RTP and SCS.

Consistency with LAFCO Policies

SB 375 requires that MCTC consult/coordinate with the Local Agency Formation Commission (LAFCO), focusing on the adopted Spheres of Influence (SOI) for each city adopted by LAFCO. The Madera LAFCO coordinates local and timely changes in local governmental boundaries (§56001); makes special studies to obtain and furnish information which contribute to the logical and reasonable development of local agencies; and prepares spheres of influence determinations for each local agency within the County

(§56425). The Commission also promotes the efficient extension of services while encouraging the protection of agricultural and open space lands (§56001). Further efforts include discouraging urban sprawl and encouraging orderly formation and development of local agencies based upon local conditions and circumstances (§56301).

For the MCTC RTP and SCS, Madera LAFCO was a member of the RTP and SCS Roundtable represented by County Planning staff. During development of the RTP and SCS, MCTC and LAFCO/County Planning staff met often to review SCS requirements, and to discuss growth projections and growth areas.

Social Equity Considerations

As part of its transportation planning process, MCTC has developed an approach to ensuring that environmental justice (EJ) principles are considered during development of regional plans and programs. The RTP also reflects the analysis of RTP and SCS projects and programs on EJ communities and whether or not the EJ communities are impacted or disproportionately affected by the projects and programs in the RTP and SCS. Based upon the modeling conducted for the RTP and SCS, the projects and programs contained in the RTP and SCS will not impact or disproportionately affect EJ communities in the Madera region (reference Chapter 10 – "*Addressing Environmental Justice*"). Under Title VI and related statutes, MCTC assures that no person shall on the grounds of race, color, or national origin, as provided by Title VI of the Civil Rights Act of 1964, and the Civil Rights Restoration Act of 1987 (P.L. 100.259), be excluded from participation in, be denied the benefits of or otherwise subjected to discrimination under any agency-sponsored program or activity. Nor shall sex, age or disability stand in the way of fair treatment of all individuals. MCTC further assures that every effort will be made to ensure nondiscrimination in all of its programs and activities, whether those programs and activities are federally funded or not.

As noted previously, MCTC has conducted its RTP and SCS outreach program across all sectors of the Madera region, and specifically conducted events and workshops in Spanish to gain input from the EJ communities. In addition, MCTC provided the SCS web-based tool in Spanish to capture input from the Spanish-speaking public and ensure that access to such tools was provided to all Maderans.

Public Health Benefits

MCTC recognizes that the 2014 RTP and SCS may have an impact on the health of the region's residents. 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 RTP and SCS supports the integration of transportation and land use policies, projects, and programs that will enhance public health improvements through active transportation modes such as those noted above. The Hybrid scenario enhances health in the region by improving the connection between land use and transportation. The

result is more walkable communities, increased bicycling, more people using transit, and better access to healthy food. Health improvements can also be affected or improved through a less-carbon intensive vehicle fleet. Through near zero and zero-emission vehicle technologies, the 2014 RTP and SCS promotes a more sustainable future for the region that includes less tail pipe emissions from the vehicles.

CEQA Streamlining

SB 375 identifies CEQA streamlining allowances and how they will be applied by the local agencies as growth and development occurs throughout the region. Specifically, SB 375 includes opportunities for streamlining the CEQA process, when certain conditions are met, as an incentive for implementing projects that are consistent with this SCS. There are two types of projects for which CEQA requirements can be streamlined once MCTC adopts the 2014 RTP and SCS that meets the greenhouse gas targets established by CARB including residential/mixed use projects and transit priority projects. As referenced previously, the MCTC 2014 RTP and SCS will not meet the CARB targets; therefore MCTC may be required to prepare an APS. In order for the CEQA streamlining to be available to Madera local agencies as they review and environmental assess new development projects, the CARB targets must be met. As a result, until such time as the targets are met either by the next RTP and SCS Update or if achieved during development of the APS, the CEQA streamlining provisions will not be applicable in Madera County.

7. Investing In Change

Introduction

The Financial Element is an invaluable tool in understanding and implementing the Regional Transportation Plan and Sustainable Communities Strategy (RTP and SCS), which guides transportation policies and investments for Madera County. This section provides a long-range view of the proposed transportation infrastructure within Madera County and its economic impacts and opportunities. This Chapter also for the first time incorporates SCS projects and earmarks funding to enable their development.

The Financial Element specifically identifies current and anticipated revenue and strategies to fund projects described in Chapter 5 – "*Delivering the Plan*." Primary transportation modes addressed are highways, local streets and roads, public transit, non-motorized bicycle and pedestrian, and rail projects.

The main focus of this financial analysis is to forecast the County's transportation system capital, operating, maintenance and rehabilitation needs and costs relative to reasonably available forecasted revenue and to optimize transportation investments in Madera County. This effort ultimately reveals the magnitude of transportation network needs and projected funding gap that must be bridged or backfilled to address identified needs. The overall economic outlook will be a major determinant in the availability of funding over the planning horizon.

Key components addressed in the Financial Element are:

- ✓ Summary of costs to operate and maintain current transportation system
- ✓ Projections of costs and revenue to implement projects in Action Plan
- ✓ Existing and potential transportation funding sources
- ✓ Unconstrained list of candidate projects if funding becomes available
- ✓ Potential funding shortfalls

Projections of potential federal, State, and local funding are reflected along with projected costs of proposed transportation projects through 2040. Extensive public participation outreach efforts undertaken during the development of this RTP and SCS provide a firm basis for reflecting projects consistent with the desires of the community. As a result, this section was developed collaboratively with Madera County jurisdictions ensuring that selection of transportation projects by region is reflective of public input.

Maintenance and rehabilitation of Madera County's multi-modal transportation system will be an on-going effort throughout the horizon of this plan. While significant emphasis is placed on sustainable

communities' strategies, maintaining, rehabilitating, and operating the County's existing transportation modes will be vital to ensure on-going connectivity and a balanced and diverse transportation network.

Financially- Constrained Plan

The RTP and SCS is required to be "financially constrained" reflecting those projects that can be realistically funded based on projected revenue and funding opportunities. Projects identified as needed but for which no funds have been identified are also included as unconstrained projects and would receive priority should funding become available. Challenges posed by this plan become evident as the cost of identified transportation needs in all modes exceeds projected funding.

Projected Revenues

A projection of reasonably available revenue is required to determine how many proposed projects can be fully funded through 2040. The Financial Element reflects traditional or historical growth trends in transportation funds available from a variety of federal, State, and local sources. Consistently reliable sources of funding, such as the excise gas tax, however, may become less stable as fuel sales decline and transportation costs rise. The continuation of Measure T and the collection of projected County-wide impact assessment fees are assumed. The loss of these large revenue sources would significantly impact the ability of the County to deliver projects.

It is acceptable practice to identify funding sources that reasonably expected to be valuable during the planning period. Measure T is the second transportation sales tax measure passed in Madera County that provides ½ percent sales tax proceeds for transportation projects and programs. It is therefore expected that Measure T will be renewed by or prior to the year 2026. Financial assumptions are always based on uncertainty and the federal and state funding sources used to develop the financial constrained revenue projections are all also based on assumptions that Congress and the State of California will continue to appropriate funds. When funding sources or programs are eliminated, or when Congress passes new transportation reauthorization legislation the RTP is updated to reflect those changes.

A number of key revenue assumptions were made, as follows:

Revenue Assumptions

- ✓ Availability of historical revenue through 2040 for all modes.
- ✓ MAP-21 reauthorization with historical program revenue allocations.
- ✓ Extension of Madera County's Local ½ Percent Sales Tax Measure T beyond 2027 to 2040.
- ✓ Annual growth of revenue.
- ✓ Availability of projected County-wide impact fees.

Table 7-1 shows the cumulative available transportation revenue in constant dollars for all modes. $1,384.23 million is projected for the planning period 2014 through 2040.

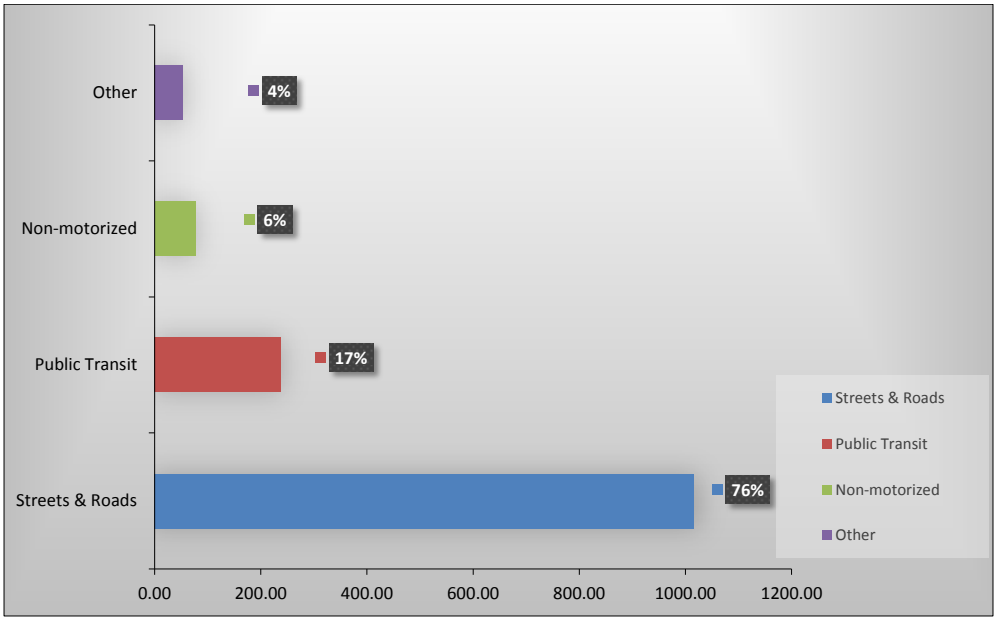
TABLE 7-1
Revenues by Mode
2014 – 2040 ($ Million)

Mode	Total	Percent
Streets & Roads	$1,052.8	76 %
Public Transit	$238.43	17 %
Non-Motorized	$36.20	3 %
Other*	$56.81	4 %
Total	$1,384.23	100%

* "Other" includes no and low-emission vehicle projects; electric charging stations; traffic signals; and various transportation control measures/transportation systems management projects, etc.

As shown in Figure 7-1, $1,052.8 million or 76 percent of projected revenue through 2040 will be expended on streets and roads; $238.43 million or 17 percent on public transit; $36.2 million or 3 percent on non-motorized transit; and $56.81 million or 4 percent on other transportation projects, such as alternative-fuel projects, and other transportation control measures (TCMs) and transportation systems management (TSM) projects.

FIGURE 7-1
Projected Revenues by Mode
2014 – 2040 ($ Million)



Local funds will be the greatest source of transportation funding for Madera County at $842.67 million or 61%, as shown on Tables 7-2 and 7-3 and Figure 7-2. Federal funds will be the second greatest at $367.54 million or 26%, while State funds are projected at $174.02 million or 13% of total revenues.

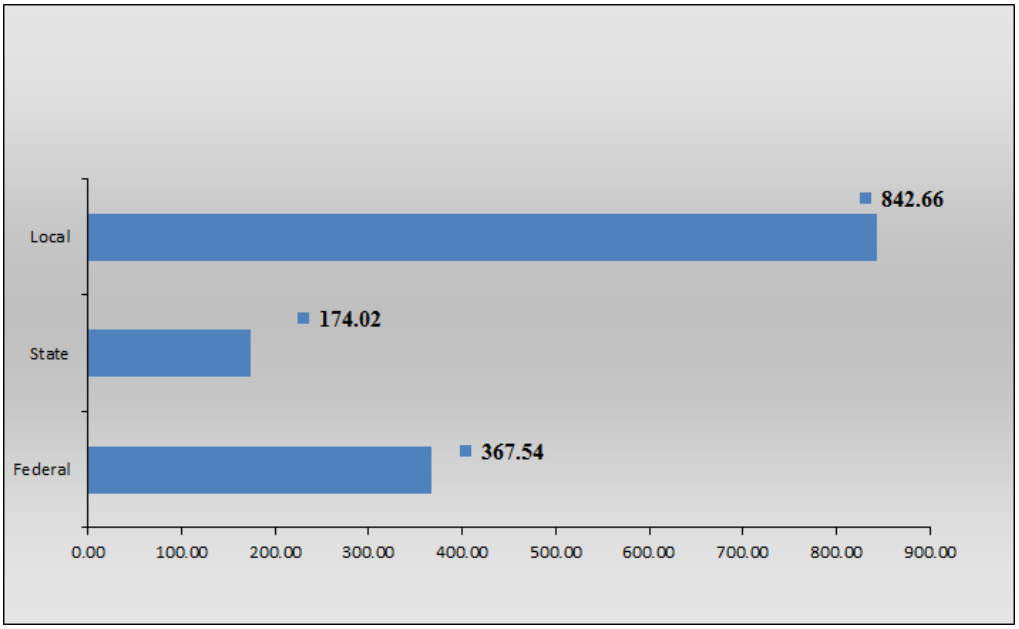
TABLE 7-2
Revenue Summary
2014 – 2040 ($ Millions)

Funding Type	Total	Percent
Federal	$367.54	26%
State	$174.02	13%
Local	$842.67	61%
Total	$1,384.23	100%

TABLE 7-3
Projected Revenue by Funding Source
2014 – 2040 ($ Millions)

Project Type	Federal	State	Local	Total
Streets & Roads	$241.26	$131.60	$679.94	$1,052.80
Public Transit	$72.12	$34.24	$132.07	$238.43
Non-Motorized	$20.82	$0	15.38	$36.20
Other	$33.34	$8.18	$15.28	$56.80
Total	$367.54	$174.02	$842.67	$1,384.23
% of Total	26%	13%	61%	100.0%

FIGURE 7-2
Projected Revenue by Funding Source
2014 – 2040 ($ Millions)



Projected Expenditures

Key assumptions used in projecting expenditures include the following:

- ✓ The current level of streets and roads operating, maintenance, and rehabilitation costs will continue through 2040.
- ✓ Transit expansion is initiated when a threshold or increment of 5,000 households is reached in a core growth area. Transit operating and capital improvements reflect on-going costs, including vehicle replacements and additional vehicles with transit enhancements.
- ✓ MAP-21 reauthorization with historical program revenue allocations and availability of state revenues will continue through 2040.
- ✓ Madera County' Local ½% Sales Tax Measure T will continue beyond 2027 to 2040.
- ✓ MCTC support to provide a CMAQ lump sum set-aside through the year 2040 of which a portion may be used to support "complete street" and "active transportation" concepts for aesthetic streetscapes, pedestrian walkability, and bicycle projects, etc.
- ✓ Major street and highway improvements will include facilities for active transportation systems as appropriate and feasible.

Table 7-4 provides a summary of funding allocation by mode. Table 7-5 shows the delivery schedule and funding sources applied to develop the constrained capacity increasing street and highway improvement projects.

TABLE 7-4
Expenditure Summary by Mode
2014 – 2040 ($ Million)

Mode	Total	Percent
Streets & Roads – Rehab & Safety	$298.0	22%
Streets & Roads – Capacity Increasing	$754.8	54%
Subtotal: Streets & Roads	$1,052.8	
Public Transit	$238.4	17%
Non-Motorized	$36.2	3%
Other*	$56.8	4%
Total	$1,384.2	100%

* "Other" includes no and low-emission vehicle projects; electric charging stations; traffic signals; and various transportation control measures/transportation systems management projects, etc.

TABLE 7-5
2014 Constrained Capacity Increasing Projects – Schedule/Fund Source

							FUNDING SOURCE					
Project #	Agency	Project Name	Project Limits	Planned Improvement	Total Cost	Project Opening Year	Measure T Regional	Measure T Flexible	Future Measure T	Local TIF & Other	STIP	ITIP
1	Chowchilla	SR 233 (ROBERTSON)	15th Street to Palm Pkwy	Restripe to 4 Lanes	$ 1,000,000	2020				$ 1,000,000		
2	Chowchilla	SR 99	SR 233 Interchange	Reconstruct Interchange	$ 16,000,000	2020	$ 7,600,000	$ 4,900,000		$ 3,500,000		
3	Chowchilla	AVE 26	SR 99 to Coronado	2 Lanes to 4 Lanes	$ 10,000,000	2025				$ 10,000,000		
4	Chowchilla	FIG TREE	SR 99 Overcrossing	2 Lane Overcrossing to Chowchilla Blvd	$ 14,000,000	2030				$ 14,000,000		
5	County	SR 41	SR 145 to RD 200	Passing Lanes	$ 22,148,000	2016	$ 6,727,000	$ 4,374,000			$ 11,047,000	
6	County	AVE 12	SR 99 to RD 30 1/2	2 Lanes to 4 Lanes	See Project #59	2016						
7	County	Oakhurst Midtown Bypass	RD 426 to 41	New 2 Lane	$ 7,495,000	2019	$ 3,670,000	$ 3,825,000				
8	County	RD 40	AVE 9 to AVE 12	0 Lanes to Max. 4 Lanes	$ 4,000,000	2018				$ 4,000,000		
9	County	AVE 9	RD 38 to Children's	2 Lanes to 4 Lanes	$ 8,582,972	2025				$ 8,582,972		
10	County	SR 41	Madera County Line to AVE 10	4 Lanes to 6 Lanes	$ 5,780,407	2025				$ 5,780,407		
11	County	SR 41	AVE 10 to AVE 12	6 Lane Freeway & Interchange At AVE 12	$ 100,858,967	2028			$ 25,214,742	$ 75,644,225		
12	County	AVE 12	RD 30 1/2 to RD 36	2 Lanes to 4 Lanes	$ 15,087,543	2030			$ 12,327,627	$ 2,759,916		
13	County	AVE 12	RD 38 to SR 41	2 Lanes to 4 Lanes	$ 6,000,000	2030			$ 4,902,439	$ 1,097,561		
14	County	AVE 12	SR 41 to North Rio Mesa Blvd	2 Lanes to 6 Lanes	$ 4,790,259	2035				$ 4,790,259		
15	County	SR 49	Westlake Dr to Meadow Vista Dr	2 Lanes to 4 Lanes	$ 7,000,000	2035			$ 5,719,512	$ 1,280,488		
16	County	AVE 10	RD 40 1/2 to SR 41	Widen to 4 Lanes	$ 5,000,000	2040				$ 5,000,000		
17	County	CHILDREN'S BLVD	SR 41 NB Ramps to Peck Blvd	4 Lanes to 6 Lanes	$ 7,281,193	2040				$ 7,281,193		
18	County	RD 145	RD 206 to SR 41	2 Lanes to 4 Lanes	$ 15,185,957	2040				$ 15,185,957		
19	County	RD 206	Madera County Line to RD 145	2 Lanes to 4 Lanes	$ 18,204,521	2040				$ 18,204,521		
20	County	SR 41	NB On-Ramp/SR 41 At Children's Blvd.	1 Lane to 2 Lanes	$ 5,000,000	2040				$ 5,000,000		
21	County	SR 41	AVE 12 to SR 145	2 Lanes to 4 Lanes	$ 45,000,000	2040			$ 13,500,000	$ 31,500,000		
22	Madera	LAKE	4th to Cleveland	2 Lanes to 4 Lanes	$ 3,500,000	2016				$ 3,500,000		
23	Madera	OLIVE	Gateway to Roosevelt	2 to 4 Lanes	$ 5,000,000	2017				$ 5,000,000		
24	Madera	CLEVELAND	Sharon to Tozer	Restripe to 4 Lanes	$ 491,950	2025				$ 491,950		
25	Madera	AVIATION	Extend to AVE 17	New 2 Lane	$ 1,500,000	2025				$ 1,500,000		
26	Madera	YEAGER	Falcon to Aviation	New 2 Lane	$ 1,500,000	2025				$ 1,500,000		
27	Madera	ELLIS	RD 26 to Krohn	2 Lanes to 4 Lanes	$ 5,874,135	2025				$ 5,874,135		
28	Madera	WESTBERRY	At Fresno River	New 4 Lane bridge	$ 12,298,739	2025				$ 12,298,739		
29	Madera	AVE 17	SR 99 Interchange	Interchange Improvements/Widen Structure	$ 56,685,401	2025				$ 56,685,401		
30	Madera	CLEVELAND	Schnoor to SR 99	4 Lanes to 6 Lanes	$ 3,750,000	2026	$ 1,600,000	$ 1,800,000		$ 350,000		
31	Madera	GATEWAY	Yosemite to Cleveland	2 Lanes to 4 Lanes	$ 8,600,000	2027	$ 2,940,000	$ 3,160,000		$ 2,500,000		
32	Madera	GATEWAY	Olive to 9th	2 Lanes to 4 Lanes	$ 2,670,202	2030				$ 2,670,202		
33	Madera	ELLIS	RD 26 to Lake	2 to 4 Lanes	$ 3,914,320	2030				$ 3,914,320		
34	Madera	SCHNOOR	Trevor to Sunset	Overlay/restripe to 4 Lanes	$ 1,106,886	2030				$ 1,106,886		
35	Madera	SHARON BLVD	Ellis to AVE 17	New 4 Lane RD	$ 8,600,000	2030				$ 8,600,000		
36	Madera	GRANADA	At Fresno River	Widen Structure 2 Lanes to 4 Lanes	$ 6,500,000	2030				$ 6,500,000		

TABLE 7-5 cont.
2014 Constrained Capacity Increasing Projects – Schedule/Fund Source

Project #	Agency	Project Name	Project Limits	Planned Improvement	Total Cost	Project Opening Year	Measure T Regional	Measure T Flexible	Future Measure T	Local TIF & Other	STIP	ITIP
37	Madera	WESTBERRY	Cleveland to AVE 16	2 Lanes to 4 Lanes	$ 2,716,787	2030				$ 2,716,787		
38	Madera	HOWARD	Westberry to Granada	2 Lanes to 4 Lanes	$ 4,673,902	2030				$ 4,673,902		
39	Madera	PECAN	Golden State to Stadium	2 Lanes to 4 Lanes	$ 4,673,902	2030				$ 4,673,902		
40	Madera	PECAN	Pine to Schnoor	2 Lanes to 4 Lanes	$ 2,000,000	2016				$ 2,000,000		
41	Madera	PINE	Almond AVE to Madera High School South Driveway	2 Lanes to 4 Lanes	$ 1,911,322	2030				$ 1,911,322		
42	Madera	SUNSET	4th to Westberry	2 Lanes to 4 Lanes	$ 3,000,000	2035			$ 2,400,000	$ 600,000		
43	Madera	D ST	Clark to Adell	2 Lanes to 4 Lanes	$ 1,500,000	2035				$ 1,500,000		
44	Madera	RD 29	Olive to AVE 13	2 Lanes to 4 Lanes	$ 8,098,953	2035				$ 8,098,953		
45	Madera	RD 29	AVE 12 to AVE 13	2 Lanes to 4 Lanes	$ 8,100,000	2035				$ 8,100,000		
46	Madera	RD 29	AVE 14 to AVE 15	2 Lanes to 4 Lanes	$ 4,720,848	2035				$ 4,720,848		
47	Madera	SR 145	AVE 12 to AVE 13 1/2	2 Lanes to 4 Lanes	$ 4,014,405	2035				$ 4,014,405		
48	Madera	SR 145	SR99 to Yosemite	2 Lanes to 4 Lanes	$ 5,536,935	2035			$ 4,524,081	$ 1,012,854		
49	Madera	STADIUM	Pecan to Maple	2 Lanes to 4 Lanes	$ 1,209,919	2035				$ 1,209,919		
50	Madera	STOREY RD	SR 145 to City Limit	2 Lanes to 4 Lanes	$ 2,396,629	2035				$ 2,396,629		
51	Madera	SUNRISE	B Street to RD 28	2 Lanes to 4 Lanes	$ 2,892,483	2035				$ 2,892,483		
52	Madera	TOZER/RD 28	AVE 13 to Knox	2 Lanes to 4 Lanes	$ 1,869,561	2035			$ 934,780	$ 934,780		
53	Madera	HOWARD RD	Pine to Schnoor	4 Lanes to 5 Lanes	$ 5,000,000	2040			$ 4,000,000	$ 1,000,000		
54	Madera	AVE 17	RD 23 to Golden State	2 Lanes to 4 Lanes	$ 3,000,000	2040			$ 2,451,220	$ 548,780		
55	Madera	AVE 17	RD 26 to RD 27	2 Lanes to 4 Lanes	$ 3,000,000	2040			$ 2,451,220	$ 548,780		
56	Madera	CLEVELAND	RD 26 to SR 99	4 Lanes to 6 Lanes/Interchange Improvements	$ 54,988,588	2040				$ 54,988,588		
57	Madera	ELLIS AVE	Interchange At SR 99	Convert to Interchange	$ 30,000,000	2040			$ 7,500,000	$ 22,500,000		
58	State	SR 99	Fresno County Line to AVE 7	4 Lanes to 6 Lanes	$ 54,000,000	2016						$ 54,000,000
59	State	SR 99	AVE 12 Interchange Improvements	Reconstruct Interchange	$ 85,500,000	2016	$ 7,657,000	$ 3,920,000			$ 22,823,000	$ 51,100,000
60	State	SR 99	AVE 12 to AVE 17	4 Lanes to 6 Lanes	$ 1,500,000	2020					$ 1,500,000	
61	State	SR 99	AVE 7 to AVE 12	4 Lanes to 6 Lanes	$ 1,500,000	2028					$ 1,500,000	
62	State	SR 99	AVE 17 to AVE 18 1/2	4 Lanes to 6 Lanes	$ 1,500,000	2036					$ 1,500,000	
63	State	SR 99	AVE 20 to AVE 21	4 Lanes to 6 Lanes	$ 1,500,000	2040					$ 1,500,000	
64	State	SR 99	AVE 18 1/2 to AVE 20	4 Lanes to 6 Lanes	$ 1,500,000	2040					$ 1,500,000	
				TOTAL:	$742,710,687		$30,194,000	$21,979,000	$85,925,620	$458,142,067	$41,370,000	$105,100,000

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Impact of Measure T Extension

The largest mode expenditures occur in the streets and roads category. If Measure T is not renewed, a potential shortfall of $287 million in projects will occur. This shortfall is comprised of future Measure T funds designated for transportation projects. Although other funds earmarked to match Measure T funds would help fund other non-Measure T projects, the impact will be negligible compared to the magnitude of funding offered by Measure T.

This potential shortfall signifies the challenges that lie ahead in ensuring renewal of Measure T through 2040 to meet the projected growth and increased demands on Madera County's multi-modal transportation network. The potential revenue shortfalls without Measure T renewal also point to the need for efficient and timely project implementation to maximize forecasted revenue and to be well positioned to receive potential future federal and State funds. Clearly, the goal of achieving a fully implemented regional transportation plan that will vastly improve the quality of life in Madera County will be a significant challenge without the infusion of increased revenues from existing and other new sources.

8. Public Involvement for Change

Introduction

The MCTC Regional Transportation Plan and Sustainable Communities Strategy (RTP and SCS) plays a major role in establishing goals and objectives and guide development of infrastructure improvements. Extensive efforts were made to achieve consultation and coordination with all transportation providers, facility operators, appropriate federal, State, and local agencies, Native American Tribal Governments, environmental resource agencies, air districts, pedestrian and bicycle representatives, and adjoining MPOs/RTPAs according to the requirements of 23 CFR 450.316 and the 2012 MCTC Public Participation Plan (PPP).

Workshop at Chowchilla City Hall

The MCTC PPP, was recently updated (2012) consistent with SAFETEA-LU guidance, Moving Ahead for Further Progress in the Twenty-first Century (MAP-21) requirements, and Senate Bill (SB 375) public participation requirements. The PPP was developed in consultation with federal, state, and local agency partners, and guided the public participation program of the 2014 RTP and SCS. The PPP establishes a baseline for MCTC communication policies and procedures, ensuring that public is well informed during the decision making process. Detailed within the plan is the length of public comment periods for MCTC documents; methods MCTC employs to distribute information; and goals for public access. The PPP is included in this document as Appendix C.

The 2014 RTP and SCS public participation program built on the success of previous public outreach campaigns to ensure widespread dissemination of information to a geographically and socially diverse population. Since the last RTP update in 2010, MCTC staff has continued to engage the public through workshops, public meetings, and presentations at service clubs and professional organizations. Educating the public about the regional transportation planning process and opportunities for continued public participation and input remains a priority for MCTC.

Environmental Impact Report

A Notice of Preparation (NOP) for the 2014 RTP and SCS Program Environmental Impact Report (PEIR) was prepared and distributed in September 2012 to the appropriate regulatory agencies for consultation and

comment. Responding to comments received during the Notice of Preparation (NOP) review period, MCTC conducted a scoping meeting with representatives of the North Fork Rancheria present and discussed transportation issues of concern to the Rancheria. The NOP and received comment letters are provided in Appendix A and B in the PEIR. The Final PEIR has also been prepared. Comment letters and responses to those comments are contained in Chapter 2 of the Final PEIR.

RTP and SCS Roundtable

MCTC formed the 2014 RTP and SCS Roundtable in October 2012. Over the 20-month RTP and SCS development process, the Roundtable met five (5) times to assist MCTC with preparation of the document. Specifically, the Roundtable reviewed the traffic and land use modeling processes, the project prioritization process, development of the SCS alternative scenarios, review of alternative scenario modeling results and performance measures, and provided a recommendation of the preferred RTP and SCS scenario to the MCTC Policy Board. The Roundtable will meet following public and agency review of the Draft RTP, SCS and PEIR. This meeting will be held to review the specific comments submitted and how MCTC plans to respond. Finally the Roundtable will recommend approval of the 2014 RTP and SCS and PEIR to the MCTC Policy Board.

RTP and SCS Public Workshops

Series 1

The first series of public workshops to review the 2014 RTP, SCS, and PEIR development process and to identify transportation and land use needs and environmental issues was held in the Oakhurst, the Ranchos area, in the City of Madera, and in the City of Chowchilla in February 2013 after an extensive public outreach campaign including newspaper advertisements, email invitations, and a notice on the MCTC website. To make public participation as convenient as possible, staff felt it was important to have a number of different workshops throughout the County. The selected time for each workshop was between 6:00 and 8:30 p.m. to make attendance more accessible. A synopsis of this workshop series is provided in Appendix D.

Workshop at Madera High School

Series 2

MCTC conducted a workshop in Madera on March 24 to review the alternative land use and transportation scenarios with the public and stakeholders prior to approval of a preferred scenario by the MCTC Policy Board.

Series 3

The third series of public workshops was held during the Draft RTP, SCS, and PEIR public review process between May and June 2014. The workshop series focused on receiving comment from stakeholders and the public regarding the Draft documents. MCTC held the ***third series*** of public workshops on the following dates and within the following subregions

- ✓ June 10, 2014 – City of Madera, CA
- ✓ June 11, City of Chowchilla, CA
- ✓ June 12, Oakhurst, CA – Foothill Communities

Two public hearings were also held and noticed including:

- ✓ June 18, 2014 at MCTC offices, Madera, CA
- ✓ June 23, 2014 at MCTC offices, Madera, CA

The following events or presentations were also held to review the Draft RTP and SCS:

- ✓ June 21, 2014, Camarena Health Center, Madera, CA (Environmental Justice Workshop)
- ✓ June 26, 2014, Oakhurst Community Alliance, Oakhurst, CA (Presentation)

Finally, the MCTC Board will consider certification of the PEIR, FTIP, Conformity Finding, and the 2014 RTP and SCS on July 23, 2014, MCTC Offices, Madera CA.

MCTC Web-Based Tool

In addition to the public workshops and other outreach efforts, MCTC desired to receive input regarding the alternative RTP and SCS scenarios from a wide variety of residents, employees, stakeholders, and others from within and outside of the Madera region. The web-based tool was posted to the MCTC website in mid-March 2014 and continues to be available to receive input. The web-based tool was advertised throughout Madera County on billboards and in newspapers. Prior to approval of the preferred RTP and SCS scenario by

Billboard Along SR 99

the MCTC Policy Board, approximately 312 people completed the web-based tool process providing vital input in English and 91 in Spanish. Based upon the results, the Hybrid Scenario was identified as the most preferred scenario by those who provided their opinion using the tool.

Banner Advertisement in Newspapers

RTP and SCS Environmental Justice Community Outreach

MCTC conducted two Environmental Justice (EJ) events to receive input from the EJ community in the City of Madera. The first event focused on the conduct of a workshop in Spanish at the Camarena Health Center. The second event was held on Earth Day at the Madera Community Garden. The outdoor event was conducted in Spanish and MCTC received significant feedback from a variety of Madera residents and employees.

EJ Outreach at Madera Earth Day 2013

RTP and SCS, and PEIR Approvals

The MCTC Policy Board may certify the PEIR and approve the 2014 RTP and SCS on July 23, 2014. A copy of the notice is provided in Appendix E.

9. Environmental Compliance

Introduction

As mandated by State law, a Program Environmental Impact report (PEIR) has been prepared pursuant to Section 15163 of the California Environmental Quality Act (CEQA). The intent of the PEIR is to serve as CEQA compliance for the MCTC Regional Transportation Plan and Sustainable Communities Strategy (RTP and SCS) and identifies:

- ✓ Significant effects of the updated 2014 RTP and SCS on the environment and indicate the manner in which those significant effects can be mitigated or avoided
- ✓ Unavoidable adverse impacts that cannot be mitigated
- ✓ Project alternatives

The PEIR is an informational document, the purpose of which is to inform public agency decision-makers and the general public of the significant environmental effects (both beneficial and adverse) of the proposed 2014 RTP and SCS. In 2010, Madera County adopted the last RTP. This document, along with the Measure T PEIR certified in 2006 was used to update the 2014 RTP and SCS and to prepare the PEIR for the 2014 RTP and SCS. The EIR process included a Notice of Preparation and preparation of an Administrative Draft, Draft, and Final EIR. Environmental topics evaluated in the PEIR range from air quality and noise to land use planning and transportation.

It should be noted that the 2014 RTP and SCS Air Quality Conformity Finding has been completed and incorporated in the PEIR and this RTP and SCS by reference.

As part of the development of the 2014 RTP and SCS PEIR, MCTC followed standard CEQA requirements for public outreach and agency consultation. This consultation included the: Notice of Preparation of the EIR, Notice of Completion of the Draft PEIR, Draft Final PEIR, and the Notice of Determination. Notifications were sent to all interested parties, including local agencies, other regional agencies, federal resource agencies, and the California State Office of Planning and Research – State Clearinghouse, which distributes CEQA EIR documents to affected State resource agencies. In addition, comments and responses to comments received during the 30-day Notice of Preparation comment period and the mandatory 45-day comment period for the Draft EIR was documented in the Final 2014 RTP and SCS Final PEIR. The 45-day review period was extended to a 55-day review period because the RTP and SCS document must be available for public and agency review for at least 55-days in accordance with Senate Bill (SB) 375.

A full discussion of mitigation activities discussed in the development of the 2014 RTP and SCS is included in the PEIR.

10. Addressing Environmental Justice

Introduction

Transportation systems play a vital role in advancing the safety, economy, and quality of life for residents of Madera County. Each day, transportation facilitates the movement of goods and people, providing mobility to Madera's residents, visitors, and businesses. Transportation systems are quite diverse, including roadways, public transportation, bicycle and pedestrian facilities, airports, and railroads and like any system, maintenance and improvements are crucial to its success. Madera is committed to maintaining the existing infrastructure and to create and implement changes, which would add to the system's efficiency and safety.

Investment in the transportation system creates measurable benefits, but may also result in unintended consequences if not planned correctly. Projects may generate disproportionate negative impacts to minority or low-income communities by either denying them their "fair-share" of transportation projects or subjecting them to an unequal share of the negative externalities. To prevent such an event from occurring, the Madera County Transportation Commission (MCTC) is committed to employing an environmental justice program that will help ensure early and continued public involvement, and an equal distribution of transportation projects, paying close attention to the needs of low income and minority populations.

Environmental Justice is a public policy goal of promoting the fair treatment and meaningful involvement of all people in the decision-making process for transportation. Satisfying this goal means ensuring that low-income and minority communities receive an equitable distribution of the benefits of transportation activities without suffering disproportionate adverse impacts. Achieving environmental justice requires both analytical techniques as well as the full and fair participation by all potentially affected communities in the transportation decision-making process.

MCTC will continue to consult and coordinate with the various Native American Tribes within Madera County. It is crucial that MCTC and these organizations work together to identify transportation needs including the provision of transit services, necessary highway and road improvements, and improvements that address known safety issues. MCTC will examine the future necessity of forming an Environmental Justice Committee to further build upon current community collaboration to enhance anticipated planning efforts.

How Transportation Investment Affects Communities

Multiple Modes of Transportation

The number and availability of different transportation modes plays an important role within Madera. Non-automobile travel modes (primarily transit) are essential to ensure access to jobs and services for the low income and elderly who may not have reliable access to a car. The investment in public transit affects the mobility of Madera residents by offering alternatives to the personal automobile.

Residents have access to transit in the form of a fixed route bus service for the City of Madera (Madera Area Express); a demand-response system for the City of Madera and Chowchilla (Madera Dial-a-Ride and Chowchilla Area Transit Express); an intercity fixed-route system that services the unincorporated areas of Madera County (Madera County Connection); a demand-response system for the elderly and people with disabilities in Eastern Madera County (Eastern Madera County Senior Bus); and a demand-response service for medical and dental appointments for residents of Eastern Madera County (Eastern Madera County Escort Service). Madera also invests in other modes of transportation such as bicycle and pedestrian facilities and encourages rideshare activities such as carpooling and vanpooling.

Several private carriers provide inter-city services, including Greyhound and Madera Cab Company. Greyhound operates seven days a week from the City of Madera's Downtown Intermodal Center on North "E" Street. Madera Cab Company provides service in Madera County seven days a week, 24 hours a day. Amtrak operates seven days a week with fourteen (14) daily stops in Madera along the BNSF Railroad alignment. The station is located on Avenue 15½ and Road 29.

In addition to transit services conducted by public transit providers, Native American Tribes are also planning for the provision of transit services including development of the North Fork Rancheria's transportation center and transit services program. In addition, the Picayune Rancheria of the Chukchansi Indians provide transit services to and from the Chukchansi Casino and Resort from Fresno, other central California regions, and from Modesto, stopping in Madera and continuing to the Casino.

CalVans is also available to provide commute vanpooling within Madera County and to employment centers in other counties in the Valley.

Air Quality

The effect of motor vehicles on air quality is one of the most recognized and quantified environmental impacts of transportation. There is a significant body of evidence that suggests air pollution from motor vehicle emissions cause a number of public health problems. Investment in transportation may have a positive or negative effect on air quality. Generally, investments that cause travelers to shift to less polluting modes (public transit, carpooling, bicycling, rail, etc.) can have a positive air quality impact.

Similarly, investment that reduces roadway congestion typically reduces pollution emissions, but may be slightly offset through greater induced travel.

The U.S. EPA established National Ambient Air Quality Standards (NAAQS) to protect public health, including the health of sensitive populations such as children and the elderly, from adverse effects of poor air quality. Pollutants covered by NAAQS include carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), fine particulate matter ($PM_{2.5}$), coarse particulate matter (PM_{10}) and lead (Pb). Of these six pollutants, lead is the only one that is not directly linked to transportation.

Background

The goal of environmental justice is to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations and to ensure the full and fair participation by all potentially affected communities in the transportation decision making process.

Title VI

Title VI of the 1964 Civil Rights Act provides one of the principle legal underpinnings for environmental justice. Title VI states that "No person . . . shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Title VI prohibits recipients of Federal funds from actions that reflect 'intentional discrimination' or that exhibit 'adverse disparate impact discrimination' on the basis of race, ethnicity or national origin."

The Civil Rights Restoration Act of 1987 amended Title VI so that recipients of federal aid must comply with non-discriminatory requirements in all their activities, not just the programs and activities that directly receive Federal support. That is, an agency that receives any federal funding must not only plan against discriminatory impacts on those projects that receive federal funding, but also for programs that are entirely state or locally funded. Later statues prohibit discrimination on the basis of sex, religion, or disability. As a government agency receiving federal funding, the Madera County Transportation Commission (MCTC) is committed to implementing Title VI and conforming to federal environmental justice principles.

Executive Order 12898 and 13175

Environmental justice was first identified as a national policy in 1994 when President Clinton signed executive order 12898, requiring that federal agencies shall, to the greatest extent of the law, carry out their activities, programs and policies in a way that avoids disproportionately high and adverse health and

environmental impacts on low-income and minority populations. E.O. 12898 thus applies to a wider population than does Title VI, which did not include low-income non-minority populations.

An interagency working group, led by the Environmental Protection Agency (EPA), was established to oversee the implementation of E.O. 12898. The Order itself does not create any new legal rights and is not enforceable in court. Rather, it is intended to focus federal agencies on the existing regulations, such as the Title VI and the National Environmental Policy Act (NEPA), that protect low-income and minority communities form discrimination and ensure their full participation.

Executive Order 13175, Consultation and Coordination With Indian Tribal Governments (November 6, 2000), establishes regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies with tribal implications. The goals of this order are to strengthen government-to-government relationships with Indian tribes and to reduce the imposition of unfunded mandates upon Indian tribes.

Public Participation

Because the RTP and SCS plays such a major role in establishing goals and objectives and guides development of infrastructure improvements, extensive efforts were made to achieve consultation and coordination with all transportation providers, facility operators, appropriate federal, State, and local agencies, Native American Tribal Governments, Environmental Justice Communities, environmental resource agencies, air districts, pedestrian and bicycle representatives, and adjoining MPOs/RTPAs according to the requirements of 23 CFR 450.316 and the 2012 MCTC Public Participation Plan (see Appendix C). Ongoing outreach efforts are listed below:

The 2014 RTP and SCS public participation program built on the success of previous public outreach campaigns to ensure widespread dissemination of information to a geographically and socially diverse population. Since the last RTP update in 2010, MCTC staff has continued to engage the public through workshops, public meetings, and presentations at service clubs and professional organizations. Educating the public about the regional transportation planning process and opportunities for continued public participation and input remains a priority for MCTC.

In 2010, MCTC joined with seven other Valley MPOs in the San Joaquin Valley Tribal EJ Collaborative Grant Project. This Caltrans-sponsored grant has facilitated increased collaboration between MPO staff and the leadership of local, federally-recognized and unrecognized tribal governments. Through this process, MCTC staff has been able to increase awareness of long-range planning projects in the County, including the Regional Blueprint and the RTP and SCS.

A Notice of Preparation (NOP) for the 2014 RTP and SCS PEIR was prepared and distributed to the appropriate regulatory agencies for consultation and comment. Responding to comments received during the Notice of Preparation (NOP) review period, MCTC conducted a scoping meeting with representatives of the North Fork Rancheria present and discussed transportation issues of concern to the Rancheria.

Public workshops were held in the Oakhurst, the Ranchos area, in the City of Madera, and in the City of Chowchilla after an extensive public outreach campaign including newspaper advertisements, email invitations, and a notice on the MCTC website. To make public participation as convenient as possible staff felt it was important to have a number of different workshops throughout the County. The selected time for each workshop was between 6:00 and 8:30 p.m. to make attendance more accessible.

The MCTC Public Participation Plan (PPP), consistent with SAFETEA-LU guidance, Moving Ahead for Further Progress in the Twenty-first Century (MAP-21) requirements, and Senate Bill (SB 375) public participation requirements, and developed in consultation with federal, state, and local agency partners, guided the public participation program of the 2014 RTP and SCS. The PPP establishes a baseline for MCTC communication policies and procedures, ensuring that the public is well informed during the decision making process. Detailed within the plan is the length of public comment periods for MCTC documents; methods MCTC employs to distribute information; and goals for public access.

Equity Analysis

Defining Population Groups

Identifying low-income and minority populations is necessary both for conducting effective public participation and for assessing the distribution of benefits and burdens of transportation plans and projects. MCTC defines minority and low-income populations in accordance with existing federal guidelines. Title VI of the Civil Rights Act prohibits discrimination on the basis of race, color, or national origin. The Office of Management and Budget (OMB) issued Policy Directive 15, "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity", in 1997, establishing five minimum categories for data on race and poverty:

- ✓ Black - a person having origins in any of the black racial groups of Africa
- ✓ Hispanic - a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race
- ✓ Asian - a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent

- ✓ American Indian and Alaskan Native – a person having origins in any of the original people of North, South America (including Central America), and who maintains cultural identification through tribal affiliation or community recognition

- ✓ Low-Income - a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines. For the year 2003, the poverty level has been set at $18,400 for a family of four[1]

  Note: OMB, in its Bulletin No. 00-02, "Guidance on Aggregation and Allocation of Data on Race for Use in Civil Rights Monitoring and Enforcement," issued March 9, 2000, provided guidance on the way Federal agencies collect and use aggregate data on race. Added to the previous standard delineations of race/ethnicity was the category of:

- ✓ Native Hawaiian or Other Pacific Islander - a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands

According to the Council of Environmental Quality (CEQ), an advisory body in the Executive Branch, minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. A minority population also exists if there is more than one minority group present and the minority percentage, as calculated by aggregating all minority persons, meets one of the above stated thresholds[2].

Analysis Methodology

MCTC staff began by analyzing racial and income data from the 2010 Census. The block group level data was chosen as the primary level of Census data analysis because it provides the most specific data for the geographic analysis of income and race. With 79 block groups within Madera County, block group data provides a more accurate level of analysis for both income and race when compared to census tract level data, which includes only 19 tracts within Madera County.

For racial data, block level data is available, which would provide a more accurate level of data analysis; however, the most specific level of data available for income information is the block group. To keep the maps and boundaries of the income and race data consistent, the block group level data was chosen.

Once the Census information for race and income were imported into the MCTC Geographic Information Systems (GIS) database, staff was able to identify racial and income characteristics of the county. Based

[1] **SOURCE**: *Federal Register*, Vol. 68, No. 26, February 7, 2003, pp. 6456-6458.
[2] Council on Environmental Quality, "Environmental Justice under the National Environment Policy Act," December 10, 1997. <http://ceq.eh.doe.gov/nepa/regs/ej/ej.pdf>

on these characteristics, staff demarcated block groups into five target areas to analyze equity of the 2014 RTP and SCS capacity increasing; rehabilitation and maintenance; transit; air quality; bicycle and pedestrian; and Caltrans projects. Projects were then assigned to particular target areas and analyzed for levels of benefit.

The goal of this process was to ensure racial, low-income and geographic equity of project benefit. That is, populations considered minority or low-income should have equal levels of benefit compared to other population groups. Similarly, projects and the level of benefit they provide should not be concentrated into one geographic region, but rather should be distributed proportionally to the share of use of a particular system. A map of the five target areas and the population density of the County are displayed in Figure 10-1. The locations with the highest concentrations of persons in the county are the City of Madera, City of Chowchilla, Oakhurst and the Madera Ranchos areas. Figure 10-1 displays the target areas and significant roads in more detail.

Target Area Population Characteristics

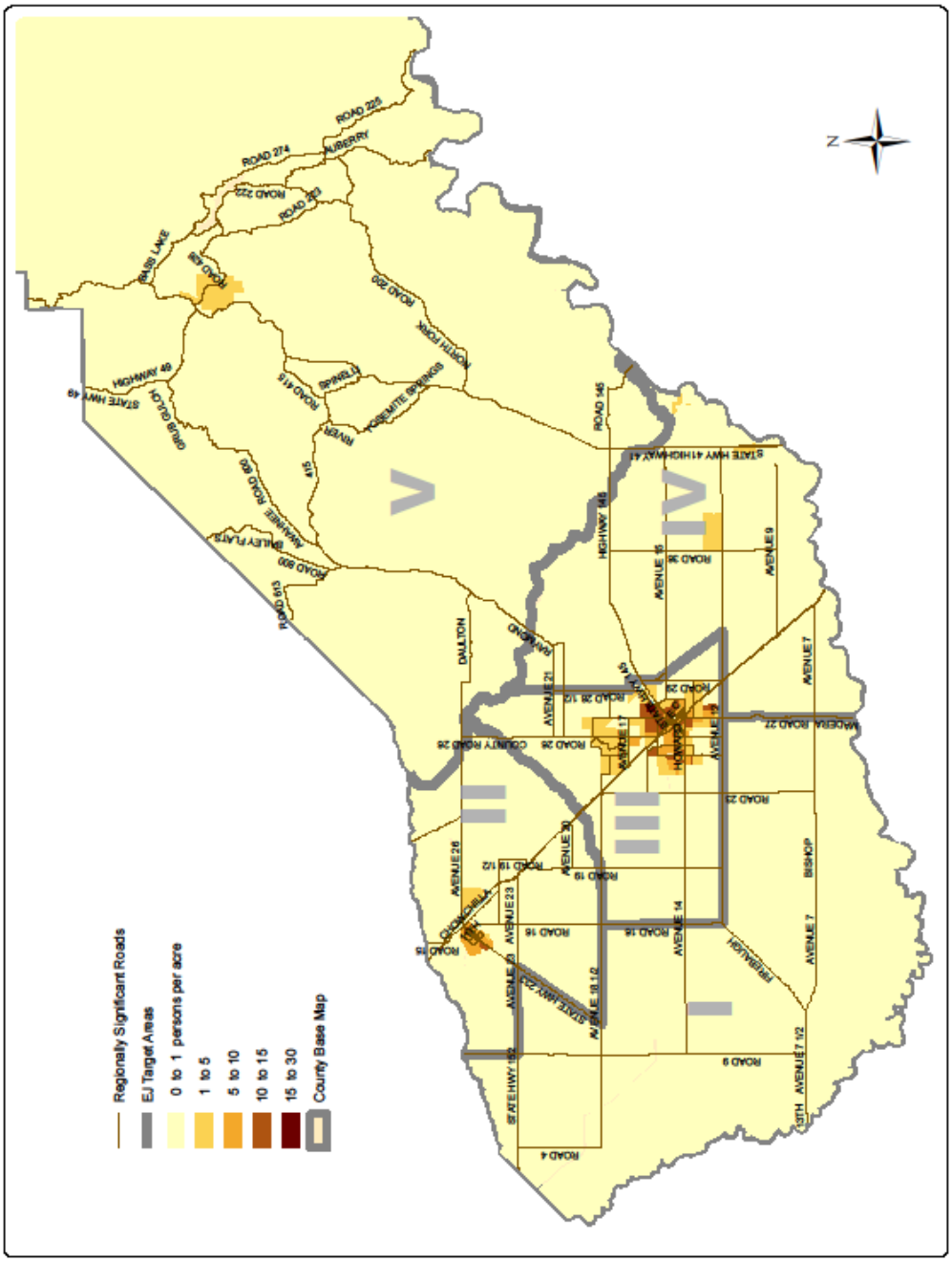
Target area I includes the town of La Vina, located in the south-west corner and is characterized by being mostly rural, with a population of 4,531 persons. Target area I accounts for roughly 1% of the total county population.

Target area II includes all of the City of Chowchilla and surrounding block groups. Racial and population figures from the two prisons within this area have been omitted. There are 23,371 persons within the target area. Target area II represents 15% of the total county population.

Target area III includes all of the City of Madera and is therefore, the most populous of the five target areas. There are 79,624 persons within the area. Target area III represents 53% of the total county population.

Target area IV includes the Madera Ranchos area, which is located near Avenue 12, between Highway 41 and Road 34. Target area IV also includes the areas of Ripperdan and Eastin Arcola, located in the south-west portion of the target area. There is significant population growth planned for this target area in the future, much of which will take place in the Rio Mesa development area, located in the north-eastern portion of the target area. Roughly 15,000 housing units and 40,000 persons are expected to occupy the Rio Mesa development area once it is fully developed. Currently, there are 18,132 persons in the target area. Target area IV represents 12% of the total county population.

FIGURE 10-1
Madera County Population Density, Target Areas and Significant Roadway Network



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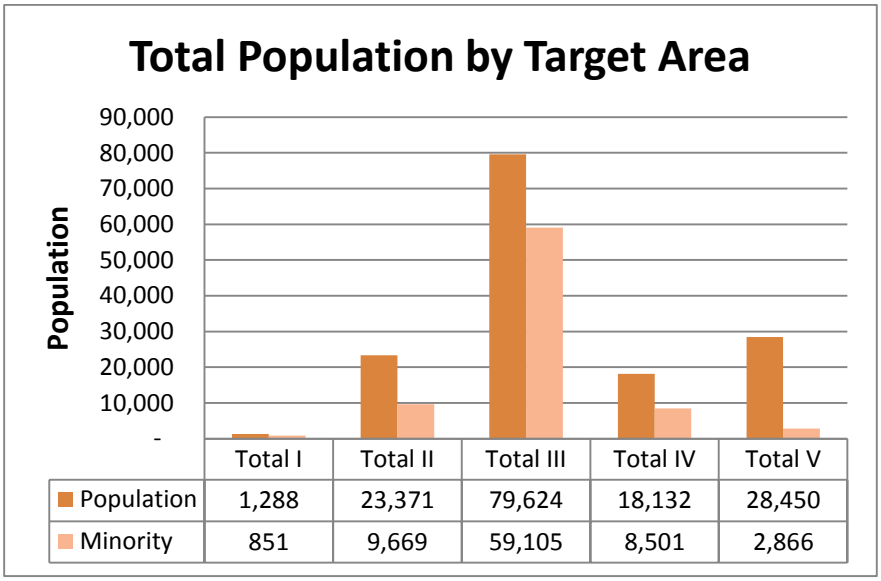
Target area V represents the mountain communities within Madera County, north of the Madera Canal. A significant portion of target area V lies within the Sierra National Forest, with little population. The majority of the persons living within target area V live in the Yosemite Lakes, Coarsegold, Oakhurst, Bass Lake and North Fork areas. There are 28,450 persons within target area V. Target area V represents 19% of the county's total population.

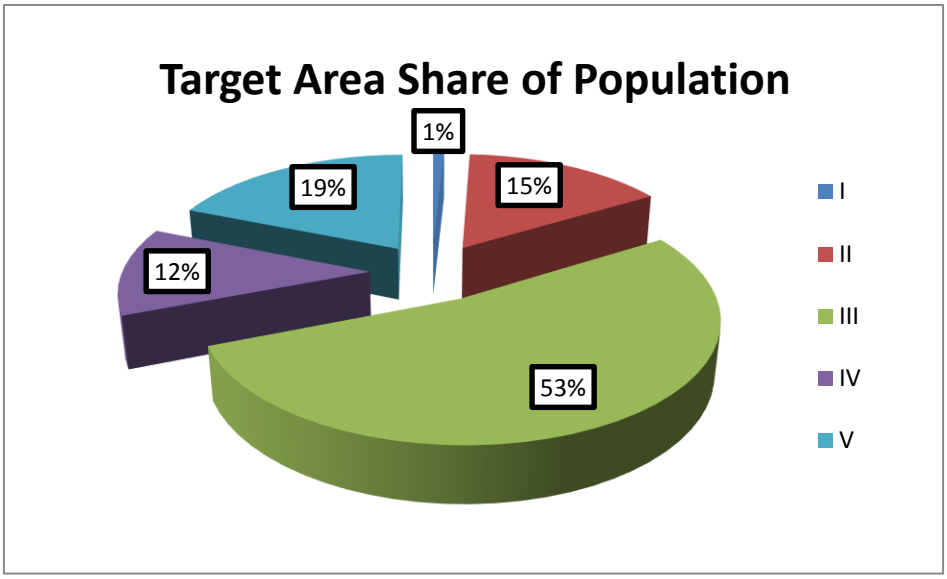
Figures 10-2 and 10-3 display graphical representations of the five target area characteristics.

FIGURE 10-2
Total Population by Target Area



	Total I	Total II	Total III	Total IV	Total V
Population	1,288	23,371	79,624	18,132	28,450
Minority	851	9,669	59,105	8,501	2,866

FIGURE 10-3
Target Area Share of Population



Racial Minority Populations

Figure 10-4 shows qualifying zones containing racial minorities by block group according to the 2010 Census. Within the County of Madera, 83,356 persons, or 55% of the County population fall under the category of racial minority. In Figure 10-4, designated minority populations are demarcated by a light blue shade. Minority populations are located primarily in target areas III and I. Target area III contains the City of Madera and includes 59,105 (74% of the target area) persons representing an ethnic minority group. Target area I includes 851 persons representing ethnic minority groups, 66% of the target areas population. Target area II includes the city of Chowchilla and contains 9,699 persons representing ethnic minority groups, 41% of the target areas population. The prison population contained within target area II is omitted from this analysis. Target area IV includes the Madera Ranchos area and the communities of La Vina and Ripperedan. Target area IV contains 8,501 persons representing ethnic minority groups, 46% of the target areas population. Target area V represents the eastern portion of Madera County and is comprised of several rural mountain communities. Target area V contains 2,866 persons representing ethnic minority groups, 10% of the target areas population.

Low-Income Populations

In addition to racial minorities, another traditionally underserved population is low-income residents. For the purpose of this study, each block group within the five target areas is labeled according to percentage greater than 20% of the poverty level. The U.S. Department of Health and Human services has determined that the poverty level in 2010 for a family of four is $22,050.

In Figure 10-4, low-income populations are demarcated by a shade of orange. Examining the poverty level threshold for each block group reveals that only the City of Chowchilla, within target area I and the City of Madera, within target area III, contain block groups with significant levels of residents at or near the poverty line. Of all the target areas, only target area III contains significant minority and low-income populations.

In Figure 10-4, block groups containing both low-income populations and minority populations are demarcated in the color purple.

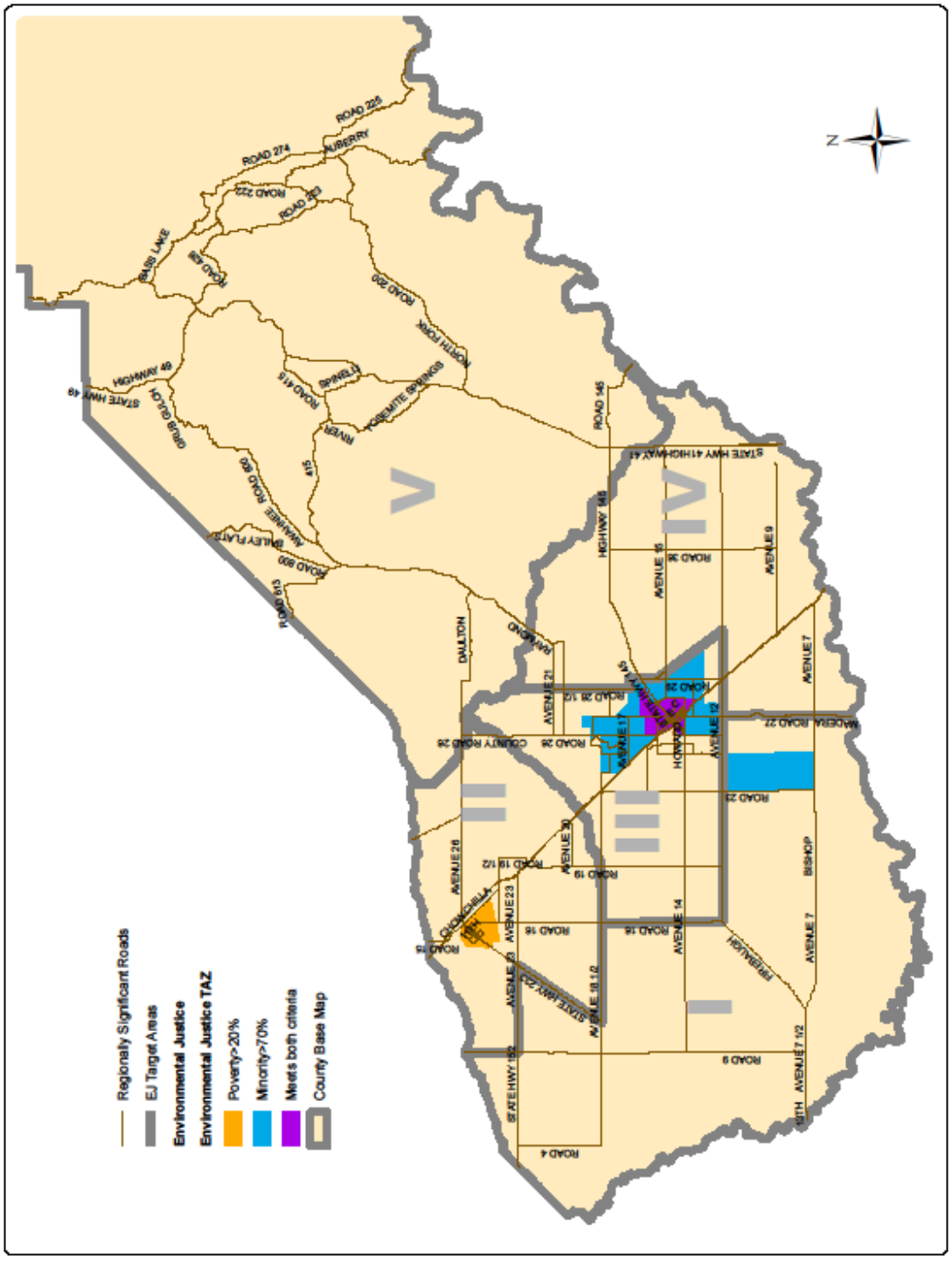
Roadway-Emphasis Projects

Roadway-emphasis projects include mainline highway, highway interchange, highway maintenance, regional roadway and regional roadway maintenance projects as listed in the 2011 RTP. Due to these projects' location-specific nature, this analysis is reliant on proximity to the proposed improvements and to regional travel patterns.

Each project is assigned to one of the five target areas; however, the benefit of each particular project is not limited only to residents of the target area in which the project is located. For example, any capacity increasing or rehabilitation project located on Highway 41 near Avenue 12 will not only benefit residents in target area IV, but will benefit residents in target area V as well, since Highway 41 is the main thoroughfare to the mountain communities. Similarly, improvements made to Highway 99 will benefit all communities located on the valley floor since it is a primary travel corridor for Madera County residents. Benefit of Highway 99 projects is therefore assigned to target areas I, II, III and IV.

This method of assigning benefit to more than one target area explains why the analysis category "percent share of investment" used throughout this chapter will not be zero sum. This process of analyzing project benefit relative to geography was found to be the most accurate method of analysis. Subsequently, if MCTC staff is able to show a geographically equitable distribution of projects, those minority and low-income populations that exist within the specific geography would garner equal levels of project benefit relative to the rest of the county.

FIGURE 10-4
2010 Madera County Ethnic Minority and Low-Income Areas



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Similarly, there are more investment dollars planned for Highway 99 compared to Highway 41, which explains the slightly less investment dollars in target area V, which is not assigned Highway 99 project benefits. The large investment of Highway 99 projects also explains the relatively large amount of benefit to target areas I and II relative to their share of the drive-to-work population.

Roadway-emphasis investments are equitable across the spectrum of different income and racial groups. With geographic equity among target areas, block groups contained within these areas benefit from similar levels of equity. In particular, target area III, which is characterized by low-income and racial minority populations, derives significant benefit from roadway-emphasis investment.

Figures 10-5 through 10-9 identify the proposed capacity increasing street and highway projects compared to 2010 low-income and minority populated areas within the County, Chowchilla and Madera. The results continue to support the conclusion that the projects do not negatively impact the low-income or minority populated areas any greater than they do higher income and non-minority populated areas of the County. Furthermore, transportation improvement projects also benefit the low-income and minority populated areas of the County to the same extent as they do the higher-income and non-minority populated communities or areas of the County.

Bus Transit Projects

Transit services within Madera County play an integral role in the transportation of low-income, elderly and people with disabilities residents who lack reliable use of personal automobiles. Fixed-route and demand-response transit systems provide access to jobs and services throughout the county.

Public transit in Madera County includes Madera Area Express fixed route and Dial-a-Ride, Madera County Connection, Eastern Madera Senior Bus, Escort Program, Chowchilla Area Transit Express, CatLinx, specialized social service transportation services, Greyhound, and taxi service. Public transportation is provided by fixed-route and demand-response transit systems, as described Chapter 2 – "*Requirements, Trends & Contents*."

To determine the adequacy of the current transit system and areas needed for improvement, public participation is critical. MCTC is committed to annually complete an Unmet Transit Needs Public Hearing process. The purpose of this process is to receive testimony from the public regarding transit systems within the County. The fixed route system, Madera Area Express, and the Madera County Connection owe their creation to this process, and since it is such an important one, MCTC staff undertakes extensive efforts to outreach to the community. Once comments are received, MCTC staff works with the Social Service Transportation Advisory Committee (SSTAC) to make recommendations for improvement to the MCTC Policy Board.

FIGURE 10-5
Madera County Population Density Compared to Capacity Increasing Street and Highway Projects

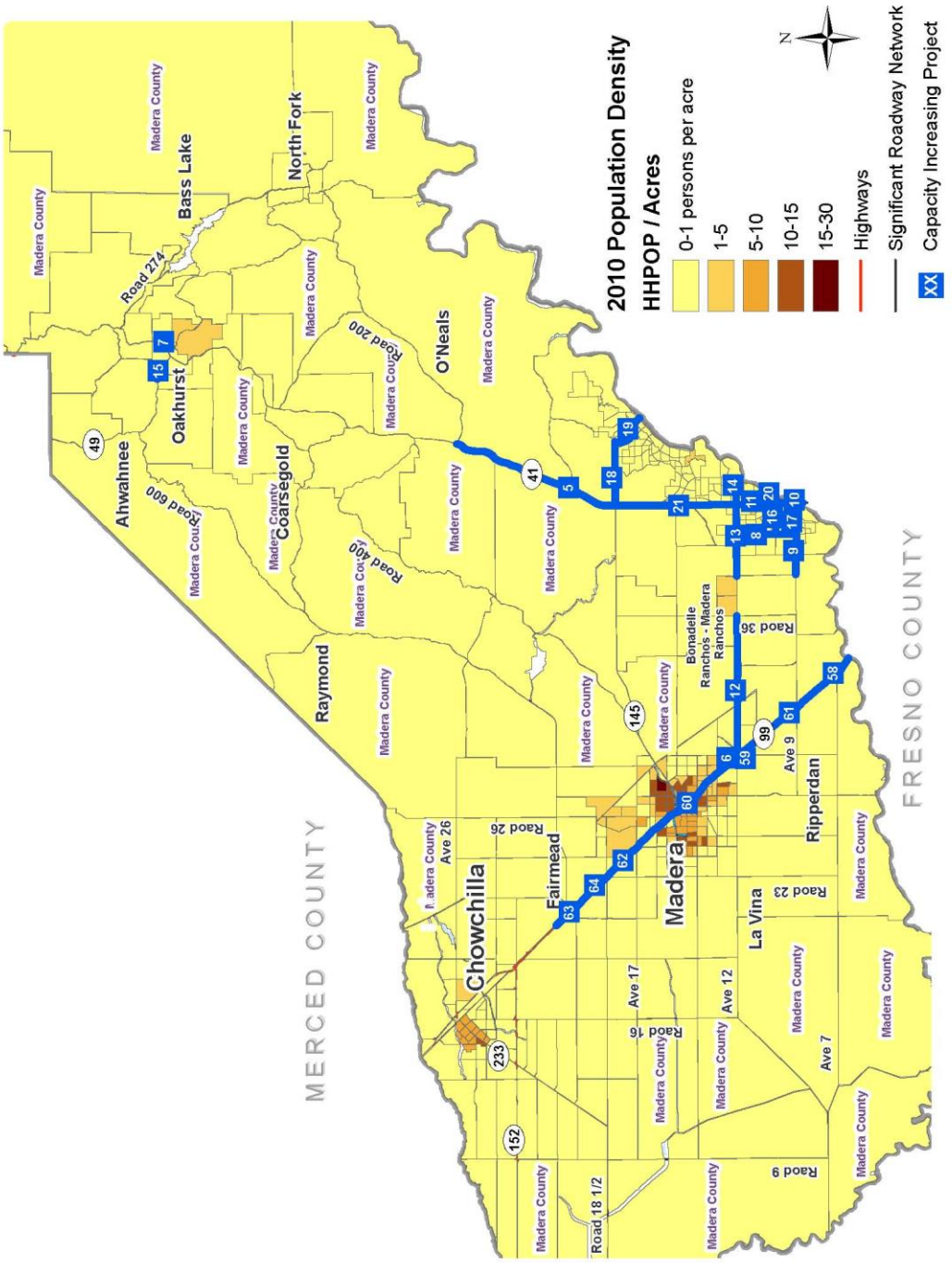

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FIGURE 10-6
Chowchilla Poverty Levels Compared to Capacity Increasing Street and Highway Projects

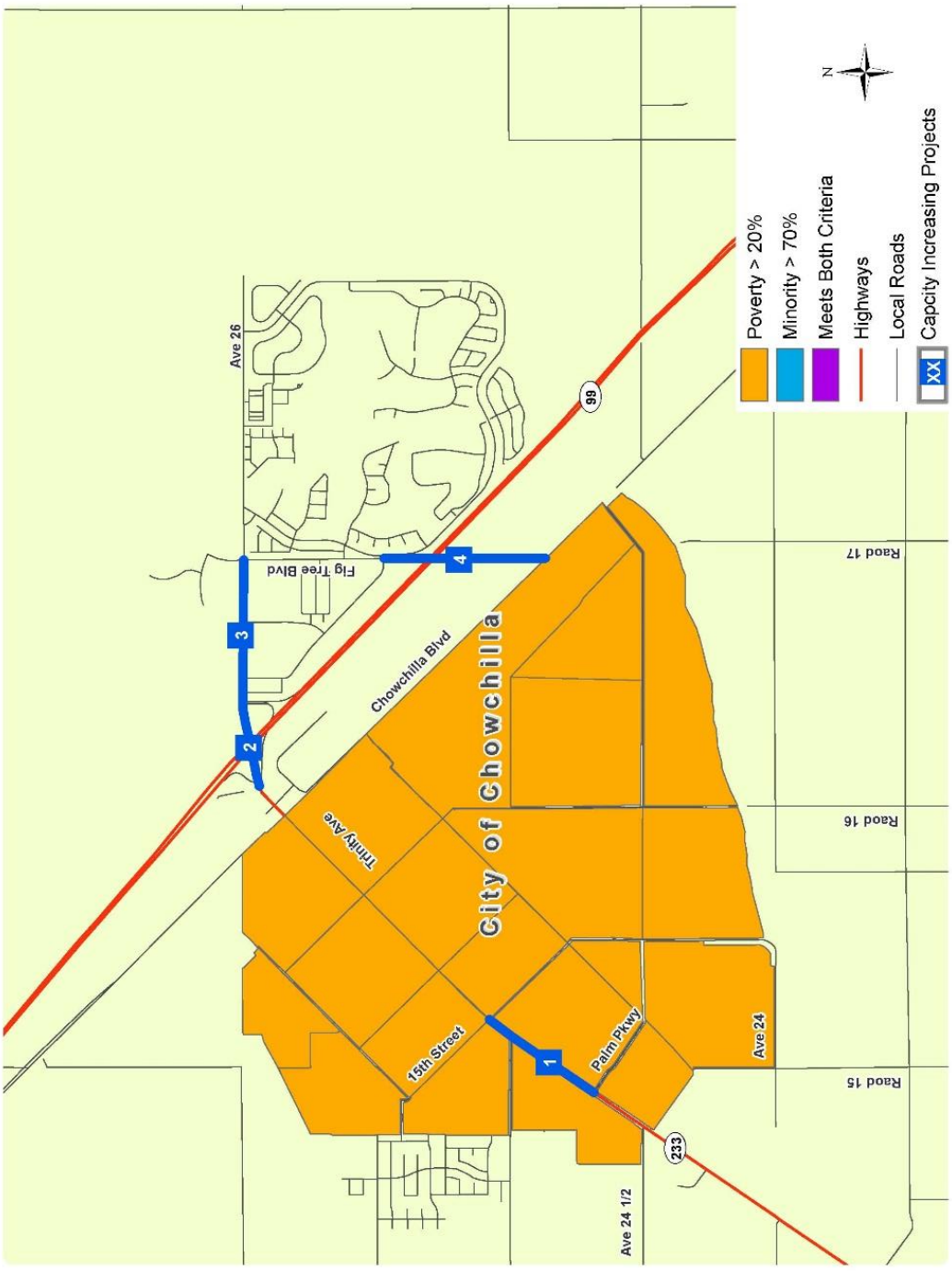

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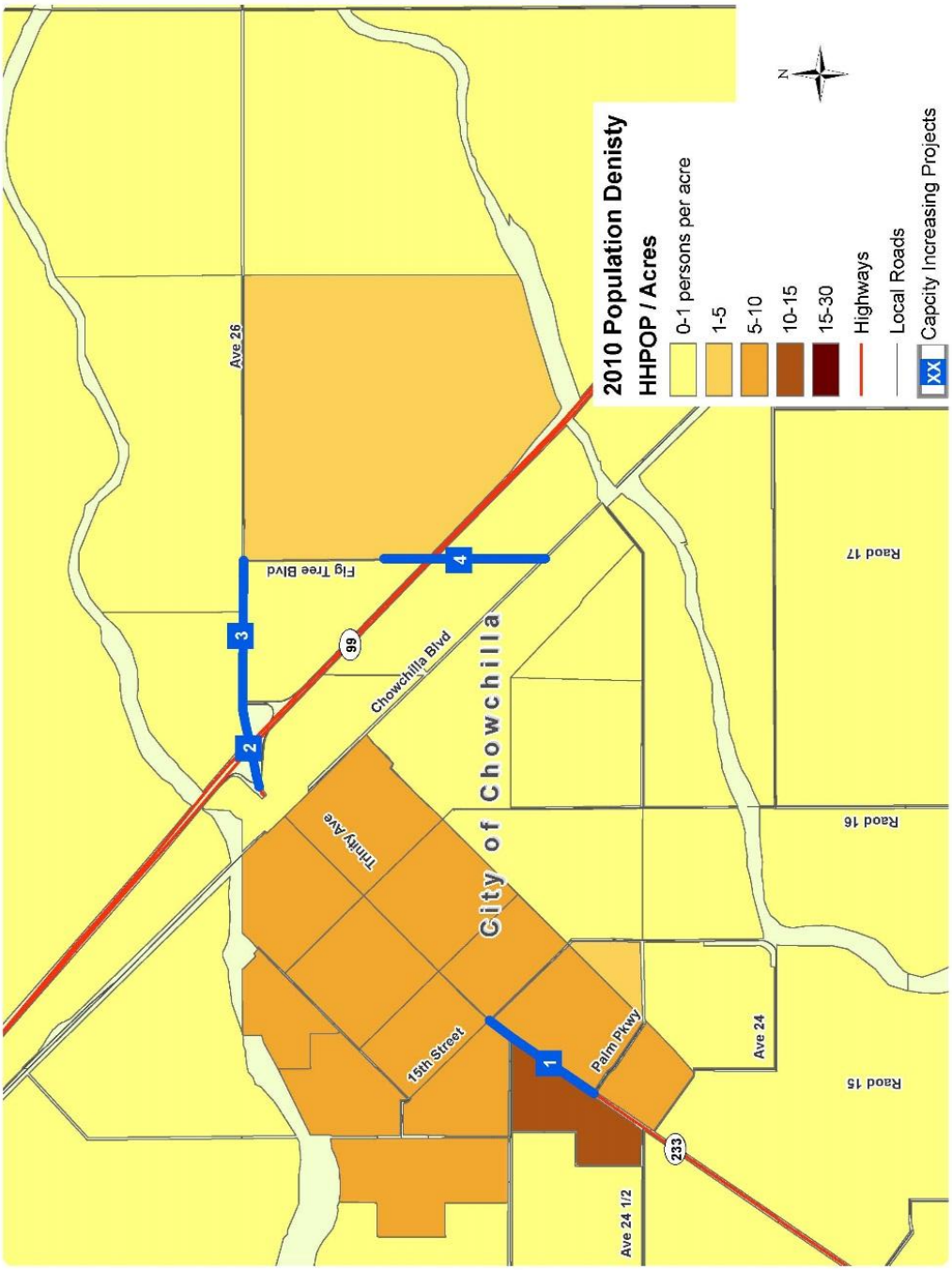
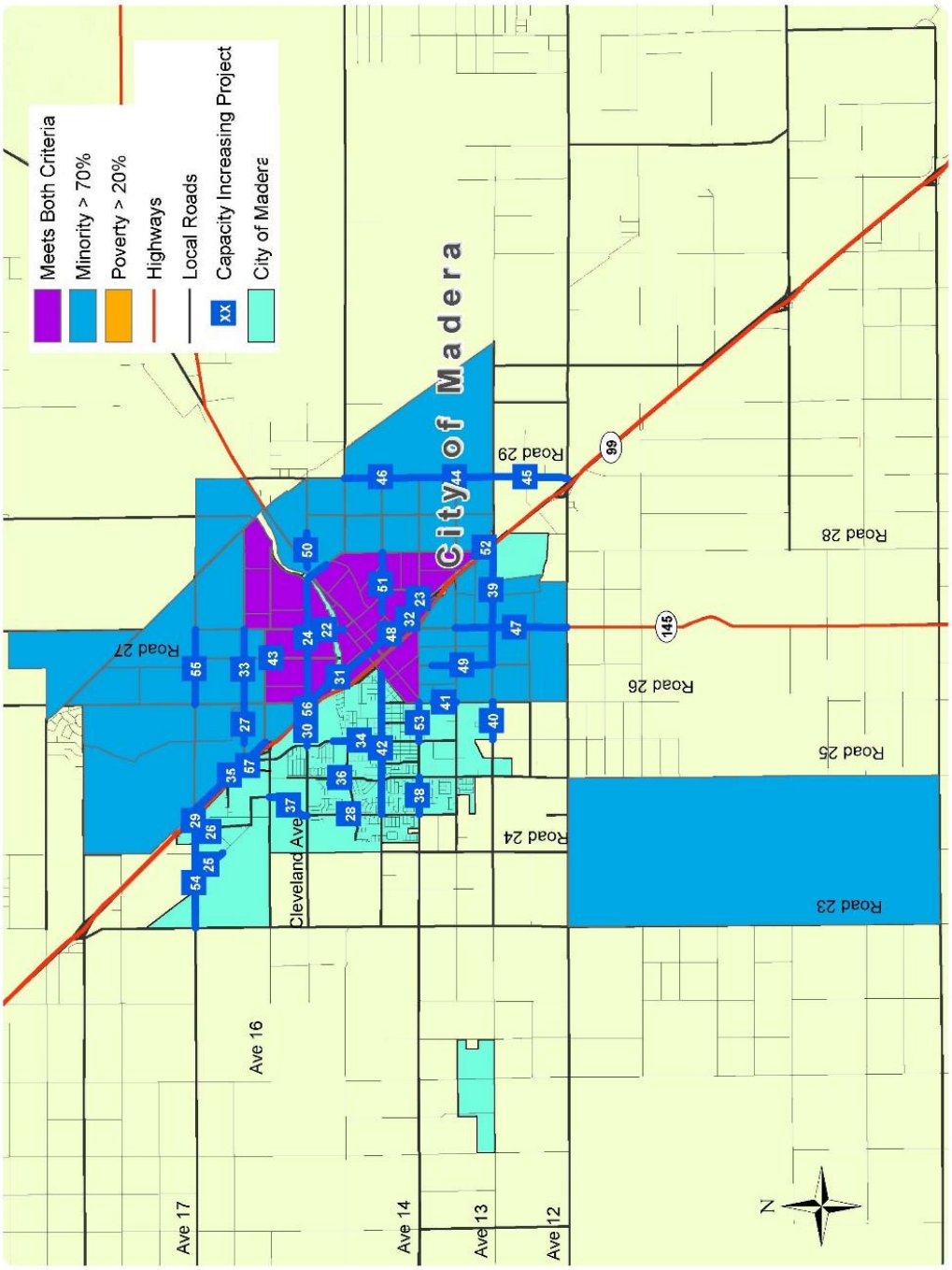
FIGURE 10-7
Chowchilla Population Density Compared to
Capacity Increasing Street and Highway Projects



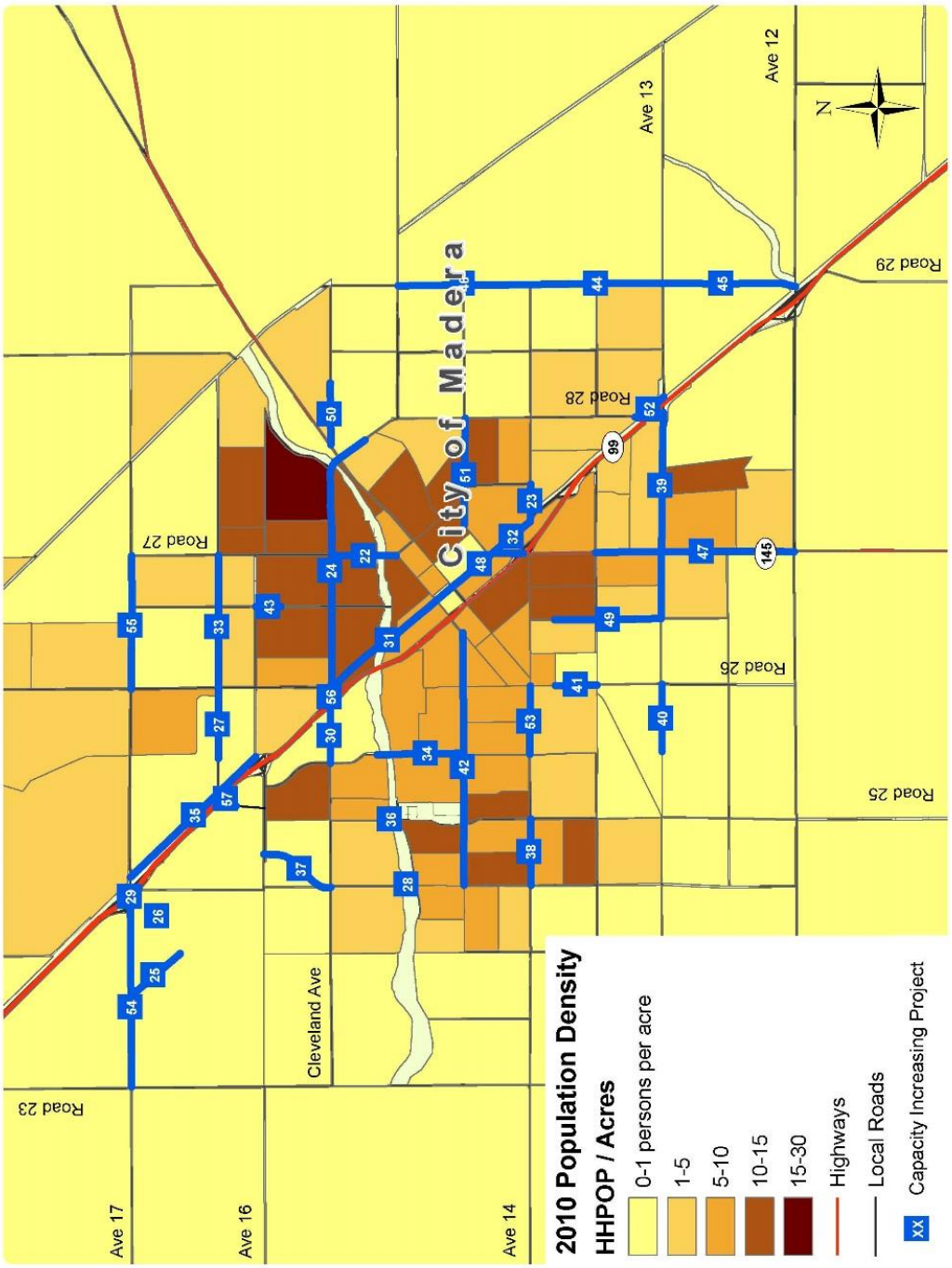
your madera 2040

FIGURE 10-8
Madera Poverty Levels Compared to
Capacity Increasing Street and Highway Projects



your madera 2040

FIGURE 10-9
Madera Population Density Compared to
Capacity Increasing Street and Highway Projects



your madera 2040

Transit expenditures were calculated using projected estimates of FTA 5307, FTA 5311, Local Transportation Fund (LTF), and Congestion Mitigation & Air Quality (CMAQ) dollars. These funds were further broken down to the specific transit systems operating within Madera County and into their respective target areas. Since the Madera County Connection (MCC) operates in all five target areas, the $32.7 million dollar estimate was divided equally among the five target areas.

Each transit system operates within a specific target area, except for the Madera County Connection, which provides service to all target areas. The number of passengers per service is assigned to the specific target area to quantify the percentage share of use. This share is then compared to the percentage share of transit investment.

There exists a strong correlation between transit use and transit investment within Madera. Target area III, which has the largest proportion of minority and low-income residents--and also the most access to transit services (Madera Area Express and Madera Dial-A-Ride)—would receive the largest proportion of transit investment. This proportionality is a key element of equity analysis. Residents who rely on public transit most, should subsequently receive the largest share of transit investment. Similarly, transit investment in other target areas should be relatively proportional to its residents' use of the transit system. In this respect, there is equity of transit investment among all residents of Madera County.

Bicycle/Pedestrian Facilities

Bicycle and pedestrian facilities are integral components of a multi-modal transportation network. These facilities not only provide regional connectivity, but by reducing the reliance on motor vehicles, can have positive impacts on air quality. Bicycle and pedestrian facilities are funded through LTF and CMAQ dollars and there is an estimated $36.2 million dollars over the next 26 years.

The majority of bicycle/pedestrian funding positively correlates with use, however there are some discrepancies. These discrepancies can be attributed to two factors. First, there are limitations to the number of residents who use the facilities. Since the City of Madera has higher population and commercial densities relative to the rest of the county, there is little surprise that there are significantly higher numbers of pedestrians who walk to work within the city. Similarly, more existing bicycle and pedestrian infrastructure can be found in the city relative to the rest of the county.

Environmental Impacts

The equity analysis section mainly assesses whether all racial and income target areas will benefit from fair shares in the transportation investments. However, some transportation projects may create some adverse impacts. Successful transportation projects do not only focus on improvements to the

transportation system, but also minimizes and mitigates any negative environmental and social impacts the project may create.

Air Pollution Emissions

The projects included in this RTP are intended to alleviate existing congestion and improve the level of service (LOS) for the roadway system. The completion of these proposed projects is likely to help congestion, thus reducing air pollutant emissions from vehicle idling and constantly accelerating and decelerating. Therefore, the neighborhoods that contain these projects may initially experience some negative impacts in local air quality due to the projects' construction, but in the long run, the local air quality in these areas will benefit from the better traffic flow and less localized pollutant emission.

In addition to the roadway projects, the transit and bike projects included in this RTP will also contribute to the improvement of air quality. The City and County of Madera has also been recognized for its efforts to improve air quality through the purchase of low pollutant or natural gas vehicles. Much of the money used for these particular clean air projects comes from federal CMAQ dollars.

Conclusion

The analysis in this chapter mainly focuses on racial minority, low-income and geographic equity of transportation projects within Madera County. This analysis endeavors to present a reasonably comprehensive investigation on the fairness of the distribution of benefits and detriments of the transportation projects included in this RTP and SCS.

Considering all the analyses as a whole, it is sufficient to conclude that the RTP and SCS does meet the environmental justice requirements: ensuring that all residents of Madera County are subject to proportionate benefits and detriments of transportation investment.

11. Measuring Up

Introduction

As the Regional Transportation Planning Agency (RTPA) for Madera County, the Madera County Transportation Commission (MCTC) monitors local and other regional transportation plans, projects and programs for consistency with regional plans. This monitoring process is conducted through the following processes:

- ✓ Regional Transportation Improvement Program (RTIP) / Federal Transportation Improvement Program (FTIP)

  MCTC is required to prepare the Regional Transportation Improvement Program (RTIP), to demonstrate its consistency with the Regional Transportation Plan (RTP), and to make a finding of conformity with the applicable State Implementation Plan (SIP) before any federal funds may be expended on transportation projects. Preparation of the RTIP involves analysis of candidate projects and project changes. MCTC prepares quarterly amendments, and works with State, other regional agencies, and local agencies to coordinate implementation of the RTP through the RTIP.

  The RTIP is a capital listing of all transportation projects proposed over a six-year period for the Region. The projects include highway improvements, transit, rail and bus facilities, signal synchronization, intersection improvements, freeway ramps, etc. The locally prioritized lists of projects are forwarded to MCTC for review, and MCTC develops the RTIP list of projects based on consistency with the RTP, financial constraint, and its ability to make a conformity determination.

- ✓ Conformity

  MCTC is required to make findings of air quality conformity for both the RTP and the RTIP before these documents are approved by federal agencies. Conformity findings must be made with the adoption of a new State Transportation Improvement Program (STIP) or where changes in federal air quality designation or standards require a further demonstration of conformity.

  In federally designated non-attainment or maintenance areas such as Madera County, specific monitoring and consistency are required under the Transportation Conformity Rule. At the time of conformity determination, the RTIP must be consistent with the RTP. During project implementation, the sponsor agencies must implement only those projects that are consistent with the conforming RTIP and RTP. The project design concept and scope must be consistent with those reflected in the conforming RTIP.

  The project sponsors must inform MCTC (as the region's RTPA) of any delay in implementation of any Transportation Control Measure (TCM) project that is included in an approved SIP and any

project regionally significant and modeled, regardless of funding sources. Working with the local agencies and with the San Joaquin Valley Air Pollution Control District (SJVAPCD), MCTC must report on the timely implementation of TCMs. Additionally, MCTC monitors changes resulting from a legal legislative, or election process that may adversely impact the implementation of any TCM or regional significant project. MCTC informs the sponsor agency of any required actions. In the case of TCM projects, the sponsor agency must officially substitute or replace the affected TCM project.

✓ Regional Transportation Monitoring

Transportation planning for the region requires continually improved information on the condition and utilization of the transportation system. Special reports are required from MCTC periodically to show the condition of the highway infrastructure and to monitor the region's overall traffic. The Highway Performance Monitoring System (HPMS) is a federally mandated program designed by the Federal Highway Administration (FHWA) to assess the performance of the nation's highway system. Caltrans is currently responsible for preparation and coordination of the HPMS process in Madera County. For purposes of this required performance monitoring process however, MCTC will request that Caltrans forward updated HPMS reports directly to MCTC for their use in monitoring the RTP.

In addition, MCTC prepares a traffic monitoring report, which provides traffic count data along the major streets and highways within the County. This report is used to update the Madera County Regional Traffic Model, supply information for Project Study Reports (PSRs) and other corridor studies, and to monitor level of service constraints along the system.

✓ Highway Performance Monitoring System

HPMS is used as a transportation monitoring and management tool to determine the allocation of Federal Aid Funds, to assist in setting policies, and to forecast future transportation needs as it analyzes the transportation system's length, condition, and performance. Additionally, HPMS is used to provide data to the Environmental Protection Agency (EPA) to assist in monitoring air quality conformity, and its data are used in support of the Biennial Report to Congress on the Status of the Nation's Highways. The HPMS program is implemented annually by the California Department of Transportation (Caltrans) in the State of California. In Madera County, Caltrans contacts the local agencies directly for input into the annual updates. As mentioned above, for purposes of this required performance monitoring process, MCTC will request that Caltrans forward updated HPMS reports directly to MCTC for their use in monitoring the RTP.

✓ Triennial Performance Audit for Transit

MCTC evaluates the performance of selected transit operators through its Short-Range Transit Planning process. Social Service transportation agencies are evaluated through the AB 120 Action Plan.

✓ Benchmarking

As the designated RTPA, MCTC is required to prepare the RTP and SCS using performance based measures that will help decision makers better analyze transportation options and trade-offs. MCTC has developed performance indicators for the region's transportation system. The overall goal of this effort was to develop specific, quantifiable, and easily understandable performance indicators, which better inform elected officials and policy boards of the broad array of choices for investing public and private funds.

APPENDIX A
PROJECT EVALUATION CRITERIA AND PRIORITIZATION RESULTS

FINAL DRAFT

MCTC 2014 RTP SCS EVALUATION CRITERIA

Capacity Increasing Projects

Application of Quantitative & Qualitative Evaluation Criteria

February 13, 2014

#	Points Applied		Criteria	Other Details
1	***Per Trip Served = Project Cost / (ADT X Length X Design Life)***			
	8		In lowest 20% of qualified projects	*A lower cost per trip served is a more cost effective project.*
	6		In between the lowest 40% and lowest 20% of qualified projects	
	4		In between the lowest 60% and lowest 40% of qualified projects	
	2		In between the lowest 80% and lowest 60% of qualified projects	
	0		In highest 20% of qualified projects	
2	***Improved Level of Service***			
		Urban	Rural	*Improves existing congestion and delay at the most critical locations.*
	16	LOS F to LOS D or better	LOS F to LOS C or better	
	14	LOS E to LOS D or better	LOS F to LOS D or better	
	12	LOS F to LOS E	LOS F to LOS E	
	10	LOS F to LOS F with traffic signal synchronization, transit service or bike facilities	LOS E to LOS C	
	8	LOS D to LOS C or better	LOS E to LOS D	
	6	LOS C to LOS B or better	LOS D to LOS C or better	
	0	Does not improve LOS	Does not improve LOS	
Source: MCTC Year 2040 Traffic Model / Prior MCTC RTP Project Prioritization Process				
3	***Improves Air Quality***			
	3		Project includes synchronization of traffic signals for more than 6 traffic signals and 3 consecutive miles	*Reduces nonattainment air emissions.*
	3		Project includes trail or bike lanes	
	3		Project is already served by transit at least twice per hour during peak hours	
	2		Project connects roadway by widening bottleneck to connect with two already widened roadway segments	
	2		Project promotes pedestrian walkability	
	2		Project enhances an existing safety deficiency that regularly causes significant delays and congestion.	
	1		Project provides a connection over, under, or through an existing circulation barrier such as a freeway, railroad, waterway.	
	1		Project incudes a new connection to state freeway roadway system or has freeway auxiliary lanes to serve weave or queues	
	1		Project has parallel facilities within a mile that operate at LOS F	
	0		Project relocates an existing bottleneck to a different location	
Source: MCTC Year 2040 Traffic Model / Project Definition / Prior MCTC RTP Project Prioritization Process / Subjective Criteria				
4	***Is Environmentally Sensitive***			
	3		Environmental document certified.	*The project has the ability to be implemented without significant mitigation costs and environmental assessment.*
	2		No significant impact on the environment or exempt from CEQA/NEPA.	
	1		Minimal impact on the environment. Neg. Declaration or FONSI required.	
	0		Significant impact on the environment. EIR or EIS required.	
Source: Prior MCTC RTP Project Prioritization Process / Subjective Criteria				
5	***Serves a Major Employment Center***			
	2		Directly serves an employment center.	*Improves the economic well-being of the adjacent area.*
	1		Indirectly serves an employment center.	
	0		Does not directly or indirectly serve an employment center.	
Source: Prior MCTC RTP Project Prioritization Process / Subjective Criteria				
6	***Provides Improved Access to Essential Services***			
	2		Directly serves a hospital or major government, office or shopping center.	*Improves the access to major services through an improved and expanded street and road system.*
	1		Indirectly serves a hospital or major government, office or shopping center.	
	0		Does not directly or indirectly serve a hospital or major government, office or shopping center.	
Source: Prior MCTC RTP Project Prioritization Process / Subjective Criteria				
7	***The Entity is Able to Demonstrate Maintenance can be Provided Over Time***			
	2		Yes.	*Insures that the project can be sustained over time.*
	0		No.	
Source: Prior MCTC RTP Project Prioritization Process / Subjective Criteria				
8	***Project Improves Safety***			
	10		Improves safety on a high speed roadway greater than 50 MPH (85 percentile) or weave operations (auxiliary lanes)	*Safety is improved with roadway widening.*
	8		Improves safety on a moderate speed roadway greater than 35 MPH (85 percentile) or provides synchronization to reduce stop and go	
	6		Involves a roadway with high accident frequency	
	4		Provides improvements to railroad grade separation or improvement to RR at grade facility	
	2		Improves pedestrian or bicycle safety and interaction with vehicles	
9	***Supports Other Modes of Transportation including Transit and Trail/Bike/Pedestrian Facilities***			
	2		Yes - Project includes the construction of planned trail/bike lanes, sidewalks, transit systems/amenities, or other modal improvements.	*Addresses multi-modal policies in the RTP.*
	1		Yes - Project provides for future planned trail/bike lanes, sidewalks, transit systems/amenities, or other modal improvements within ROW.	
	0		No.	
Source: Project Definition / Prior MCTC RTP Project Prioritization Process / Subjective Criteria				
10	***Supports RTP SCS Principles (4 points possible)***			
	1		Create walkable neighborhoods.	*Project furthers implementation of the RTP & preferred SCS.*
	1		Foster distinctive, attractive communities with a strong sense of place.	
	1		Provide a variety of transportation choices.	
	1		Enhance the economic vitality of the region.	
Source: Prior MCTC RTP Project Prioritization Process (Blueprint) / Subjective Criteria				
11	***Provides benefits or reduces burdens to low-income, minority, elderly or mobility-impaired communities (concern for Environmental Justice)***			
	2		Benefits or reduces burdens to low-income, minority, elderly or mobility-impaired communities. Addresses safety problems , results in reduced traffic, results in reduced noise impacts, or improves accessibility to employment.	*Addresses Environmental Justice requirements set forth in Title VI.*
	0		No benefits or reduced burdens to low-income, minority, elderly or mobility-impaired communities.	
Source: New Subjective Criteria				

MCTC 2014 RTP
PROJECT EVALUATION RESULTS

Priority	Project #	Route	Project Segment	Jurisdiction	Description of Improvement Req'd to Improve LOS	Estimated Cost of Improvement
1	12	CLEVELAND	Schnoor to SR 99	Madera	4 lanes to 6 lanes	$ 3,750,000
2	2	SR 41	Ave. 12 to SR 145	Unincorporated	Expressway Widen 2 to 4 lanes	$45,000,000
3	3	AVE. 12	Road 38 to SR 41	Unincorporated	Widen 2 to 4 lanes	$6,000,000
4	13	GATEWAY	Yosemite to Cleveland	Madera	2 lanes to 4 lanes	$ 8,600,000
4	15	SR 145	SR 99 to Yosemite	Madera	2 lanes to 4 lanes	$ 5,536,935
5	1	SR 41	Ave. 10 to Ave. 12	Unincorporated	Freeway Widen to 6 lanes & IC @ Ave. 12	$100,858,967
5	17	HOWARD RD	Pine to Schnoor	Madera	4 lanes to 5 lanes	$ 5,000,000
6	4	AVE. 12	Road 30 1/2 - Road 36	Unincorporated	Widen 2 to 4 lanes	$15,087,543
7	5	SR 41	SR 145 to Rd. 200	Unincorporated	Passing Lanes	$22,148,000
8	6	SR 99	SR 233 Interchange	Chowchilla	Reconstruct IC	$16,000,000
9	7	SR 49	Westlake Dr. to Meadow Vista Dr.	Unincorporated	Widen 2 to 4 lanes	$7,000,000
9	9	AVE 17	Road 26 to Road 27	Unincorporated	Widen 2 to 4 lanes	$3,000,000
10	8	AVE. 17	Road 23 to Golden State	Madera	Widen 2 to 4 lanes	$3,000,000
11	10	ELLIS ST.	Ellis St./SR 99 Interchange	Madera	Convert to IC	$30,000,000
12	14	SUNSET	4th to Westberry	Madera	2 lanes to 4 lanes	$ 3,000,000
13	11	Oakhurst Midtown Bypass	Rd 426 to 41	Unincorporated	New 2 lane	$ 7,495,000
14	16	TOZER/RD 28	Avenue 13 to Knox	Madera	2 lanes to 4 lanes	$ 1,869,561

APPENDIX B
SAN JOAQUIN VALLEY REGION OVERVIEW

ONE VALLEY: THE SAN JOAQUIN VALLEY PROFILE

Geography

The San Joaquin Valley (Valley) is the southern portion of the Great Central Valley of California *[Figure 1]*. The San Joaquin Valley stretches from the Tehachapi Mountains in the south to the San Joaquin Delta in the north, a distance of nearly 300 miles. The eastern boundary is the Sierra Nevada Mountains, which reaches elevations of over 14,000 feet, while the western boundary is the lower coastal ranges. The Valley floor is about 10,000 square miles in size.

Figure 1
San Joaquin Valley Topography

For the purposes of this report, the San Joaquin Valley is considered to include the entirety of the counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and Kern. The total area of the eight counties is 27,383 sq. mi. (larger than West Virginia). Kern County straddles the Sierra Nevada Mountains and occupies a portion of the Mojave Desert. The desert portion of Kern County (about 3,650 sq. mi.) is within the Southeastern Desert Air Basin.

On the Valley floor, the topography is generally flat to rolling, and the climate is characterized by long, very warm summers, and short, cool winters. Precipitation is related to latitude and elevation, with the northern portions of the valley receiving approximately 12-14 inches of rain a year, while the southern portion has an annual average of less than six inches.

Snow rarely falls on the Valley floor, but heavy winter accumulations are common in the Sierra Nevada Mountains.

The Valley occupies an area between the two largest metropolitan areas in California, San Francisco and Los Angeles. The major transportation facilities run generally north/south through the Valley and include State Route 99, Interstate 5, Union Pacific Railroad and Burlington Northern & Santa Fe Railroad. Several highways and some rail lines cross the Valley east/west including State Routes 4, 120, 152, 198 and 58 among others. In addition, the Valley contains numerous oil and natural gas pipelines, a myriad of telecommunication facilities, distribution centers, the Port of Stockton, and air travel corridors.

Population

While the Valley is largely rural in nature, it does contain several large cities and suburbs with a total population of nearly 4 million people (more than the population of 24 states). The eight Valley counties are a part of seven Metropolitan Statistical Areas (MSAs): Stockton (San Joaquin County), Modesto (Stanislaus County), Merced, Fresno-Madera, Hanford-Corcoran (Kings County), Visalia-Porterville (Tulare County) and Bakersfield (Kern County). The large majority of the Valley's population resides along the State Route 99 corridor including four cities of over 150,000 people (Fresno, Bakersfield, Stockton and Modesto) *[Figure 2]*. Population growth has been sustained and significant *[Figure 1]*. In 1970, the eight San Joaquin Valley counties had a population of just over 1.6 million. By 2012, the population had increased 149% to over 4 million *[Figure 3].* The Valley continues to be one of the fastest growing regions in the state. The Valley accounted for 8.2% of California's total population in 1970 and has grown to account for 11% of California's total population now. By 2050, the Valley is projected to capture 15% of the state's population *[Figure 4].*

Figure 2

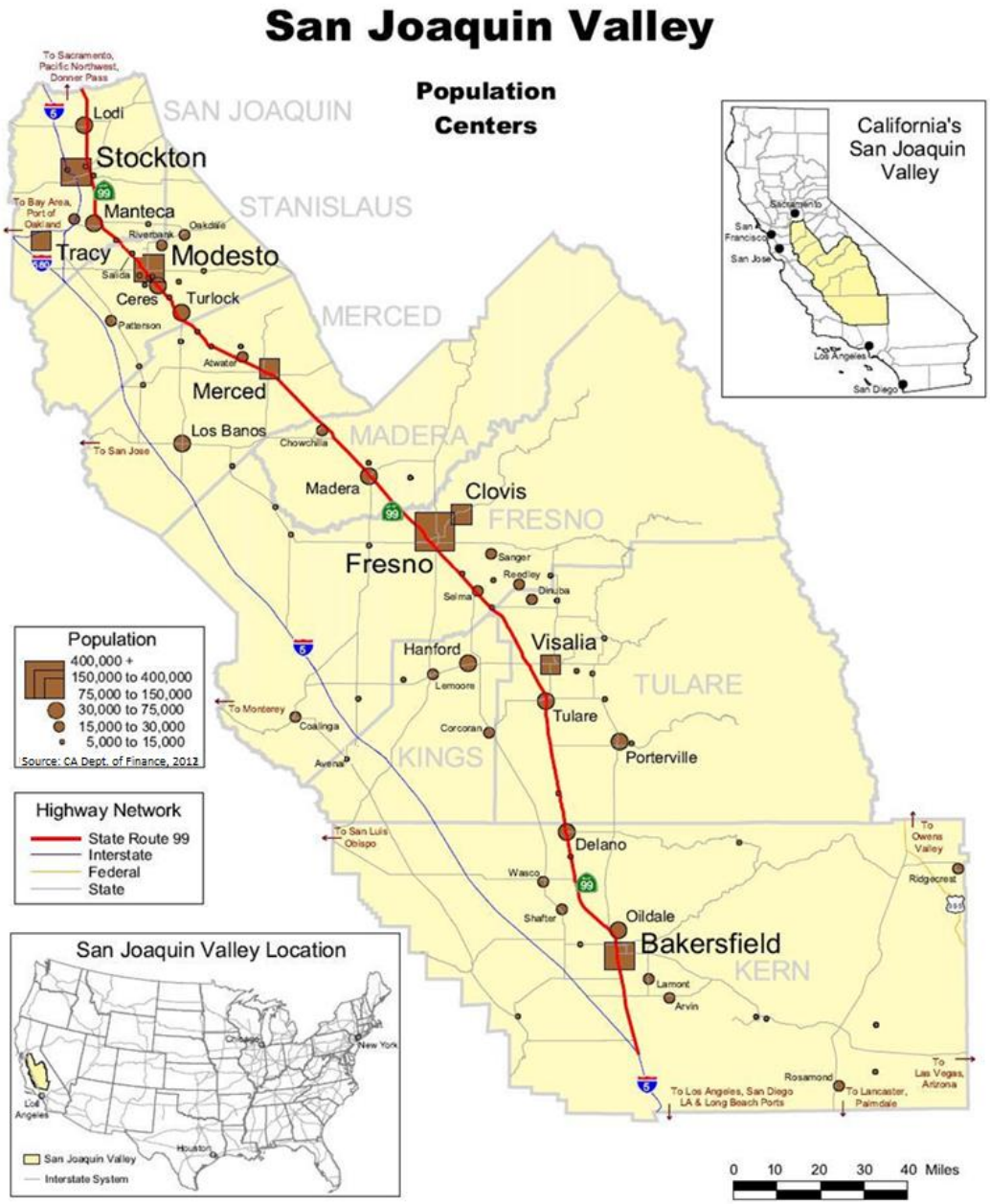

San Joaquin Valley
Population Centers
SAN JOAQUIN
STANISLAUS
MERCED
MADERA
FRESNO
TULARE
KINGS
KERN
Lodi
Stockton
Manteca
Tracy
Modesto
Ceres
Turlock
Merced
Los Banos
Madera
Clovis
Fresno
Hanford
Visalia
Tulare
Porterville
Delano
Oildale
Bakersfield
California's San Joaquin Valley
Population
400,000 +
150,000 to 400,000
75,000 to 150,000
30,000 to 75,000
15,000 to 30,000
5,000 to 15,000
Source: CA Dept. of Finance, 2012
Highway Network
State Route 99
Interstate
Federal
State
San Joaquin Valley Location
San Joaquin Valley
Interstate System
0 10 20 30 40 Miles

Figure 3

San Joaquin Valley Population Growth by County

	1970	1980	1990	2000	2012	2020	2030	2040	2050
Fresno	413,329	514,621	667,490	799,407	945,711	1,071,728	1,241,773	1,397,138	1,509,715
Kern	330,234	403,089	544,981	661,645	850,006	1,057,440	1,341,278	1,618,681	1,858,455
Kings	66,717	73,728	101,469	129,461	152,419	176,647	205,627	235,129	260,500
Madera	41,519	63,116	88,090	123,109	152,074	185,056	229,277	278,011	323,469
Merced	104,629	134,560	178,403	210,554	258,736	301,376	366,352	436,188	496,787
San Joaquin	291,073	347,342	480,628	563,598	695,750	810,845	1,004,147	1,213,708	1,379,333
Stanislaus	194,506	265,900	370,522	446,997	519,940	589,156	674,859	759,027	861,984
Tulare	188,322	245,738	311,921	368,021	450,840	526,718	630,303	722,838	784,334
Total San Joaquin Valley	1,630,329	2,048,094	2,743,504	3,302,792	4,025,476	4,718,966	5,693,615	6,660,720	7,474,577
California	19,971,069	23,667,764	29,760,021	33,871,648	37,678,563	40,643,643	44,279,354	47,690,186	50,365,074
% of San Joaquin Valley of out California	8.2%	8.7%	9.2%	9.8%	10.7%	11.6%	12.9%	14.0%	14.8%

Sources: U.S. Census 1970-2010, California Department of Finance 2020-2050

Figure 4

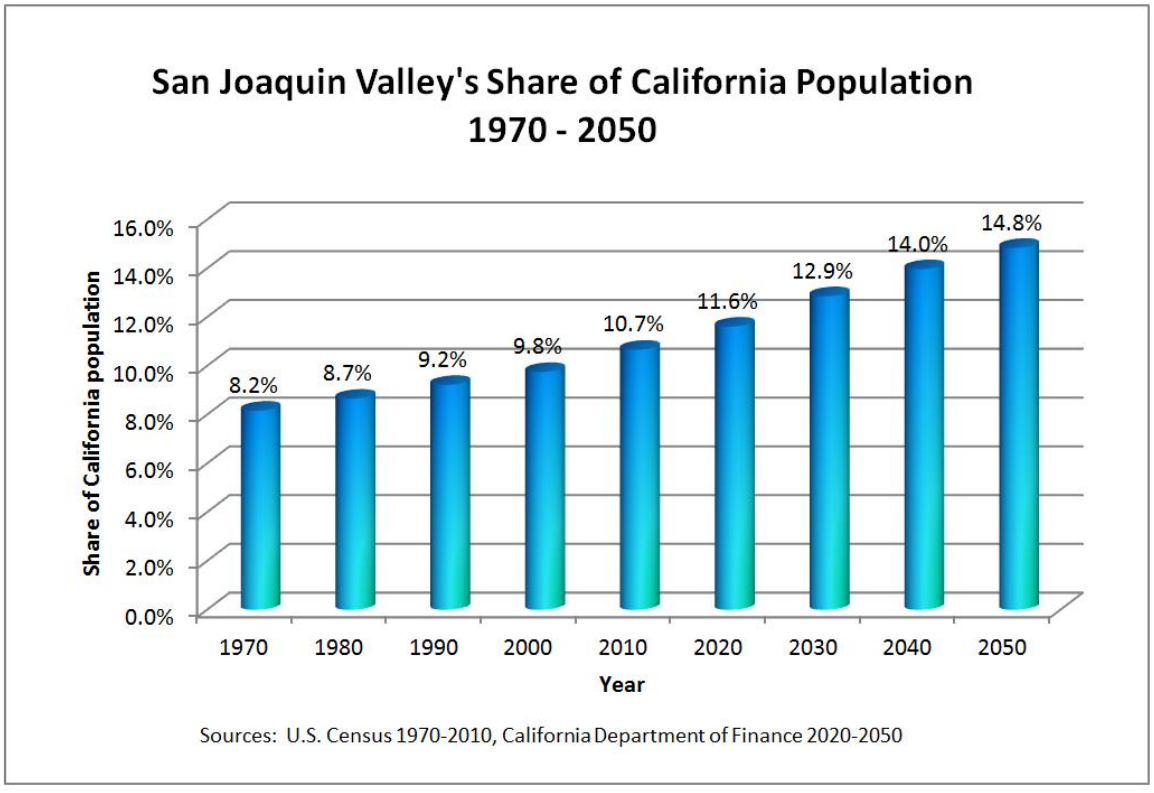
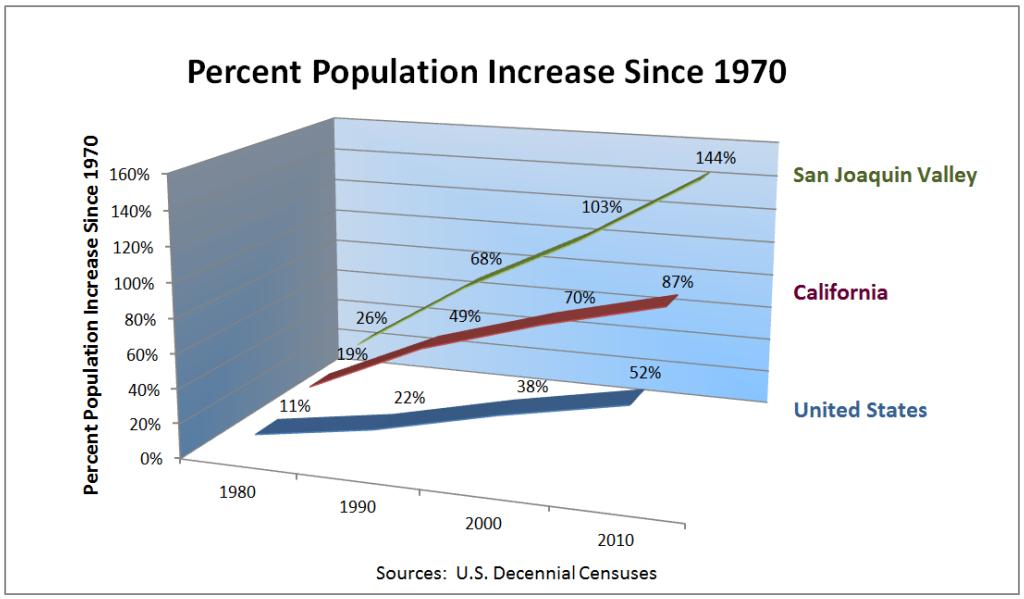


Figure 5



Future population growth is also expected to be sustained and significant. Both ends of the Valley are under growth pressure from the neighboring metropolitan areas of Los Angeles and the San Francisco Bay Area in addition to the natural growth rate in the Valley. Population in the eight Valley counties is projected to reach nearly7.5 million by the year 2050, using growth projections from the California State Department of Finance (DOF) *[Figure 3]*.

Economy

The San Joaquin Valley is famous for agricultural production. All eight counties rank within the top twelve of California's 58 counties. In addition, if the Valley were a state, it would be the top agricultural producing state in the country. The Valley produced $25.4 billion in agricultural products in 2008. This amount is over double the remainder of California and more than the next highest producing state, Iowa *[Figure 7]*.

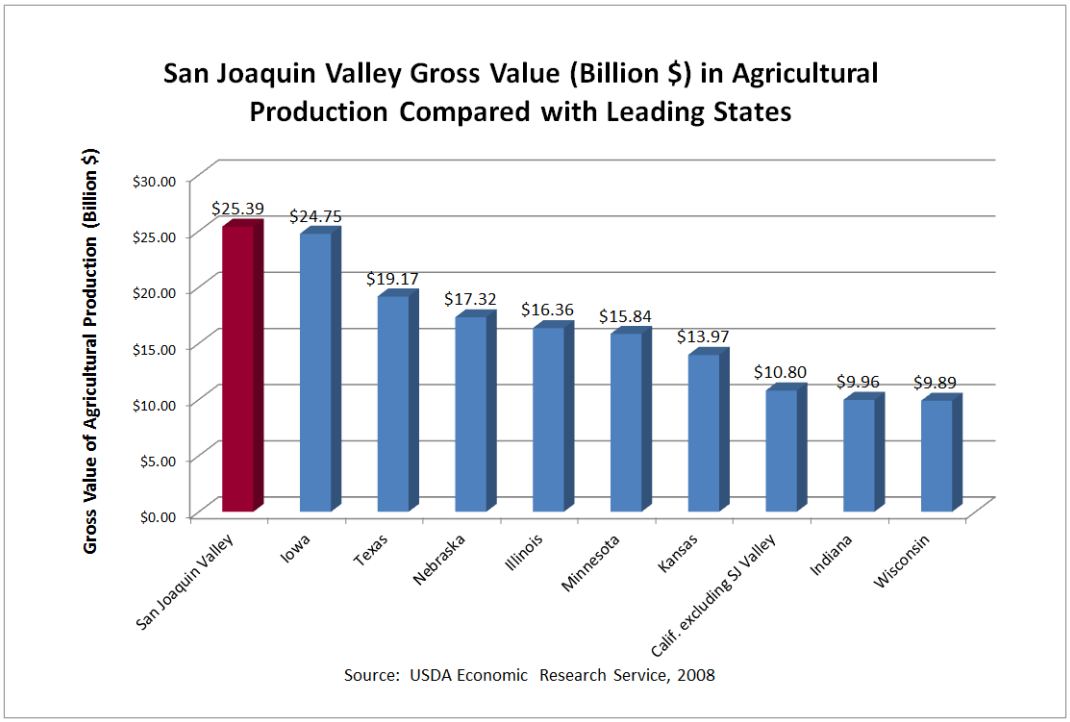
Figure 6

San Joaquin Valley Counties Rank
in Gross Value of Agricultural Production
Among all California Counties

1	Fresno	$6.886 billion
2	Tulare	$5.629 billion
3	Kern	$5.365 billion
5	Merced	$3.259 billion
6	Stanislaus	$3.070 billion
7	San Joaquin	$2.247 billion
8	Kings	$2.220 billion
12	Madera	$1.570 billion

Source: California County Agricultural Commissioners' Reports, 2011

Figure 7



Agriculture accounts for 12% of the Valley's jobs *[Figure 8].* In comparison, only 3% and 2% of the state and nation's jobs are in agriculture *[Figure 9].* Other major employment sectors in the Valley are education, health and social services (21.5%) and retail trade (11.3%).

Figure 8

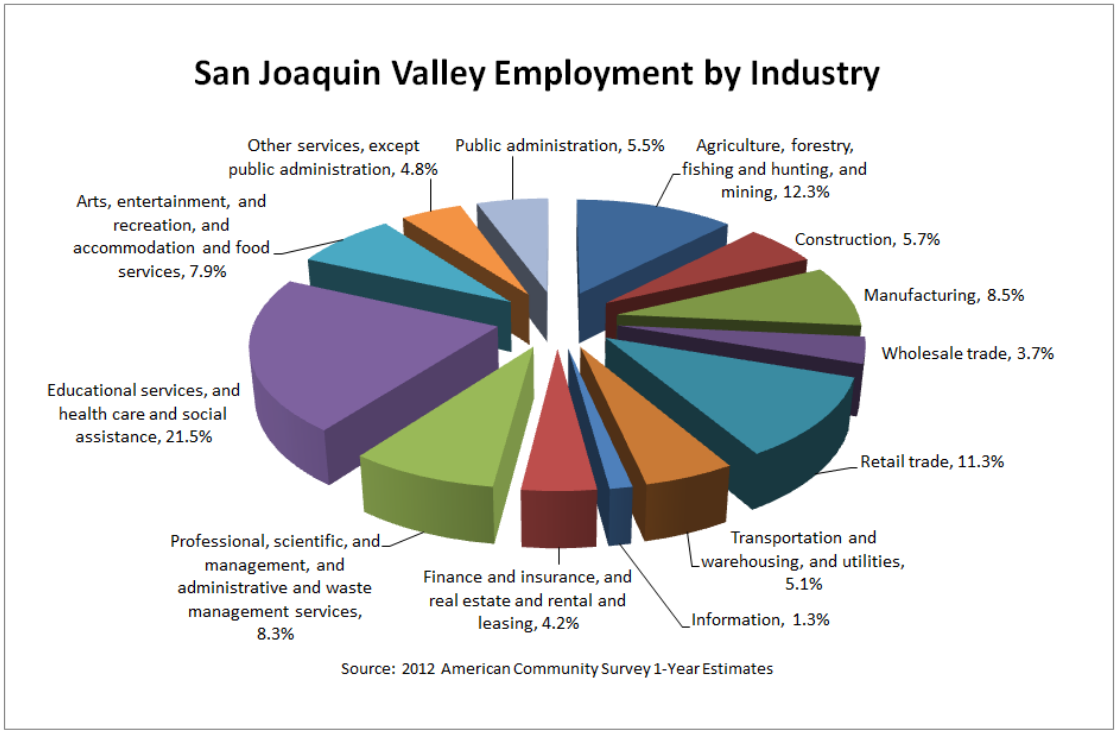


Figure 9

EMPLOYMENT BY INDUSTRY

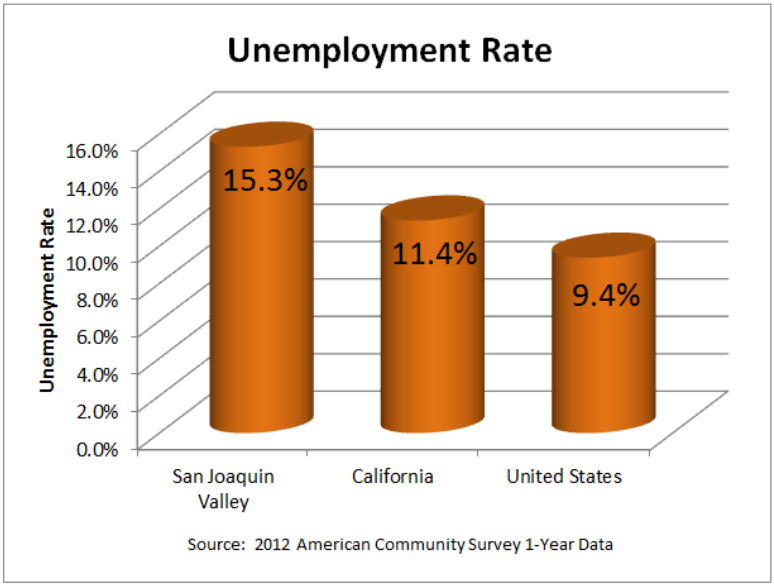
Industry	San Joaquin Valley		California		United States	
Agriculture, forestry, fishing and hunting, and mining	187,439	12.3%	412,318	2.5%	2,830,729	2.0%
Construction	86,743	5.7%	983,602	5.9%	8,802,312	6.2%
Manufacturing	129,388	8.5%	1,660,819	9.9%	14,988,864	10.5%
Wholesale trade	55,747	3.7%	503,594	3.0%	3,785,841	2.6%
Retail trade	171,575	11.3%	1,892,209	11.3%	16,639,780	11.6%
Transportation and warehousing, and utilities	77,522	5.1%	769,009	4.6%	7,020,960	4.9%
Information	19,498	1.3%	475,122	2.8%	2,975,482	2.1%
Finance and insurance, and real estate and rental and leasing	63,437	4.2%	1,058,597	6.3%	9,414,894	6.6%
Professional, scientific, and management, and administrative and waste management services	126,130	8.3%	2,140,616	12.8%	15,591,744	10.9%
Educational services, and health care and social assistance	326,927	21.5%	3,518,296	21.0%	33,113,097	23.2%
Arts, entertainment, and recreation, and accommodation and food services	120,223	7.9%	1,701,284	10.1%	13,697,912	9.6%
Other services, except public administration	72,582	4.8%	916,873	5.5%	7,118,937	5.0%
Public administration	84,440	5.5%	745,722	4.4%	6,941,135	4.9%
TOTAL Civilian employed population 16 years and over	1,521,651	100.0%	16,778,061	100.0%	142,921,687	100.0%

Source: 2012 American Community Survey 1-Year Estimates

Economically Distressed Area

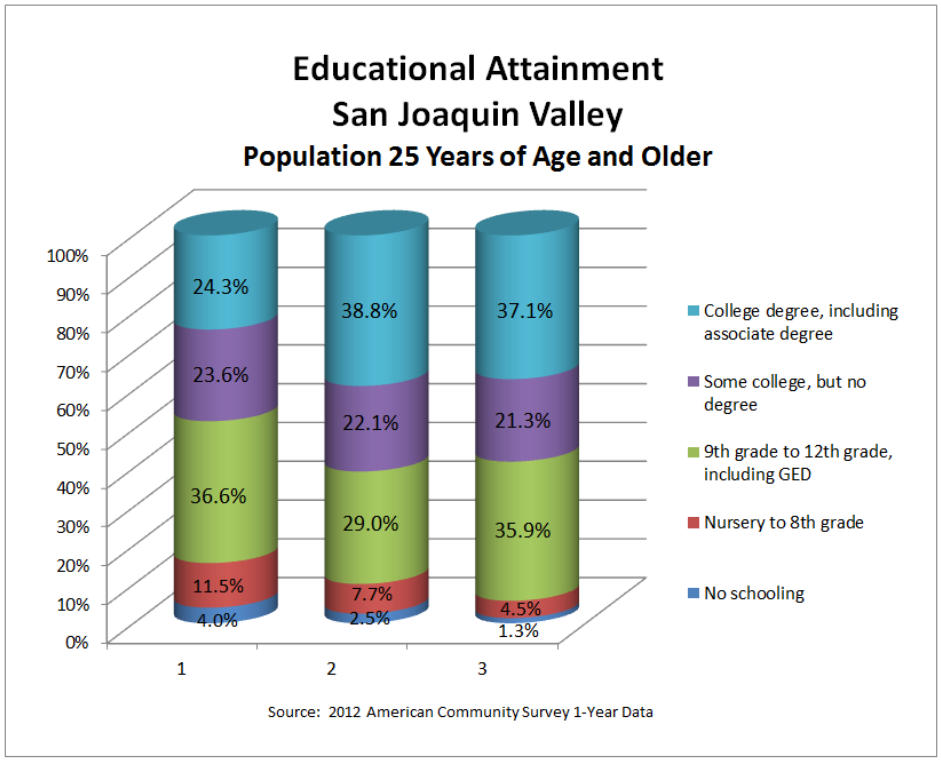
The San Joaquin Valley is one of the most economically distressed regions in the United States. High unemployment rates have historically plagued the Valley. As shown in Figure 10, in 2012 the Valley's unemployment rate was 15.3%, in contrast to 11.4% and 9.4% for the state and that nation, respectively.

Figure 10



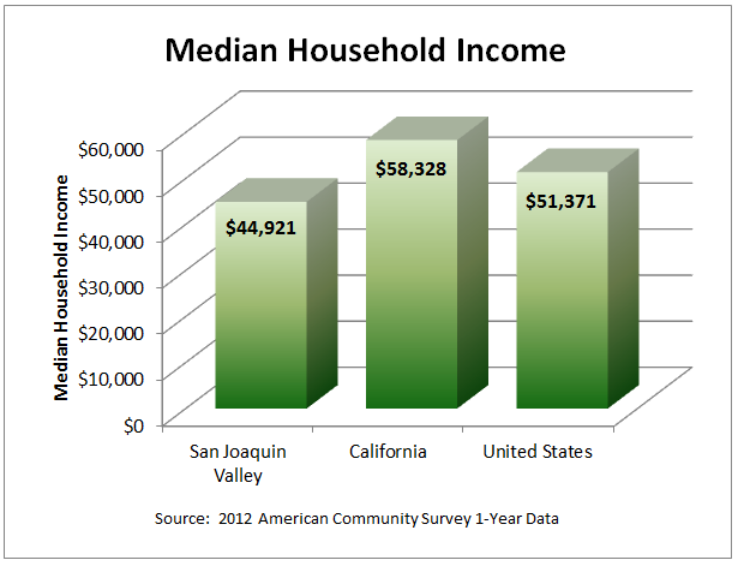
Educational levels for Valley residents lag behind those of California and the United States. Only 24.3% of persons 25 years of age and older have a college degree, compared to 38.8% and 37.1% for the state and nation, respectively *[Figure 11]*.

Figure 11



With the Valley's mix of employment types, high unemployment, and low educational attainment levels, the Valley is plagued with a low median household income. As shown on Figure 12 below, the Valley's median household income of $45,000 is far below the state and nation's averages of $58,000 and $51,000.

Figure 12

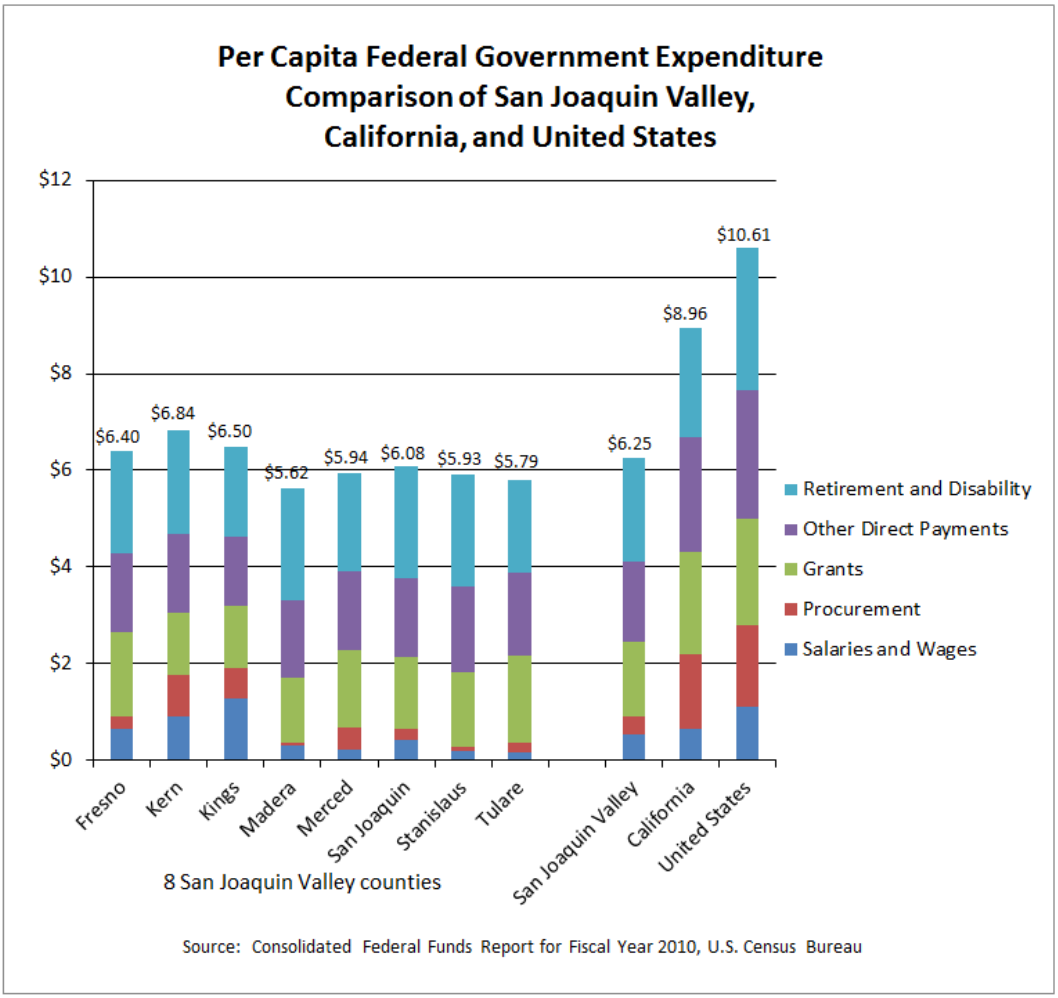


The economic plight of the San Joaquin Valley is starting to be recognized at a national level. The Congressional Research Service (CRS) completed a study in 2005 (California's San Joaquin Valley: A Region in Transition) comparing the economic conditions of the San Joaquin Valley to the Central Appalachian region, another severely economically distressed region. The Central Appalachian region (primarily eastern KY and parts of WV, TN and VA) is the most economically distressed sub-region within the Appalachian Regional Commission (ARC). ARC was created by Congress in 1965 in response to the persistent socioeconomic challenges in the Appalachian region. Economic conditions in the Valley were shown to be comparable to Central Appalachia and lagging far behind the state of California as a whole and the United States. For example, poverty rates in the Valley are similar to the poorest region of the Appalachians and are actually trending worse than the Central Appalachian region.

While being one of the most economically challenged regions in the country, the Valley has traditionally received far less federal assistance than other regions in the United States. The CRS study also showed that the Valley is lagging behind the Appalachian region, California and the United States in per capita federal expenditures.

Figure 13 below indicated that in 2010, the per capita federal government expenditure for the Valley and each of its eight counties was still far below that of California and the United States.

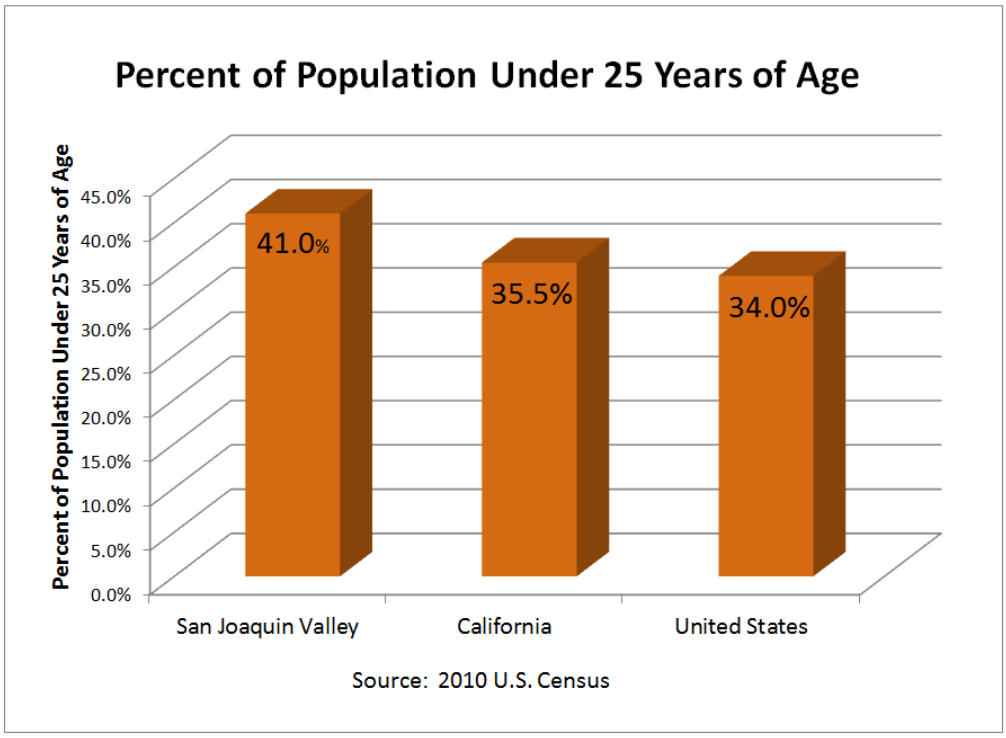
Figure 13



Demographics

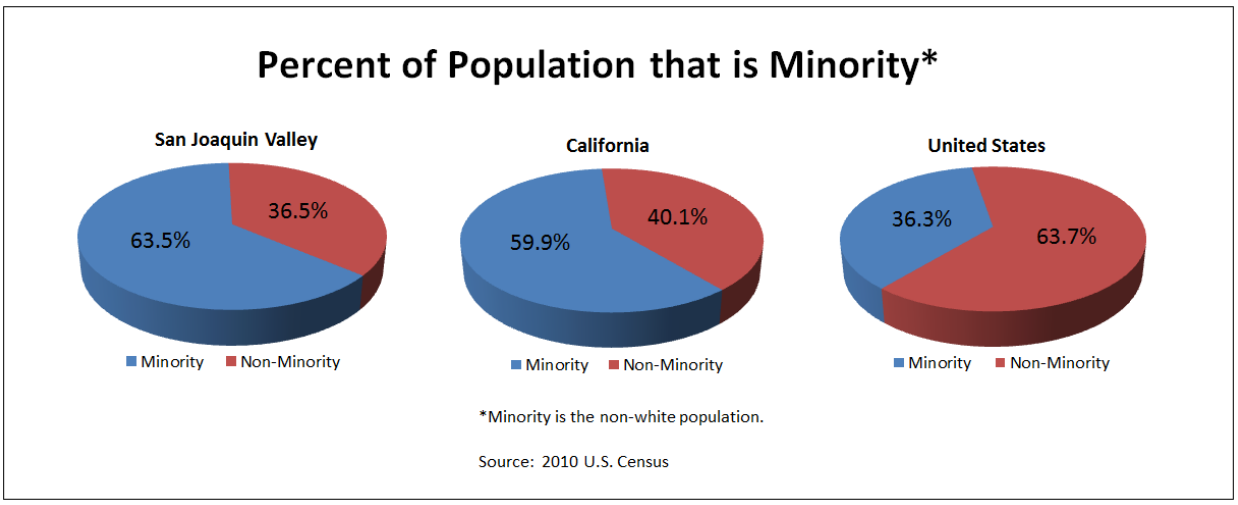
The Valley has a younger population than California as a whole and the United States. In 2010, 41.0% of Valley residents were under the age of 25 compared to 35.5% for California and 34.0% for the United States *[Figure 14]*.

Figure 14



The residents of the Valley are more ethnically diverse than those of California and the United States. According to the 2010 U.S. Census, 63.5% of the Valley's inhabitants are minority (non-white), compared to 59.9% and 36.6% for the state and nation *[Figure 15].*

Figure 15



VALLEY SUCCESS IN PARTNERING AND PLANNING

Air Quality

Background

The SJV is one of the largest and most challenging air quality nonattainment areas in the United States. The SJV nonattainment area includes eight counties from San Joaquin County to Kern County on the Western border of the Sierra Nevada range. These counties represent a diverse mixture of urban and rural characteristics, yet are combined in a single nonattainment area that violates federal health standards for ozone and particulate matter. Air quality monitoring stations continue to indicate that the San Joaquin Valley is among the worst polluted regions in the country. Since the eight counties are combined into a single nonattainment area, a coordinated approach for compliance with the federal Clean Air Act. That coordinated approach is essential in meeting the Valley's goal to provide clean air to all residents.

Coordination

On-going coordination with federal, state, and local partners has been, is, and will continue to be critical to the meeting the goal of providing clean air to all San Joaquin Valley residents. As one of the few multi-jurisdictional planning areas in the country, the individual decisions and actions of each of the SJV Regional Planning Agencies (RPAs) have the potential to affect the entire San Joaquin Valley. The process is critical to documenting compliance with the Federal Clean Air Act, as well as enabling the expenditures that build and maintain transportation infrastructure; investments which provide valuable jobs to San Joaquin Valley residents.

Transportation Conformity

The primary goal is to assure compliance with transportation conformity regulations with respect to the requirements for Regional Transportation Plans (RTPs), Federal Transportation Improvement Programs (FTIPs), amendments, compliance with the California Environmental Quality Act (CEQA), implementation of applicable transportation control measures (TCMs), and applicable State Implementation Plans (SIP). Since coordination efforts have begun, the SJV RPAs have been successful in complying with conformity requirements for the 2004 TIP/RTP, 2006 TIP, 2007 TIP/RTP, and 2011 TIP/RTP. In addition, FHWA has determined that the SJV RPA planning processes substantially meet the federal planning requirements. TIP/RTP Amendments, including coordinated amendment cycles and development of valley-wide process to be federally approved.

Continued examples of SJV RPA coordinated efforts with respect to transportation conformity include the following:

- Monitoring and testing of transportation model updates;
- Continued documentation of latest planning assumptions and compliance with the transportation conformity rule and corresponding guidance documents;
- Drafting of valley-wide procedures for RPA staff use, with detailed instructions from the execution of EMFAC to post-processing of emissions results consistent with applicable SIPS; and
- Preparation of boilerplate documentation, including draft public notices and adoption resolutions, as well as draft response to public comments.

Sustainable Communities Strategies

Introduction

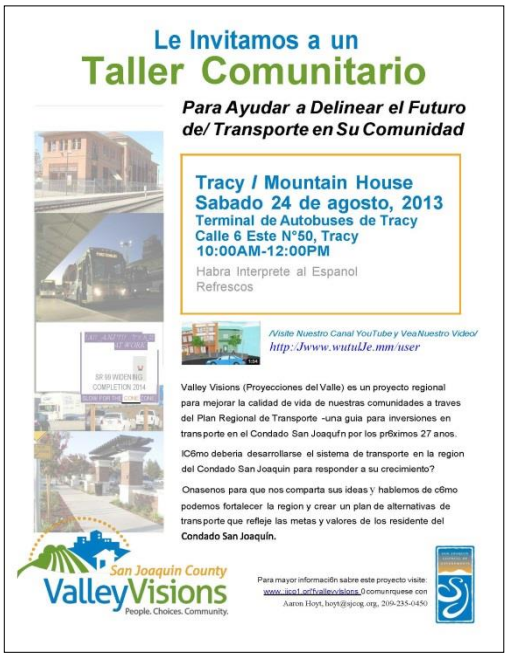
California's Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) supports the State's climate action goals to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning with the goal of more sustainable communities.

Under the Sustainable Communities Act, the California Air Resources Board (ARB) sets regional targets for GHG emissions reductions from passenger vehicle use. The ARB established these targets in the San Joaquin Valley as GHG reductions of 5% by 2020 and 10% by 2035. Under Senate Bill 375, each Metropolitan Planning Organization (MPO) in the State must have a Sustainable Communities Strategy (SCS) that demonstrates the respective region's ability to attain and exceed these GHG emission-reduction targets. The SCS outlines the plan for integrating the transportation network and related strategies with an overall land use pattern that accounts for projected growth, housing needs, changing demographics, and forecasted transportation needs among all modes of travel.

For the San Joaquin Valley, each MPO in scheduled to approve their SCS as an element of their Regional Transportation (RTP/SCS) in 2014. Referred to as the RTP/SCS, each Valley COG has developed an investment strategy that outlines their region's transportation future through 2040. Each RTP/SCS in the Valley goes in-depth into the projects, policies, and strategies that will achieve compliance with state laws while delivering a financially constrained plan matching forecasted revenues with transportation demands. Some achievements of the collective RTP/SCS include:

- Provision of transportation and travel choices
- Improving safety, mobility, efficiency of the transportation system

- Maximizing economic competitiveness/economic vitality
- Facilitating goods movement
- Building healthy and active communities
- Improving the environment



Valleywide Coordination on RTP/SCS

Valley Visions

While SB 375 mandated individual development of the RTP/SCS, the eight San Joaquin Valley Councils of Government decided also to collaborate in this process to share information, best practices, and foster consistent approaches to RTP/SCS development. The eight COGs participated in a joint grant proposal to the California's Strategic Growth Council for Proposition 84 funding. The grant was funded and launched as "Valley Visions."

Valley Visions was implemented as a series of planning efforts underway throughout the San Joaquin Valley. It took a big-picture look at how the Central Valley grows over time in a way that uses resources efficiently, protects existing communities, conserves farmland and open space, and supports the Central Valley economy, ultimately reducing future greenhouse gas emissions. The Valley Visions logo was provided to each COG to use and customize to their region if they wanted.


ValleyVisions

Valley Visions is a regional planning effort underway in the San Joaquin Valley to improve the quality of life in our communities by expanding transportation and housing choices. It takes a big-picture look at how the Central Valley can grow over time in a way that uses resources efficiently, protects existing communities, conserves farmland and open space, and supports the Central Valley economy.

What Is Valley Visions?
Valley Visions the name of the collective efforts of the eight Metropolitan Planning Organizations of the San Joaquin Valley. These agencies (known as MPOs) are responsible for setting transportation policy and priorities for a region and documenting how transportation funds will be spent in a Regional Transportation Plan. In Fresno County, this effort is being led by the Fresno Council of Governments.

Why Are We Doing This?
A new state requirement directs MPOs to add an element to the Transportation Plan (known as a Sustainable Communities Strategy) that coordinates land use, housing and transportation planning to reduce the amount people have to drive. This effort is part of a statewide strategy to reduce greenhouse gas emissions to meet regional targets. These plans may also help attract funding to our communities and streamline permitting processes.

Who Is Involved?
In your community, Fresno Council of Governments is taking this opportunity to engage residents, elected officials, businesses, local governments, community groups and others to create a plan that benefits our neighborhoods, cities and the entire San Joaquin Valley. Everyone interested is invited to participate in this process to help shape our community's future. Most of the Valley Visions plans will be complete by the end of 2013.

How Can I Share My Ideas?
We want to hear from you! Your input can help us create communities we all want to live, work and invest in, and that reflect our community values. Good planning will preserve the community and natural features that we enjoy, now and for our children and grandchildren.

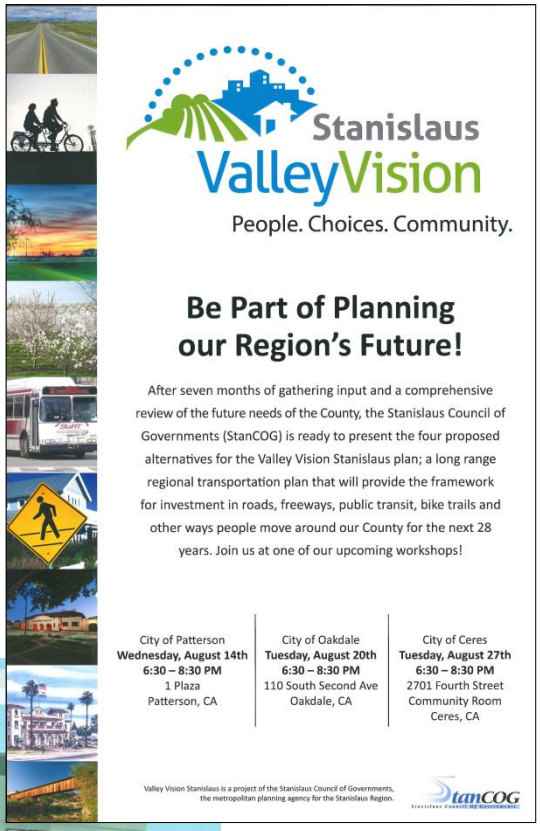
Find out more from the Fresno Council of Governments:

Visit www.fresnocog.org "or" www.valley-visions.org
Call: (559) 233-4148
Write to us at: Fresno COG, 2035 Tulare Street, Suite 201, Fresno, CA 93722

The project scope for this task included templates/written materials for customization, a media campaign to engage residents and publicize outreach efforts (social media, newspapers, radio and/or TV), and to assist with the development of SB 375 required workshops and hearings.

One of the tasks identified in the successful grant proposal was enhancement of the eight COG's individual public outreach efforts with a Valleywide campaign.

Of particular note was an informational video on the SCS process provided in three languages: English, Spanish, and Hmong and the media campaign that was active during the months of August, September, and October 2013. The videos were made available on YouTube, with links on the Valley Visions web page (www.valley-visions.org).



Valley Visions is yet another example showcasing the successes in Valleywide collaboration. The eight counties of the San Joaquin Valley coordinated some aspects of these planning efforts and maximized resources, while each area's Metropolitan Planning Organization (MPO) developed a separate plan. This effort helped the Valley COGs brand a consistent message about sustainability.

Goods Movement

Introduction

In the Statewide Goods Movement Action Plan, the California Department of Transportation (Caltrans) designated the Valley as one of the State's four major international trade corridors. The Valley is the leading agricultural producer in the world, and it also supports major food processing industries. Portions of the Valley continue to be major oil and gas producers. Due to its central location, relatively inexpensive land, labor force, and multimodal transportation system, the Valley also is becoming a major distribution point for international exports and consumer products. Prior to the recession, the Valley was the fastest growing population center in California and is poised to return to this position as the economy recovers.

Many of the agricultural products that the Valley produces are exported through California's marine and airport systems using the highway and roadway systems to move commodities from farm, to processor/packer, to market. While Interstate 5 and State Route 99 are the two primary north/south transportation arteries, SR 99 is the transportation backbone of the San Joaquin Valley and is served by many significant east-west corridors such as SR-58, SR -120, SR-180, I-580 to 205, SR-152, SR-198, and SR-46.

The Valley, as a region, needs to effectively plan for efficient goods movement and successfully partner with the private sector, state and Federal agencies to make necessary investments. A failure to effectively plan and invest could result in congested and poorly maintained highways, lost economic opportunities due to inadequate access to markets, land use conflicts between logistics-oriented business and growing communities, and poor air quality due to diesel emissions. Emphasis on system-wide efficiency and a comprehensive goods movement system seem to have become key elements of competitive funding. It is anticipated these trends will continue to shape transportation policy and that future funding may emulate the approach of the state's Trade Corridor Improvement Fund (TCIF), tying transportation funding to trade corridors and movement of goods.

Background

In 2007, The San Joaquin Valley Regional Planning Agencies developed the *San Joaquin Valley Regional Goods Movement Action Plan (2007)*. The purpose of the plan was to provide a knowledge base for the understanding of freight and goods movement issues facing the San Joaquin Valley. The plan identified freight flows for the region, and developed the San Joaquin Valley Truck Model tool and scenario testing.

Previous goods movement works efforts for the Valley:

- San Joaquin Valley Regional Goods Movement Action Plan, 2007
- Draft San Joaquin Valley Regional Goods Movement Action Plan, 2008
- California Interregional Intermodal System (CIRIS) Implementation Plan 2006
- SR 58 Origin and Destination Study
- State Route 99 Business Plan
- Interstate 5 and State Route 99 Origin and Destination Study, 2009
- East Side Business Plan (Short Haul Rail), Tulare County, 2010
- SR 223, 166, 119, 46 and 65 Truck Origin and Destination Studies, 2011

In fiscal year 2010-2011, the eight Valley RPAs received a funding award for a Caltrans Partnership Planning grant for the San Joaquin Valley Interregional Goods Movement Plan. The Plan will build on previous work efforts and further refine the criteria and decision-making process while identifying vital goods movement networks for the multi-county region.

San Joaquin Valley Interregional Goods Movement Plan

This San Joaquin Valley Interregional Goods Movement Plan is intended to take the next steps to develop and implement the region's freight transportation vision. This effort, more than the prior phases of the Valley Goods Movement Study, is focused on developing actionable project recommendations and implementation plans. There are many project concepts that have been developed over the last decade that include strategies, such as short-haul intermodal rail services, short sea container barge services, mainline rail capacity projects, SR 99 capacity and operational improvements, east-west highway improvements, and a host of other innovate goods movement systems ideas. Not all of these can be funded, and not all are of the highest priority. At the conclusion of this planning effort, it is important that the Valley goods movement stakeholders prioritize this project list based on clear criteria that reflect the region's goals and objectives. The projects need to be market-based, and at least some need to demonstrate state and national benefits.

Through this data driven 18 month process, the final plan anticipated in May 2013 will include an investment plan of project improvements and strategies that will increase the efficiency and reliability of the Valley's goods movement system. This multi-modal project list and strategies will build on the regional strengths, while identifying a funding and implementation strategy. Transportation improvements and investments in the multi-modal infrastructure will support economic growth in higher-value crops, logistics and warehousing/ distributions facilities, light manufacturing, oil production, and export products. Goods movement improvements can reduce congestion and delays for California businesses, carriers, and shippers and provide more reliable access to domestic and international markets. These improvements will increase productivity, profits, growth, and competitiveness within the San Joaquin Valley.

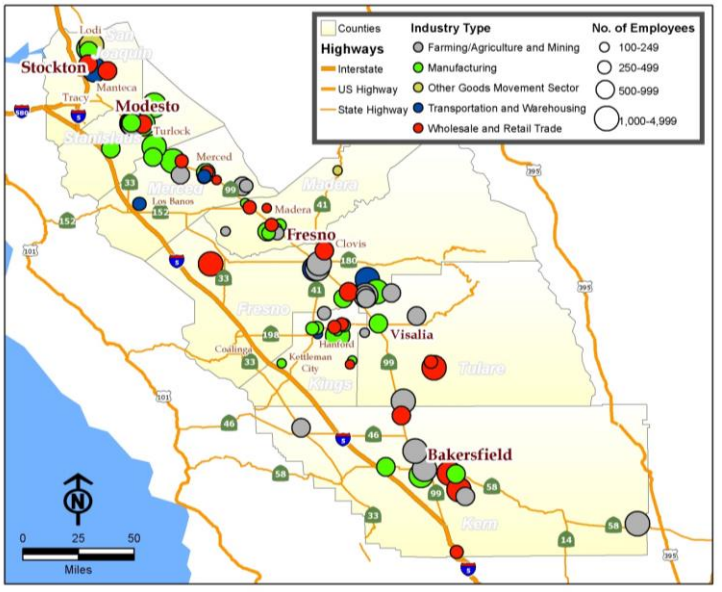
Figure 16

The San Joaquin Valley Goods Movement System

San Joaquin Valley Goods Movement Key Findings

The San Joaquin Valley is the sixth fastest growing region in the United States and is projected to nearly double in population by 2040.

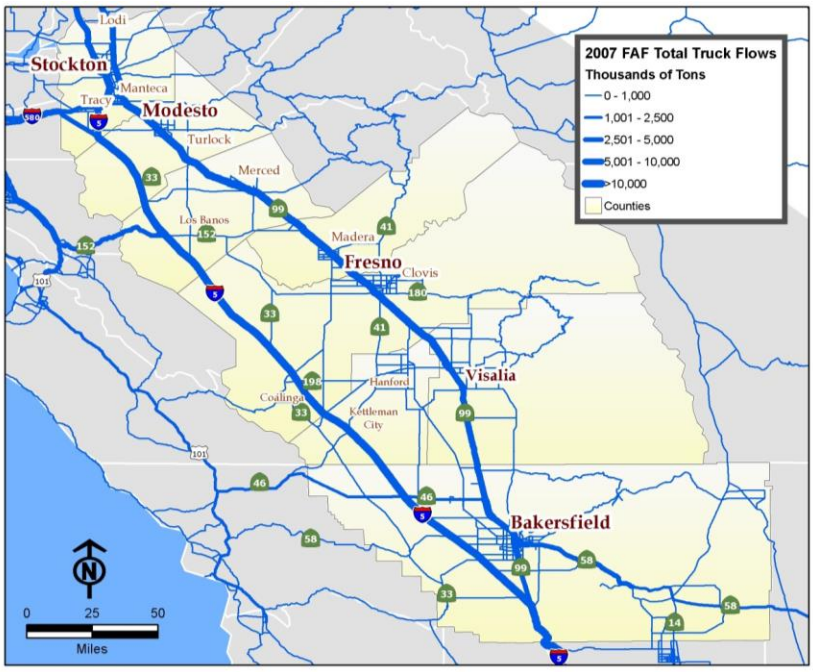
Figure 17 SJV *Employment* Clusters



Population and employment centers within the SJV are generally located adjacent to major highway facilities such as SR 99, I-5, SR 152, SR-198, and SR 41. Access to major population centers is critical for the movement of goods, not only for local deliveries of consumer products but to access warehousing and distribution facilities and services for transportation operators.

In 2010, there were about 1.2 million people employed across all sectors in the San Joaquin Valley. Of this total, over 44 percent (564,000 jobs) are associated with goods movement-dependent industries. By 2040, goods movement-dependent jobs are expected to increase by over 45 percent (nearly 250,000 jobs).

Figure 18 Truck Tonnage in the SJV, 2007



The highway and local road system is the primary freight infrastructure for the region, and trucking is the dominant freight mode. There are over 31,420 roadway miles in the San Joaquin Valley. There are over 2,700 miles of truck routes in the 8-County study region, with over 80 percent designated STAA National Truck Routes.

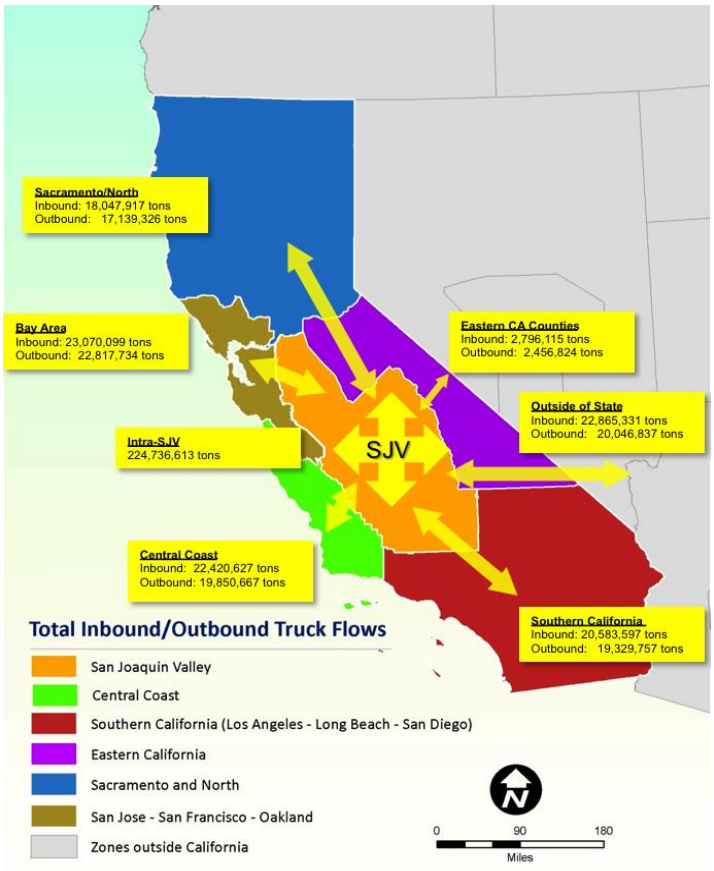
Rail freight operations and facilities in the study area are primarily owned by the Union Pacific (UP) and Burlington Northern Santa Fe (BNSF). The region also has several short-line operations, including 417 miles of the San Joaquin Valley Railroad (SJVR). However, there currently is no intraregional service within the SJV.

The air cargo system in the San Joaquin Valley is comprised of seven airports – all of which offer limited commercial passenger airline and air cargo service.

Truck is the dominant goods movement mode in the San Joaquin Valley. Nearly 500 million tons of goods moved by all modes on the San Joaquin Valley goods movement system in 2007. Over 90% of this (425 million tons) was moved by truck.

Industries depend heavily on intra-regional movements within the San Joaquin Valley, both between Counties and within the same County. 53% of all truck tonnage is intra-regional with raw agricultural products (such as animal feed or cereal grains) and mining materials (such as stone and sand) playing a prominent role. Contrary to truck traffic, nearly all SJV rail traffic moves to or from other states. Products moved by air continue to use airports outside of the San Joaquin Valley. Airports in the San Joaquin Valley collectively account for less than one percent of all air cargo handled by California's civilian airports. The Port of Stockton is primarily a bulk commodity port and in 2010 handled nearly 1.4 million tons of bulk and break-bulk commodities. Many prominent industries in the San Joaquin Valley (such as food processing) rely on the transportation system to receive raw materials and to deliver goods to market. For example, tomato processing facilities located throughout the SJV provide about 76% of all tomato processing capacity in California.

Figure 19 SJV Trading Partner Truck Tonnage Distribution



Between 2007 and 2040, freight moving on the SJV goods movement system is anticipated to grow substantially, reaching over 800 million tons by 2040. Similar to 2007, trucks are projected to carry the majority of all goods by 2040. In fact, trucks are projected to carry 93% (750 million tons) of this tonnage, while rail is projected to carry 7% (50 million tons). Air and water modes will continue to play a role in delivering specific types of commodities, but will continue to command less than 1% of the total commodity flow volume.

The region has several critical goods movement corridors (most notably I-5 and SR-99) that carry the highest volumes of trucks within the San Joaquin Valley. However, there are also many corridors and local roads that, though carrying smaller total volumes of trucks, are still vital to the region's goods movement. East-West corridors throughout the SJV (including SR 152, SR 58, SR 198 and SR 46) are especially important, as are numerous smaller facilities (such as farm to market roads and County roadways) that connect single industrial sites, farms, agricultural processing centers, or other freight-generating activities to the Statewide and National freight system.

Figure 20 Growth in Truck Flows in the SJV, 2007-2040 (FAF3)

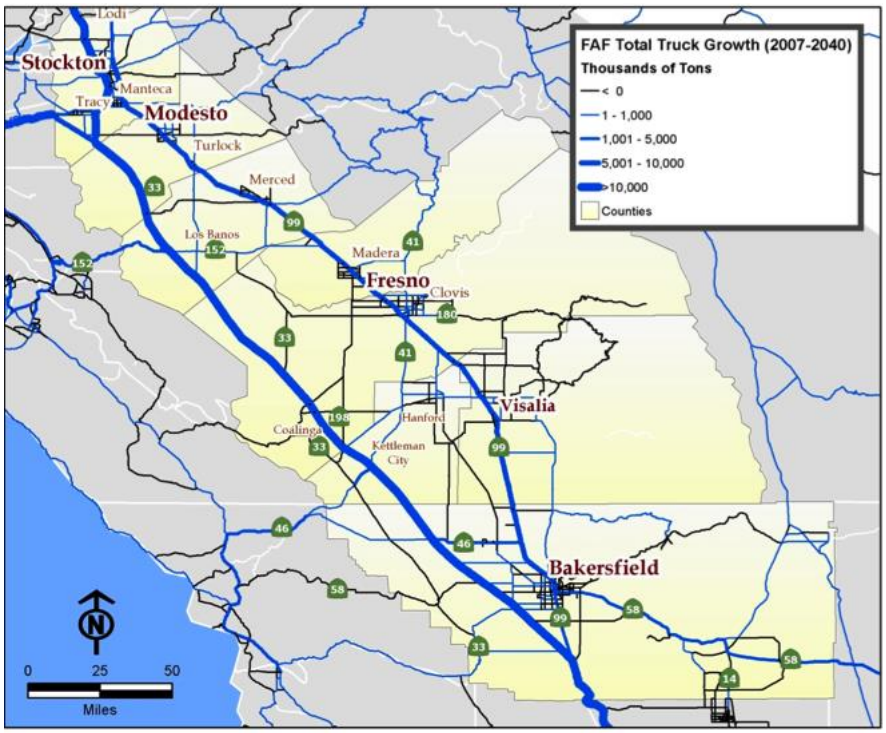
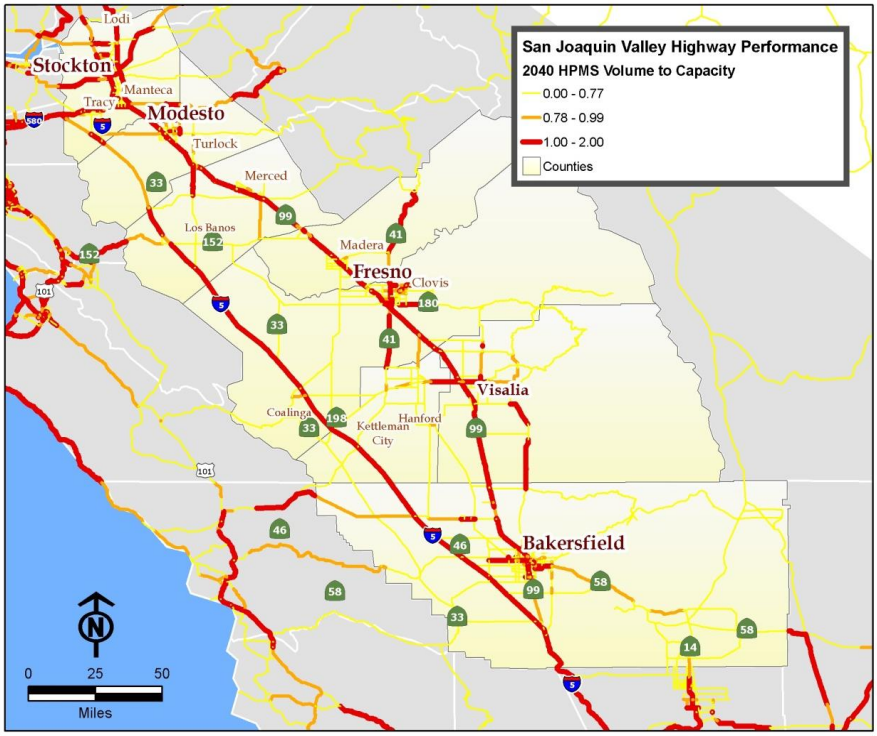


Figure 21 2040 Anticipated Highway Performance



Movement of freight between counties in the San Joaquin Valley (intra-regional) will continue as the dominant pattern of goods movement. Intra-regional movement will be responsible for over 50% of the total expected tonnage (nearly 400 million tons) in the San Joaquin Valley in 2040. Between 2007 and 2040, outbound tonnage will increase at a greater rate (90%) than inbound tonnage (60%), indicating a growing importance of outbound shipments from the SJV.

Inbound carload rail flows will experience marginal declines by 2040 due to declines in cereal grains, animal feed, and fertilizers. Contrarily, outbound carload tonnage will increase over 100%, largely due to increasing demand for prepared foodstuffs, alcoholic beverages (including wine), and other agricultural products. Rail intermodal flows will increase substantially by 2040, both inbound and outbound, led by outbound intermodal tonnage associated with mixed freight (including consumer products, shipped using domestic trailers or containers). Growing warehousing and distribution hubs, as well as SJV manufacturing facilities may be beneficiaries of this increased demand.

Figure 22 Inbound, Outbound and Intra-Regional Commodity Distribution – 2007 to 2040

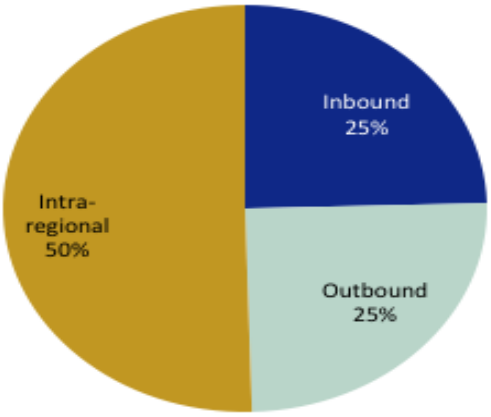
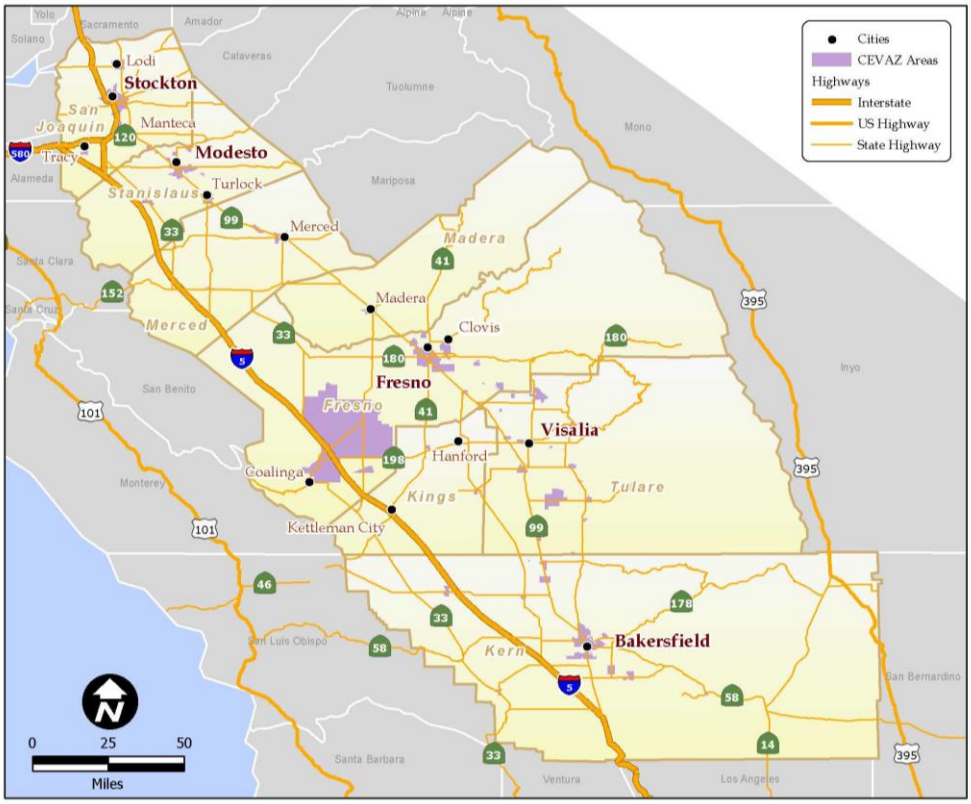


Figure 23 High – CEVAZ (Most Vulnerable) Population Clusters in the SJV



Air cargo has not been a growth industry in California over the past decade, and there is little indication that air cargo volumes will soon rise.

Goods movement activities contribute to the SJV's air quality concerns. Poor air quality –a serious issue in the SJV, is partially caused by exhaust emissions from trucks, rail, and equipment involved in freight movement. The San Joaquin Valley Air Pollution Control District estimates that trucks emit 10% of the Valley's directly emitted particulate matter ($PM_{2.5}$).

Congestion on roadways in the San Joaquin Valley results in economic impacts and in public health consequences. Traffic congestion translates to economic losses, wasted fuel, and also contributes to localized emissions "hot spots" from increased emissions due to idling engines. Increased emissions can lead to negative impacts to public health – including respiratory ailments, reduced lung function, a weakened immune system and headaches. In the SJV, traffic

volumes on portions of SR 99, SR 120, SR 58, SR 41, and I-5 already exceed the capacity of the facility. Projections are for rapidly increasing vehicle and truck volumes by 2040, which will likely exacerbate existing congestion throughout the Valley.

The Future of Goods Movement in the Valley

Through planning efforts such as the eight-county San Joaquin Valley Goods Movement Plan, the Valley is seriously looking at all of the existing conditions, growth implications and environmental impacts on our communities to develop a strategic and comprehensive understanding and strategies for implementing an efficient goods system.

Public and private stakeholders have met and discussed throughout the Goods Movement planning process the criteria and metrics for evaluating projects to enhance the socio-economic status of the San Joaquin Valley via improvements in our transportation systems.

The San Joaquin Valley Interregional Goods Movement plan focused on several outcomes and processes:

- Worked with regional freight stakeholders from throughout the SJV to understand the issues, challenges, bottlenecks, and opportunities of the Valley's multi-modal goods movement system, including a three-tiered stakeholder outreach process to public, private, and other freight system stakeholders.
- Assessed supply chain and logistics trends of key industries, their current needs, and how they will impact goods movement in the future, including creating simplified supply chain diagrams to illustrate the transportation system needs of industries.
- Created a prioritized investment plan of multimodal project improvements and strategies to increase the efficiency and reliability of the region's goods movement system, including evaluation using the Valleywide truck model, IMPLAN economic input-output software, and other tools to quantify the environmental, economic, and mobility benefits of each project / strategy.
- Contributed to economic development, strong industries, and environmental health throughout the entire San Joaquin Valley.

The culmination of the Goods Movement Plan is a stand-alone, data-driven, multimodal project list that reflects the combined goods movement vision of the entire eight-county region. The outcomes and priorities identified in the Plan are being integrated into the MAP 21 required National Primary Freight Network, the Valley has two members on the California Freight

Advisory Committee, and our planning efforts are being integrated into the California Freight Mobility Plan.

Advocacy

San Joaquin Valley Regional Policy Council

The voluntary creation of the San Joaquin Valley Regional Policy Council (Regional Policy Council) in 2006 is a key partnership that exemplifies the Regional Transportation Planning Agencies' approach to working on regional issues.

This sixteen member Regional Policy Council was established to discuss and build regional consensus on issues of Valley importance. The Regional Policy Council consists of two elected officials and one alternate appointed from each of the eight regional planning agencies' governing boards in the San Joaquin Valley. The Regional Policy Council is positioned to have a unique and potentially pivotal position in further Valley collaborative efforts and improving the quality of life for all Valley residents.

The Regional Policy Council provides guidance on common interregional policy issues and also represents the San Joaquin Valley at public forms such as the California Transportation Commission, the Governor and his administration, as well as State and Federal legislative bodies that require a common voice. Issues of common interest, include:

- Intercity Rail
- State Route 99 Coordination
- Joint Funding Strategies
- San Joaquin Valley Interregional Goods Movement
- Short Haul Rail (SB 325 Implementation)
- Air Quality Transportation Planning Coordination
- Relationship Development with External Agencies & Entities
- San Joaquin Valley Regional Blueprint Planning
- Valley Legislative Affairs Committee
- Valleywide Model Improvement Plan
- Coordination with the California Partnership for the San Joaquin Valley
- Proposition 84, Sustainable Communities Implementation
- Regional Energy Planning
- Regional Transportation Plans
- Fall Policy Conference
- San Joaquin Valley Websites
- Coordination of the Policy Council and Executive Directors' Committee

Valley Legislative Affairs Committee

The San Joaquin Valley Regional Transportation Planning Agencies have established a staff-level Valley Legislative Affairs Committee (VLAC), consisting of staff from the San Joaquin Valley Regional Transportation Planning Agencies. The VLAC track pertinent legislation, updates the RTPA Directors, and makes recommendations when warranted to the San Joaquin Valley Regional Policy Council. The Regional Policy Council is made up of two elected officials from each of the eight RTPAs and provides a forum for elected officials to discuss topics and build consensus on issues of Valleywide importance. Every year, State and Federal legislative platforms are developed to provide guidance to the RTPAs. The annual "Valley Voice" advocacy trips are coordinated by the VLAC. The latest Washington D.C. trip was held in September 2013 and the Sacramento trip was conducted in March 2014. The next trip to Washington D.C. is scheduled for September 2014.

Other Collaborative Planning Efforts

For over the last fifteen years the Valley RTPAs have explored the mutual benefits and economies of scale in working together on voluntary planning efforts. Oftentimes the funding for these projects is the result of a successful grant application that is submitted on behalf of all the Valley RTPAs. Developing the themes and consensus for the grant application requires a high level of coordinated effort between the Executive Directors and the governing boards.

Several impressive examples of this voluntary collaboration between the Valley RTPAs include the San Joaquin Valley Blueprint, the San Joaquin Valley Greenprint, the San Joaquin Valley Express Transit Study, and the San Joaquin Valley Tribal Transportation Environmental Justice Study. Each of the above named studies represents countless hours of conference calls, face to face meetings, working with Valleywide and local stakeholders, and often times retaining a subject matter consultant(s) between the Valley RTPAs to develop a specific product.

The San Joaquin Valley Blueprint is an outstanding example of this voluntary collaborative planning effort. A commitment to work together and submit a grant application in 2006, has since grown into a seven year cooperative Valleywide and regional planning effort to identify smart growth strategies for the Valley communities. This planning effort involved all levels of government and the opportunity for local citizens in all eight counties to participate. From this unprecedented level of outreach, several other planning efforts have emerged and continue to gain momentum. As a counterpart to the San Joaquin Valley Blueprint, the San Joaquin Valley Greenprint continues to explore how to best preserve the vast productive acres of farmland and vital habitat in the region.

As part of the latter Blueprint effort, the Valley RTPAs worked with several other agencies to create the Blueprint Awards program. This award program began in 2010 and is used to recognize the outstanding achievements, the greater aesthetics or progressive details as demonstrated in a sustainable development project.

VALLEYWIDE CHAPTER

The Valley RTPAs in the recent years were successful in obtaining a grant for the purpose of assisting Valley jurisdictions with populations of 50,000 or less persons to implement smart growth principles into their local planning documents. Jurisdictions in the eight counties were divided into northern, central, and southern counties and well respected local consultant firms were retained in the three regions to provide technical services. This effort highlights a coordinated voluntary effort in which the Valley RTPAs came together on behalf of the smaller population member agencies.

Aside from regional planning, the RTPAs have explored Valleywide transit and strategies to improve regional planning with our Tribal Governments. The goal of the SJV Express Transit Study was to identify recommendations for inter-county commuter-express transportation services within the SJV region and non-Valley urbanized population centers. The Tribal Transportation Environmental Justice Collaborative Project invited 47 California Central Valley Tribes to participate with the Valley RTPAs and explore long-range planning issues and environmental justice priorities.

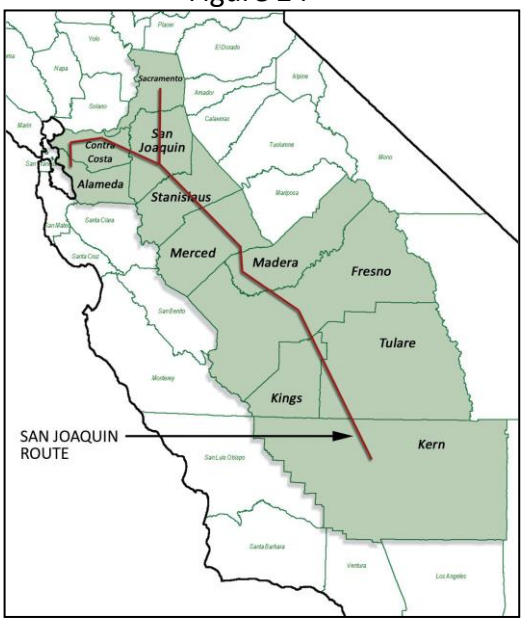
The Valley RTPAs work on specific studies often times when key information is unavailable. Recent examples include the San Joaquin Valley Demographic Forecast 2010 to 2050 Study and the Market Demand Analyses for Higher Density Housing in the San Joaquin Valley. These two technical data driven projects included a high level of subject experts from the private real estate and larger economics field. The Valley RTPAs made a coordinated effort to work with subject matter experts to ensure that the final end products were creditable with the high level of validity.

The Valley RTPAs continue to work very closely with the San Joaquin Valley Partnership. The San Joaquin Valley Partnership consists of members appointed by the Governor, California Cabinet Secretaries, and civic leaders that work with several work groups that explore economic development to water.

In conclusion, the Valley Regional Transportation Planning Agencies have a strong history of working together on other collaborative voluntary planning efforts and will continue to do so as resources allow.

Valley Success in Implementation

Figure 24



AMTRAK San Joaquin Service

Passenger Rail in the San Joaquin Valley

Background

Passenger rail service has been an area of extensive activity for the Central Valley with two existing services currently operating and the first segment of the California High Speed Rail System scheduled to begin construction in 2014. The two existing passenger rail services include the AMTRAK San Joaquin route that runs the length of the Central Valley and the Altamont Corridor Express (ACE) that connects the northern Central Valley with the San Francisco Bay Area.

The AMTRAK San Joaquin route provides service from the San Francisco Bay Area and Sacramento through the Central Valley to Bakersfield. Over 1.1 million passengers traveled on the San Joaquin route in 2012. The San Joaquin runs multiple times daily between the San Francisco Bay Area (or Sacramento) and Bakersfield, where Amtrak Thruway buses connect to great Southern California destinations. Other stops along the way include Stockton, Modesto, Merced, Martinez and Fresno. Thruway bus connections to San Francisco are made at Emeryville.

Figure 25

Altamont Corridor Express (ACE)

The Altamont Corridor Express (ACE) provides commuter rail service from the City of Stockton in San Joaquin County to the City of San Jose in Santa Clara County. ACE runs four round trips daily with average weekday ridership over 4,000 passengers totaling a million passengers per year. ACE trains depart Stockton in the morning with return departures from San Jose in the afternoon. ACE service has ten stations through San Joaquin, Alameda, and Santa Clara County with bus connections to other transit including Bay Area Rapid Transit (BART) in Pleasanton.

The California High-Speed Rail System will be the first high-speed rail system in the nation. By 2029, the system will run from San Francisco to the Los Angeles basin in under three hours at speeds capable of over 200 miles per hour. The system will eventually extend to Sacramento and San Diego, totaling 800 miles with up to 24 stations. In addition, the Authority is working with regional partners to implement a statewide

rail modernization plan that will invest billions of dollars in local and regional rail lines to meet the state's 21st century transportation needs. The initial 60-mile segment of high-speed rail construction from Fresno to the Tulare-Kern County line near Bakersfield is scheduled to begin construction in 2014.

Figure 26 California High Speed Rail Statewide Rail Modernization

Coordination

Central Valley Rail Policy Working Group

Coordination of passenger rail service in the Central Valley has involved a significant number of stakeholders from the local, state, and federal agencies to the private railroads and public. The Central Valley Rail Policy Working Group consists of 20 agencies and has been involved in coordinated planning for passenger rail service between Merced and Sacramento since 2006. Recent activities of the Central Valley Rail Policy Working Group have included support of the High Speed Rail Authority (HSRA) in the implementation of high-speed rail through the Central Valley. These activities have involved:

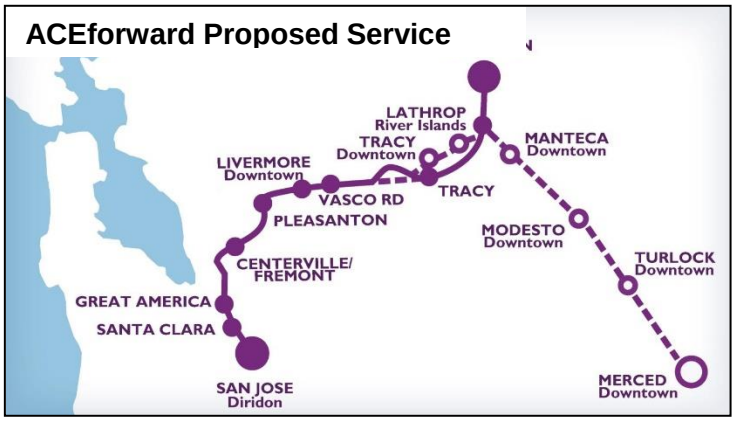
- Partnering with the HSRA throughout the project development process
- Providing guidance on local issues, development plans, and policies
- Assisting in developing and evaluating alternatives
- Participation in public involvement activities and events
- Serving as liaisons to local communities

San Joaquin JPA

With the passage of Assembly Bill (AB) 1779 in August 2012, regional government agencies were enabled to form the San Joaquin Joint Powers Authority (SJJPA) to take over the administration and management of the existing San Joaquin Rail Service from the state. The SJJPA was established in March 2013 and is comprised of ten member agencies including the San Joaquin Regional Rail Commission, Sacramento Regional Transit, Stanislaus Council of Governments, Merced County Association of Governments, Contra Costa Transportation Authority, Tulare County Association of Governments, Madera County Transportation Commission, Alameda County, Fresno Council of Governments, and Kings County Association of Governments. Under the provisions of AB 1779, the state will continue to provide the funding necessary for service operations, administration and marketing. Furthermore, Caltrans Division

of Rail will remain responsible for the development of the Statewide Rail Plan and the coordination and integration between the three state-supported intercity passenger rail services.

Figure 27



Looking Forward

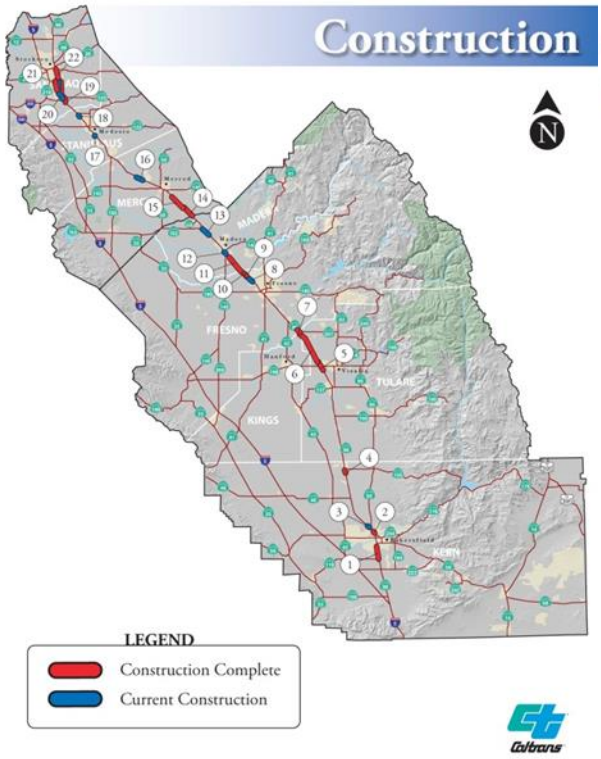
In 2013 the San Joaquin Regional Rail Commission (SJRRC) initiated ACEforward, a planning effort to support both the enhancement of exiting ACE service between Stockton and San Jose as well as extend ACE service to Manteca, Modesto, Turlock and Merced. The ACEforward effort has involved extensive coordination through the Central Valley Rail Policy Working Group with the hope to realize portions of the ACE service extension to Merced by as early as 2020. The Central Valley transportation partners will also continue to work with the California HSRA to support the implementation of high-speed rail within the Central Valley as the initial operating phases are complete and services are initiated.

Proposition 1B and State Route 99 Bond Program

The $1 billion for State Route 99 included in Proposition 1B made a small dent in the nearly $6 billion in immediate needs identified in Caltrans' 99 Business Plan. Far greater funding is needed, however, to bring the "Main Street" and the primary goods movement corridor of the Valley up to a full six lanes from Bakersfield to Sacramento. Widening to at least six lanes has been a long term goal of the Valley and is necessary to accommodate the forecasted growth and avoid major congestion problems along the SR 99 corridor in the future. As the Proposition 1B program nears its sunset date, the recent update of the SR 99 business plan paints a clear picture of the continuing needs for upgrading and improving the roadway and interchanges.

Figure 28

State Route 99 Business Plan



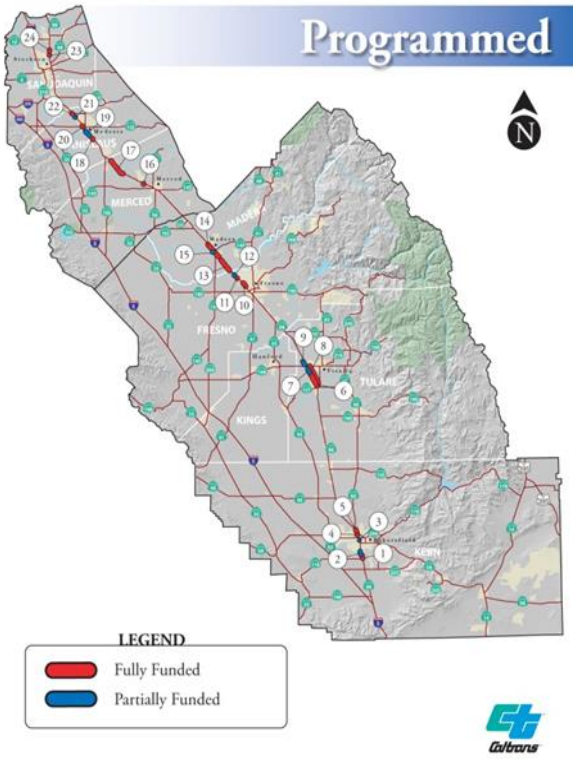


Figure 3.6
Status of Priority Category 2 Candidate Projects:
Major Capacity Increasing Improvements
(Capital Costs Greater than $8 million)

Caltrans

In 2013, Caltrans and the 8 Valley MPOs completed the second update to the 99 Business Plan. Here are the highlights:

- $1Billion funded by Proposition 1B
- Construction/Complete - 20 Projects - $1.3 Billion funded
- Programed/Partially Funded - 24 Projects - $1.4 Billion funded
- Candidates Remaining - 19 Major Projects - $3.5 Billion unfunded
- New Emphasis on operational improvements including: carpool facilities / ramp metering, reduced truck congestion , 511 Travel Info System, CalVans public vanpool service, privately subsidized express bus service saving 1.4M VMT/yr, new park & ride lots.

APPENDIX C
MCTC 2012 PUBLIC PARTICIPATION PLAN

Public Participation Plan
Updated April 2012

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INTRODUCTION

The Madera County Transportation Commission (MCTC) is committed to involving the public in transportation planning activities. MCTC encourages the public's input in the planning process to ensure that the community's needs are met. Engaging the public early and often in the process of planning and decision making is critical to the success of any transportation plan or program.

The goal of MCTC's Public Participation Plan is to ensure continuous public notification and participation in major actions and decisions by the MCTC Policy Board. This report will establish a baseline for the communication policies and procedures, ensuring that the public is well informed during the decision making process. The Public Participation Plan will include goals, objectives and the corresponding methods to successfully reach all communities, including those that are traditionally under served within the county. The elements in this plan will be based on the premise that education and awareness are critical in the transportation planning process.

The Public Participation Plan elements shall be proactive and provide complete information, timely public notice, full public access to key decisions, and opportunities for early and continuous involvement. The elements will be built around the following Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) principles[1]:

1. Early and continuing public involvement opportunities throughout the transportation planning and programming process;
2. Timely information about transportation issues and processes to citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, other interested parties and segments of the community affected by transportation plans, programs, and projects;
3. Reasonable public access to technical and policy information used in the development of the plan and State Transportation Improvement Program (STIP);
4. Adequate public notice of public involvement activities and time for public review and comment at key decision points, including but not limited to action on the plan and STIP;
5. A process for demonstration explicit consideration and response to public input during the planning and program development process;
6. A process for seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low-income and minority households which may face challenges accessing employment and other amenities;
7. Periodic review of the effectiveness of the public involvement process to ensure that the process provides full and open access to all and revision of the process as necessary.

[1] Title 23 Code of Federal Regulations Part 450.212 Public Involvement

BACKGROUND

The Madera County Transportation Commission (MCTC) is the Regional Comprehensive Planning Agency, Regional Transportation Planning Agency (RTPA), Metropolitan Planning Organization (MPO) and Local Transportation Commission for Madera County. Major responsibilities of MCTC include the development and adoption of the Regional Transportation Plan (RTP), Regional Transportation Improvement Program (RTIP), and other environmental review documents related to transportation and required by state and Federal law. These documents provide a framework for project development and deployment within the region. The RTP in particular, is the regional long-range plan for federally funded transportation projects and serves as a comprehensive, coordinated transportation plan for all governmental jurisdictions within Madera County.

Beginning in July of 2003, MCTC assumed the newly designated role of MPO for Madera County. An MPO is the local decision making body that is responsible for carrying out the metropolitan transportation planning process and must be designated for each urban area with a population of more than 50,000 people. A Federal Register Notice regarding Qualifying Urban Areas for Census 2000 was published on May 1, 2002, listing 76 newly qualified urban areas for 2000 that were not part of an urban area in 1990. The City of Madera is among the new urban areas, with an urban population of 58,027 within the new urban boundary established by the Census Bureau. The Madera metropolitan boundary area shall cover the entire county of Madera.

The MPO's role in the transportation planning process is to foster intergovernmental coordination; undertake comprehensive regional planning with an emphasis on transportation issues; provide a forum for citizen input into the planning process; and to provide technical services to its member agencies.

In order to accomplish the objectives and responsibilities of a comprehensive transportation program, MCTC has established working relationships with a number of state, regional and local agencies. These Memorandum of Understandings (MOU) provide a framework for the planning process, which ultimately result in the delivery of safe, efficient, and environmentally sensitive transportation projects.

In conjunction with a coordinated agency effort, the inclusion of public input is necessary. MPOs are required to solicit the public's input and the methods for participation shall be documented in the Public Participation Plan. This plan shall develop protocols to ensure active public participation in the development of all transportation planning activities.

REGULATORY SETTING

Regulations governing public involvement are the crux of MCTC's Public Participation Plan. MCTC will strive to meet and in select instances exceed these requirements to best serve the community's rights and needs.

Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)

On August 10, 2005, the President signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). With guaranteed funding for highways, highway safety, and public transportation totaling $244.1 billion, SAFETEA-LU represents the largest surface transportation investment in our Nation's history. The two landmark bills that brought surface transportation into the 21st century—the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21)—shaped the highway program to meet the Nation's changing transportation needs. SAFETEA-LU builds on this firm foundation, supplying the funds and refining the programmatic framework for investments needed to maintain and grow our vital transportation infrastructure.

SAFETEA-LU addresses the many challenges facing our transportation system today – challenges such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment – as well as laying the groundwork for addressing future challenges. SAFETEA-LU promotes more efficient and effective Federal surface transportation programs by focusing on transportation issues of national significance, while giving State and local transportation decision makers more flexibility for solving transportation problems in their communities.

SAFETEA-LU legislation also requires MCTC — when developing the Regional Transportation Plan(RTP) and the Transportation Improvement Program (TIP) — to coordinate transportation plans with expected growth, economic development, environmental protection and other related planning activities within our region. Toward this end, this Public Participation Plan outlines key decision points for consulting with affected local, regional, state and federal agencies and Tribal governments.

The Ralph M. Brown Act (Government Code sections 54950-54962)

The Ralph M. Brown Act governs meetings and actions of governing board members of local public agencies and their created bodies. Requirements of the Brown Act also apply to any committee or other subsidiary body of a local agency, whether permanent or temporary, decision-making or advisory, which is created by such a governing board. The Brown Act sets minimum standards for open meetings relative to access to public, reasonable regulations ensuring the public's right to address the agency, including regulations to limit the amount of time allocated for public testimony. The MCTC Board and its standing committees all adhere to these requirements involving proper noticing, access and the ability to address the Board and committees.

The Brown Act requires the MCTC Board to conduct its business in meetings open to the public and allows boards to meet in private to discuss such issues as personnel, litigation, and labor negotiations. Time constraints for unscheduled comments may be limited to three minutes; however MCTC encourages citizens to provide written copies of their presentation to the Board if the statement is longer than the allotted time. If citizens are unable to attend a meeting in person, relevant written comments submitted to staff will be presented to the respective governing body.

Americans with Disabilities Act

The Americans with Disabilities Act of 1990 (ADA) requires involving the community, particularly those with disabilities, in the development and improvement of public services and capital facilities. Meetings and hearings must be held in ADA compliant buildings. Special accommodations must be made to assist those with disabilities to participate in meetings, planning and programming activities.

Title VI of the Civil Rights Act of 1964

Title VI of the Civil Rights Act of 1964 requires that transportation planning and programming be non-discriminatory on the basis of race, color, national origin or disability. The federal statute was further clarified and supplemented by the Civil Rights Restoration Act of 1987 and a series of federal statutes enacted in the 1990s relating to the concept of environmental justice. The fundamental principles of environmental justice include:

- Avoiding, minimizing or mitigating disproportionately high and adverse health or environmental effects on minority and low-income populations;
- Ensuring full and fair participation by all potentially affected communities in the transportation decision-making process; and
- Preventing the denial, reduction or significant delay in the receipt of benefits by minority populations and low-income communities.

Executive Orders

An Executive Order is an order given by the President to federal agencies. As a recipient of federal revenues, MCAG assists federal transportation agencies in complying with these orders.

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

In February 1994, President Clinton signed Executive Order 12898, Federal Actions to Address Environmental Justice for Minority Populations and Low-Income Populations, which mandates that federal agencies make achieving environmental justice part of their missions. This order requires that disproportionately high and adverse human health or environmental effects on minority and low-income populations be identified and addressed in order to achieve environmental justice. Minority

populations are defined in the order as Black/African-American, Hispanic, Asian/Pacific Islander, American Indian and Alaskan Native. Low-income populations are defined in the order as persons whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines, with those at 0 percent of median income classified as low income and those at 50 percent of median income classified as very-low income.

Executive Order 13166: Improving Access to Services for Persons with Limited English Proficiency

Executive Order 13166 states that people who speak limited English should have meaningful access to federally conducted and federally funded programs and activities. It requires that all federal agencies identify any need for services to those with limited English proficiency and develop and implement a system to provide those services so all persons can have meaningful access to services.

2008 California Legislation

Under a new state law (SB 375, Steinberg, Chapter 728, 2008 Statutes), MCTC must develop a Sustainable Communities Strategy to integrate planning for growth and housing with long-range transportation investments, including goals for reducing greenhouse gas emissions for cars and light trucks.

As required by the legislation, MCTC shall develop a sustainable communities strategy (SCS) and alternative planning strategy (APS), if needed, as an additional element of the regional transportation plan. The legislation includes specific public participation requirements for the development of the SCS and APS, if needed, which have been addressed in the PPP. A summary of these new requirements are listed below.

- Expanded stakeholder groups and consultation with agencies;
- Inclusion of multiple workshops and public hearings to inform the public regarding the development of the RTP and SCS/APS; and
- Broaden visual presentation of the RTP and SCS/APS.

Public Utilities Code § 99238.5

The Transportation Development Act (TDA) also known as the "Mills-Alquist-Deddeh Act" was established by the State Legislature in 1971. The TDA provides one of the major funding sources for public transportation in California. Section 99238.5 addresses the role of public participation in the unmet transit needs finding process. It also requires a public hearing.

(a). The transportation planning agency shall ensure the establishment and implementation of a citizen participation process appropriate for each county, or counties if operating under a joint powers agreement, utilizing the social services transportation advisory council as a mechanism to solicit the input of transit dependent and transit disadvantaged persons, including the elderly, handicapped, and persons of limited means. The process shall include provisions for at least one public hearing in the jurisdiction represented by the social services

transportation advisory council. Hearings shall be scheduled to ensure broad community participation and, if possible, the location of the hearings shall be rotated among the various communities within the advisory council's jurisdiction. Notice of the hearing, including the date, place, and specific purpose of the hearing shall be given at least 30 days in advance through publication in a newspaper of general circulation. The transportation planning agency shall also send written notification to those persons and organizations which have indicated, through its citizen participation or any other source of information, an interest in the subject of the hearing.

(b). In addition to public hearings, the transportation planning agency shall consider other methods of obtaining public feedback on public transportation needs. Those methods may include, but are not limited to, teleconferencing, questionnaires, tele-canvassing, and electronic mail.

Other Requirements

A number of other federal and state laws call on MCTC to involve and notify the public in its decisions. MCTC complies with all other public notification requirements of the California Public Records Act, the California Environmental Quality Act, as well as other applicable state and federal laws.

GOALS, OBJECTIVES AND POLICIES

The effectiveness of any program and policy plan depends upon its success in meeting the expectations of the public. Further, plans and programs need to be reassessed periodically to determine if the public's evolving needs and expectations are adequately provided for through the plan. In order to ensure that this occurs, the public must be kept informed of activities and must be given a meaningful opportunity to participate in the development and review of public policy. Thus it is important to have an ongoing program to involve citizens through the use of advisory committees, public workshops, press releases and other public outreach activities.

Public Participation Goal

The public involvement process for transportation planning shall provide complete information, timely public notice, and full access to key decisions; and shall support early and continuing involvement of the public. Such federal legislation has placed an increased emphasis upon effective community involvement and MCTC continues its efforts to explore ways to reach a larger audience to provide information, develop public awareness and to facilitate an enhanced level of public involvement in the decision making process.

A. **Objective 1: Public Access** The public shall be provided timely notice and reasonable access to information about transportation issues and processes.

Policy 1.1 MCTC plans and documents shall be made available for the public to review at the MCTC office as well as on the MCTC web site. Copies of the Regional Transportation Program (RTP) shall be distributed to all public libraries in Madera County, local planning departments and other participating agencies, and through the Technical Advisory Committee.

Policy 1.2 Notice and agendas of MCTC Board and Committee meetings shall be available to the public 72 hours before they occur, except in cases of emergency meetings when 24 hours is allowed under The Brown Act. Agendas and Minutes will be placed on the MCTC website at: www.maderactc.org.

Policy 1.3 MCTC shall provide reasonable access to technical and policy information used in the development of plans, the Regional Transportation Plan and the Transportation Improvement Programs.

Policy 1.4 In compliance with the Americans with Disabilities Act, individuals needing special accommodations to participate in meetings should contact MCTC at least three working days prior to the scheduled meeting.

Policy 1.5 Meetings and workshops of the MCTC Board and its advisory committees shall be held in ADA-compliant venues. Further accommodations will be evaluated upon request.

Policy 1.6 Meetings and workshops of the MCTC Board and its advisory committees are open to the public, except as allowed by The Brown Act.

B. Objective 2: Public Outreach -- Opportunities shall be created for all segments of the public to learn and become informed about issues and proposals under consideration by MCTC, particularly those communities which may be directly affected by the outcome.

Policy 2.1 Information pertaining to the adoption, revision, or amendment of all MCTC plans and transportation project priorities shall be available 72 hours prior to the date of the final action, unless in the course of an emergency meeting as allowed under The Brown Act.

Policy 2.2 MCTC shall inform the public about issues and proposals under consideration through public notices, workshops, the "Go Madera" newsletter, website, or other appropriate means, during the development of transportation plans, program, studies, and projects for which MCTC is responsible.

Policy 2.3 MCTC shall annually review the Public Participation Plan in terms of effectiveness in soliciting broad-based public input and inclusiveness of transportation stakeholders and traditionally underserved groups.

Policy 2.4 Madera County contains significant Hispanic and Spanish-speaking populations. MCTC will continue to outreach to those communities through appropriate available media that serves minority communities.

Policy 2.5 MCTC is aware that Native American outreach differs from traditional public outreach. Native American Tribes are sovereign nations, with governments that have jurisdiction over specific territories and individuals and therefore must be involved on a government-to-government basis. Tribal governments must be formally notified of agency actions and proposals and should be given the same courtesies and opportunities for participation and review that are given to other governmental entities. It is not enough to simply inform tribal governments at the end of the planning process, but rather they should be included from the initial stages of development. Such "consultations" shall be arranged when necessary.

C. Objective 3: Public Input -- Consideration of public input shall be an integral part of MCTC decision-making process.

Policy 3.2 MCTC shall provide all significant public comments pertaining to the plans and projects for which MCTC is responsible to the Board prior to any action being taken.

Policy 3.3 MCTC shall provide an opportunity for the public to comment during the MCTC Policy Board meeting.

PUBLIC NOTIFICATION AND PARTICIPATION PROCEDURES

A variety of public notification and participation procedures will be used to encourage the early and continuous involvement of citizens, jurisdictions, communities and other interests in the planning process and the decisions and actions. They will include, but are not limited to, the following:

I. Meetings

MCTC Board meetings are generally held on the third Wednesday of each month. The meetings are held at 3:00 pm in the MCTC Offices at 2001 Howard Rd. Suite 201, Madera, California 93637. A public comment period is always available at the beginning of each meeting. All MCTC Board meetings are open to the public.

A. Agendas

MCTC Board agendas will be posted at least 72 hours before regular meetings or 24 hours before special meetings. The agendas will be posted at the following locations to the extent possible:

i. Madera County Transportation Commission entrance, located at 2001 Howard Rd, Suite 201, Madera, California
ii. Agendas shall be made available by regular mail to all upon request
iii. Agenda shall be posted on the MCTC website at www.maderactc.org
iv. Agendas will also be sent to local media outlets

B. Public Notices

Public notices will be used to inform the general public and media of workshops, and public hearings as appropriate.

C. Public Hearings

MCTC shall hold or sponsor public hearings or public meetings whenever appropriate or in accordance with applicable statutory requirements. The criteria shall include whether there is: substantial controversy concerning the proposed action, substantial interest in holding the hearing, or a request for a hearing by another agency with jurisdiction over the action.

i. Public hearings are held prior to the MCTC Policy Board's actions, to present and solicit information from the public regarding transportation issues. They can be a formal means to gather citizen comments and positions from all interested parties, for the public record and as an input into the decision making process.

ii. SAFTEA-LU and state law requires public hearings for the adoption of major plans and programs such as the Federal Transportation Improvement Program, Regional Transportation Plan, Unmet Transit Needs, and air quality conformity determinations.

iii. Unless otherwise required by statute, MCTC will publish one public notice in a general circulation newspaper citing the time, date and place of the hearing at least ten days in advance of that hearing. That notice will instruct individuals needing special accommodations to contact MCTC at least three working days prior to the scheduled meeting.

iv. Public Hearings will be held in facilities that are accessible to people with disabilities.

vi. MCTC will accept written comments from the public during the period between the notice and the hearing date. These comments will be considered part of the public record.

vii. Staff will accept questions and provide clarification on issues raised by the public.

viii. Certain plans and programs will include the required review periods noted below. This specific review period will allow agencies involved in the consultation process and the public to submit written comments to the draft document and supporting material. MCTC acknowledges that there may be other plans and programs not listed below for which a specified review and comment period is appropriate:

a. Regional Transportation Plan and Conformity determinations for the RTP . . . . . 30 days
b. Federal Transportation Improvement Program and conformity determinations for the FTIP . . . . 30 days
c. Transportation Plan and FTIP amendments . . . . . 14 days
d. Transportation Plan and FTIP amendments that only add or delete exempt projects . . . . 7 days
e. Air quality Conformity Determinations . . . . . 30 days
f. Bicycle Plans . . . . . 30 days
g. Unmet Transit Needs Hearing . . . . . 30 days
h. Public Participation Policy . . . . . 45 days
i. Disadvantaged Business Enterprise Program . . . . . .45 days

II. Publications

The Brown Act requires that written materials provided to the MCTC Board be made available to the public upon request. All materials are available for viewing at the MCTC office or on the MCTC website.

A. Reports

i. Copies of the draft and final reports will be made available to member agencies as well as the public. The first copy will be free, after that if appropriate, a charge will be incorporated to offset copying costs.

ii. These reports can include but are not limited to the: Regional Transportation Plan, Federal Transportation Improvement Plan, the Public Participation Plan, the Regional Bicycle Plan, Annual Project Listings, etc.

B. Newsletters

i. MCTC produces and publishes a quarterly newsletter, "Go Madera", that is distributed to stakeholders, elected and public officials, and members at large. MCTC will make copies available to anyone interested. Both printed and electronic copies are available, with the electronic copies either sent directly to a subscriber's email address or downloaded from the website. Those who wish to be added to the mailing list should contact MCTC staff or visit the website (www.maderactc.org) and subscribe online.

ii. The newsletter purpose is to provide up to date and current information on projects, meetings and important dates.

III. Sustainable Community Development and Alternative Planning Strategy Participation Activities

MCTC shall adopt a public participation plan, for development of the sustainable communities strategy and an alternative planning strategy, if any, that includes all of the following:

i. 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.

ii. Consultation with congestion management agencies, transportation agencies, and transportation commissions.

iii. 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. At least one workshop shall be held in each county in the region. Each workshop, to the extent practicable, shall include urban simulation computer modeling to create visual representations of the sustainable communities strategy and the alternative planning strategy.

iv. Preparation and circulation of a draft sustainable communities strategy and an alternative planning strategy, if one is prepared, not less than 55 days before adoption of a final regional transportation plan.

v. At least two public hearings on the draft sustainable communities strategy in the regional transportation plan and alternative planning strategy, if one is prepared. 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.

vi. A process for enabling members of the public to provide a single request to receive notices, information, and updates.

IV. Other Public Notification and Participation Efforts

A. Website – MCTC maintains a website (www.maderactc.org) that is targeted to a wide range of audiences ranging from transit riders seeking bus schedules to transportation professionals, elected officials and news media seeking information on particular programs, projects and public meetings.

The site provides information about MCTC's projects and programs, the agency's structure and governing body, local transportation sales tax information and upcoming meetings and workshops. It contains the names, email addresses and phone numbers for staff, MCTC's current planning documents, quarterly newsletters and air quality information.

B. Public Speaking – MCTC staff welcome opportunities to speak before public groups, school groups and interested organizations to provide transportation information on a regional basis.

EVALUATION AND MONITORING

In order to regularly evaluate the Public Involvement Program, five performance measures are identified.

1. The **accessibility** of the outreach process to serve diverse geographic, language and ability needs.
2. The extent or **reach** of the process in involving and informing as many members of the public as possible.
3. The **diversity** of participants in the outreach process and its ability to reflect the broad range of ethnicities, incomes and special needs of Madera County residents.
4. The **impact** of public outreach and involvement on the plan/program and on Policy Board actions.
5. The **satisfaction** with the outreach process expressed by participants.

For each of these five performance measures there is a set of quantifiable indicators, which will be applied as appropriate to plans/programs.

1. **Accessibility Indicators:**
    - Meetings are reasonably accessible by transit.
    - Meetings are accessible under the requirements of the American with Disabilities Act.
    - Meetings will be linguistically accessible to participants on a project by project basis.

2. **Reach Indicators:**
    - Number of comments logged during the comment process and review period.
    - Number of individuals actively participating in outreach program.

3. **Diversity Indicators:**
    - Demographics of targeted individuals and organizational workshops.
    - Percentage of targeted organizations and groups participating in at least one workshop.
    - Participants represent a cross-section of people of various interests, places of residences, and primary modes of travel.

4. **Impact Indicators:**
    - Significant written comments received will be logged, analyzed, summarized, and communicated in time for consideration by staff and the Policy Board.

5. **Participant Satisfaction:** ***(This information would be obtained via written surveys available at workshops and public meetings)***
    - Accessibility to meeting locations.
    - Materials presented in appropriate languages for targeted audiences and upon request.
    - Adequate notice of the meetings provided.
    - Sufficient opportunity to comment.
    - Educational value of presentations and materials.
    - Clear information at an appropriate level of detail.
    - Clear understanding of items that are established policy versus those that are open to public influence.

- Quality of the discussion.
- Responsiveness to comments received.

COMMITTEES

The Madera County Transportation Commission is organized into a Board of Directors supported by the Transportation Policy Committee and the Technical Advisory Committee. MCTC staff includes an Executive Director, three Transportation Planners, and one Administrative Assistant. There is currently one standing committee -- the Social Services Transportation Advisory Council (SSTAC), which reports through the Technical Advisory Committee. The relationship between the Board, its staff and the committees is illustrated below.

Policy Board

Policy decisions are made by the Madera County Transportation Commission Policy Board. The Commission Board of Directors is comprised of three (3) members from the Madera County Board of Supervisors; two (2) members from the Madera City Council; and one (1) member from the Chowchilla City Council.

The Transportation Policy Committee has the same membership as the Board with the addition of one (1) person representing the Caltrans District 06 Director. This committee reviews transportation plans and programs prior to action by MCTC, with particular emphasis on compliance with applicable state and federal planning and programming requirements. Both Board meetings are open to the public with time allocated at the beginning of each meeting for public comments not on the agenda.

Technical Advisory Committee (TAC)

The Technical Advisory Committee (TAC) provides technical advice and recommendations to the MCTC Policy Board on transportation issues affecting the region. The TAC includes the Madera County Road Commissioner, Madera County Planning Director, City of Madera Engineer, City of Madera Planning Director, City of Chowchilla Administrator, and one representative from Caltrans District 06. The TAC reviews staff work conducted pursuant to the Overall Work Program; advises MCTC and Transportation Policy Committee on transportation issues; and makes recommendations on planning and programming actions to be taken by MCTC. The TAC also serves as a forum to exchange transportation related information among member agencies and the public. All TAC meetings are open to the public and provide an opportune time for the pubic to access technical and policy information used in the development of plans and projects.

Social Services Transportation Advisory Council (SSTAC)

In accordance with state law, the Madera County Transportation Commission has established a citizen advisory group known as the SSTAC to aid in its review of transit issues with emphasis on the annual identification of transit needs within Madera County. The Social Services Transportation Advisory Council serves as a citizen advisory committee to MCTC on matters related to public transportation needs of Madera County residents. The SSTAC generally has three meetings each year.

The first meeting is held in March prior to the “unmet transit needs” public hearing. This initial meeting is used to familiarize the members with their role as advisors to MCTC and to select Council officers. The second meeting is scheduled following the “unmet transit needs” hearing to provide the Council with an opportunity to consider commentary presented at the hearing. The Council works with staff to develop recommendations for MCTC towards finding that public transportation needs that are reasonable to meet are being met. This includes the needs of transit dependent and transit disadvantaged persons, including the elderly, disabled and persons of limited means. All SSTAC meetings are open to the public. Citizens can request to be placed on the mailing list to receive committee agendas.

APPENDIX D
RTP & SCS WORKSHOP SERIES #1 SYNOPSIS

MCTC Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) Public Workshop Series #1 Summary

Overview

Between February and April 2013, the Madera County Transportation Commission (MCTC) held the first series of public workshops regarding the 2014 RTP/SCS throughout Madera County on the following dates and within the following subregions:

- February 12, Oakhurst Community Center, Oakhurst, CA
- February 13, 2013, Madera Ranchos, CA
- February 19, 2013, Madera CA
- February 21, 2013, Chowchilla, CA
- April 6, 2013, Camarena Health Center, Madera, CA [Environmental Justice (EJ) Workshop]
- April 21, 2013, Madera Community Garden Earth Day Event, Madera, CA (EJ Workshop)

VRPA Technologies, Inc. (VRPA), the prime consultant working with MCTC to develop the RTP/SCS, conducted each of the workshops considering the following objectives:

- Educate the public about the purpose of the RTP/SCS and why it is being prepared by MCTC
- Provide information about the MCTC 2014 RTP and SCS including population, housing and employment growth expected between 2013 and 2040, and the RTP/SCS development process and schedule
- Give the public an opportunity to speak with the MCTC/VRPA Project Team members about the RTP/SCS development and associated legislation
- Identify how the role of the public and stakeholders is important to the success of the RTP/SCS
- Receive feedback on:
  - Demographics of attendees
  - Attendee knowledge of livable communities concepts and potential strategies using polling
  - Transportation and land use needs/issues and environmental constraints/benefits using a mapping exercise

Table 1 below provides an overview of each Series #1 workshop outreach efforts conducted between February and April 2013.

TABLE 1

MCTC 2014 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)

Series #1 Public Workshop Series Synopsis

EVENT	DATE	TIME	SUBREGION	VENUE	# OF ATTENDEES	PRESENTATION LANGUAGE
1	February 12, 2013	5:30 - 8:00 PM	Oakhurst	Oakhurst Community Center	36	English
2	February 13, 2013	5:30 - 8:00 PM	Madera Ranchos	Webster Elementary School Multi-Purpose Room	3	English
3	February 19, 2013	5:30 - 8:00 PM	Madera	Madera High School Cafeteria	23	English with Translation Equipment for Spanish Speaking Attendees
4	February 21, 2013	5:30 - 8:00 PM	Chowchilla	Chowchilla Civic Center Plaza - Public Meeting and Training Room	26	English
5	April 6, 2013	9:30 AM - 12:00 PM	Madera	Camarena Health Center	19	Spanish
6	April 21, 2013	11:00 AM - 3:00 PM	Madera	Madera Community Garden	50	Spanish with a few attendees speaking English

Noticing was provided for each of the outreach efforts using the following strategies:

- Paid public notices in the Fresno Bee, Madera Tribune (English Notice and English and Spanish Direct Mailer), Chowchilla News, and Merced Sun-Star
- Free noticing in the Sierra Star
- Distribution of workshop/event notice fliers to businesses and churches in each of the major subregions
- Email blasts to identified stakeholders (approximately 120+) throughout Madera County
- Distribution of notices by EJ stakeholders to community residents

Materials utilized to facilitate outreach efforts included the following:

- Project branding (RTP/SCS logo) and PowerPoint Slide Master
- Workshop Notice Fliers
- PowerPoint Presentation (English and Spanish)
- Polling Exercise (English and Spanish)
- Mapping Exercise materials including maps of various subregions, magnetic boards and magnetic transportation, land use and environmental icons in both English and Spanish
- Sign-in and comment sheets (English and Spanish)
- Directional signs to the venue
- Refreshments
- Donated raffle items

your madera 2040

The following sections provide a synopsis of each major component of the workshop series and EJ outreach events. Feedback and comments not referenced below will be included in final outreach materials related to the RTP/SCS.

Welcome

- Four (4) Workshops

  At each of the first four (4) workshops held in February 2013, Derek Winning welcomed all in attendance, and introduced other MCTC/VRPA staff also in attendance.

- Two (2) EJ Events

  The first EJ workshop was held on April 6, 2013 at the Camarena Health Center, Camarena Health Center representative Mariana Delgado welcomed the attendees in Spanish and VRPA staff person Reyna Castellanos conducted and facilitated the workshop in Spanish. Finally, at the April 21, 2013 Earth Day event at the Madera Community Garden, VRPA staff set-up a booth for event, greeted attendees, and discussed the RTP/SCS process with them in both English and Spanish as they visited the booth.

Workshop/Event Presentations

- Four (4) Workshops

  - PowerPoint Presentation

    Derek Winning (MCTC) and Georgiena Vivian (VRPA) provided an educational PowerPoint presentation that included the following major subjects:

    - ✓ Expected growth within the County and each of the jurisdictions (cities of Chowchilla and Madera and the County of Madera unincorporated area) between 2013 and 2040
    - ✓ How the RTP/SCS process will facilitate investment in the County and in each of the cities and communities while at the same time reducing vehicle trips and increasing walkability and bikeability resulting in reduced greenhouse gases (GHG) and other air emissions.
    - ✓ Defined the concept of livability/walkability focusing on the development of streetscape strategies in Oakhurst, Madera, and Rio Mesa using “best practices” examples in similar communities in the Western United States
    - ✓ An overview of the previous Blueprint planning process and growth/transportation scenarios and how they compare to the potential RTP/SCS growth/transportation scenarios
    - ✓ What the RTP is and why it is required
    - ✓ What the SCS is and why it is required

- ✓ What the purpose of Workshop Series #1 is and why public and stakeholder involvement is critical to the RTP/SCS development process

At the Oakhurst workshop, a significant number of questions were asked of MCTC/VRPA Team staff regarding the RTP, the SCS and the EIR. Detailed explanations and answers were provided to attendees for subjects ranging from Senate Bill (SB) 375, Assembly Bill (AB) 32, transportation funding, MCTC's role, RTP requirements, SCS requirements and the SCS development process, as well as many others. Questions were also posed at each of the other workshops and events. A copy of the PowerPoint presentation can be found on the MCTC website at www.maderactc.org.

- Two (2) EJ Workshops/Events

  - PowerPoint Presentation

    VRPA staff person Reyna Castellanos provided an educational PowerPoint presentation that also included the major subjects highlighted above. Her presentation was conducted completely in Spanish including all answers to all questions posed by attendees. There was not a PowerPoint presentation provided at the EJ Event (Earth Day Event at the Madera Community Garden); however, the presentation was showing on a large TV screen for viewing by event attendees stopping by the booth.

  - Polling Exercise

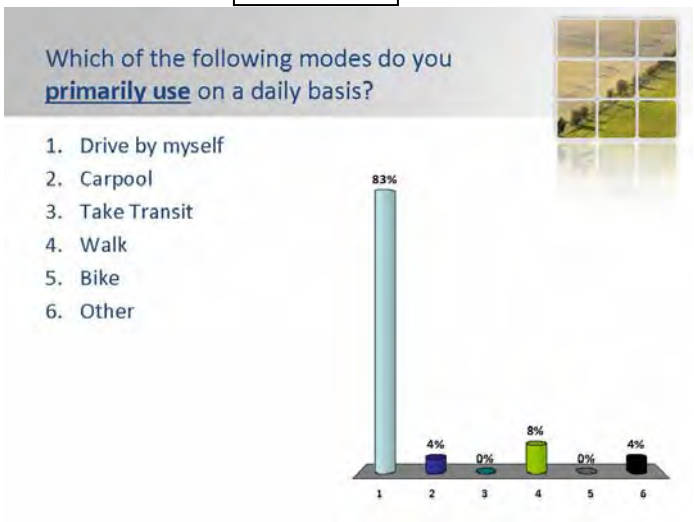
    Georgiena Vivian then conducted an Instant Polling Exercise using Turning Point software and clickers distributed to attendees. Each attendee had the opportunity to select from a series of multiple choice answers for questions posed related to attendee demographics, housing choice, transportation mode choice, other livability issues, and effectiveness of the polling exercise to gain an understanding of the RTP/SCS process and related issues.

    The following selected polling results provide an overview of opinion results that only varied between one subregion vs. another. Results are not provided for Madera Ranchos since only two (2) attendees participated in the polling exercise. Full polling results for all questions posed are available on the project website at www.maderactc.org.

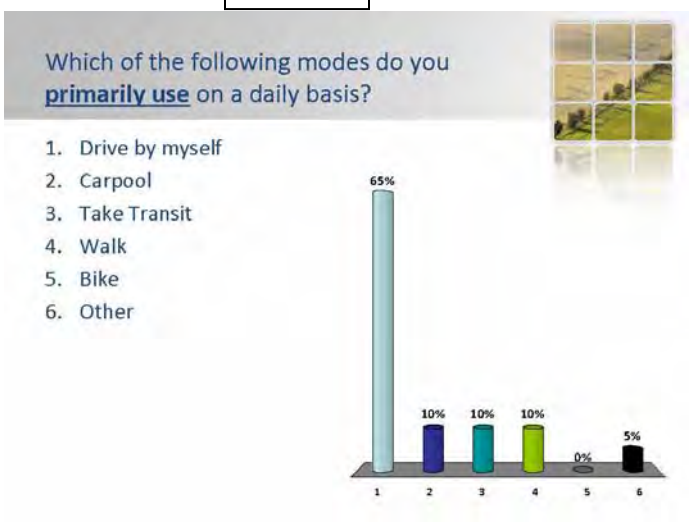
✓ ***Question 7 – Which of the following modes do you primarily use on a daily basis?***

As shown below, Oakhurst and Chowchilla had similar results indicating that 83% and 91% of the attendees drive alone, while for both the Madera and the Madera EJ workshops, lower percentages (65% and 25%) of attendees drive alone and higher percentages use other modes; especially walking (10% and 44%) and transit (10% and 25%) .

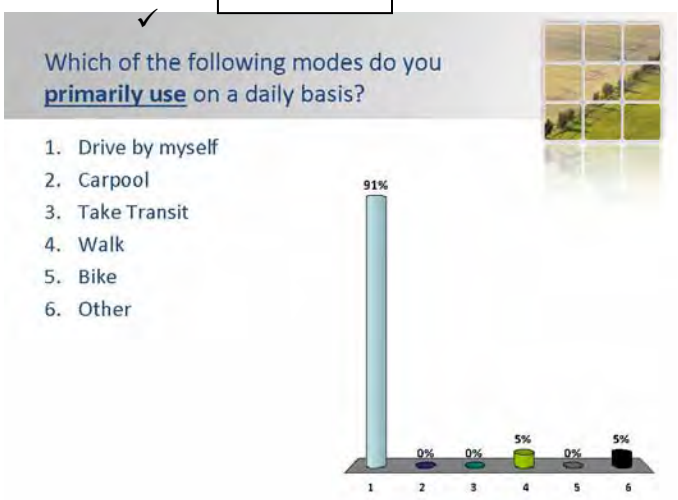
Oakhurst



Madera



Chowchilla

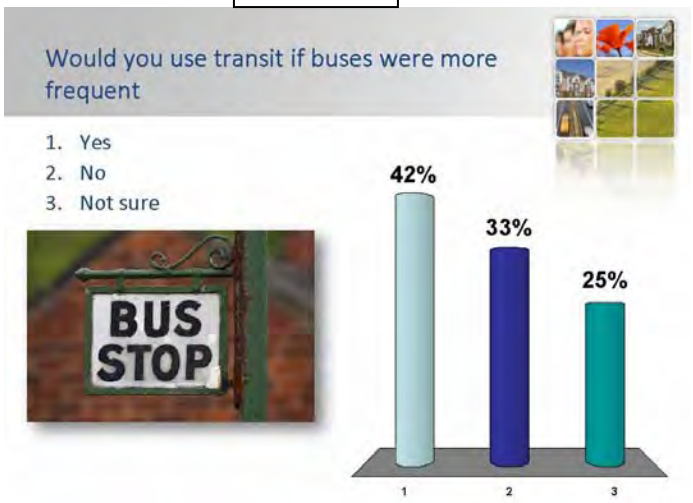


Madera EJ

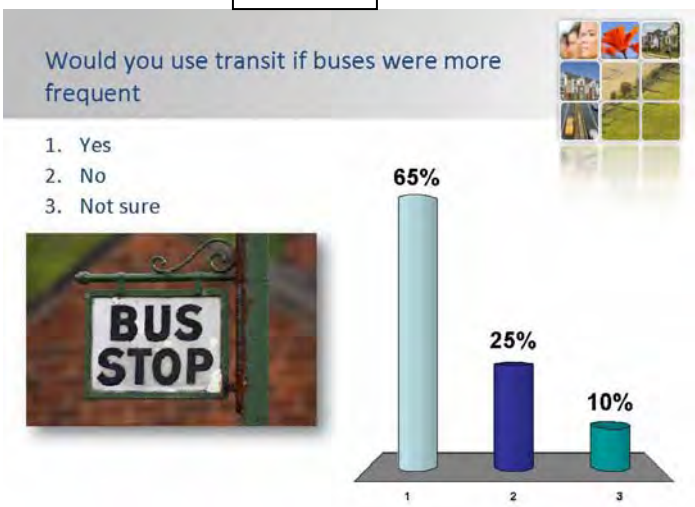
Question 8 – Would you use transit if buses were more frequent?

As shown below, Oakhurst and Chowchilla had similar results indicating that only 42% and 43% of the attendees would use transit if buses were more frequent, while for both the Madera and the Madera EJ workshops, significantly higher percentages (65% and 88%) of attendees would use transit if buses were more frequent.

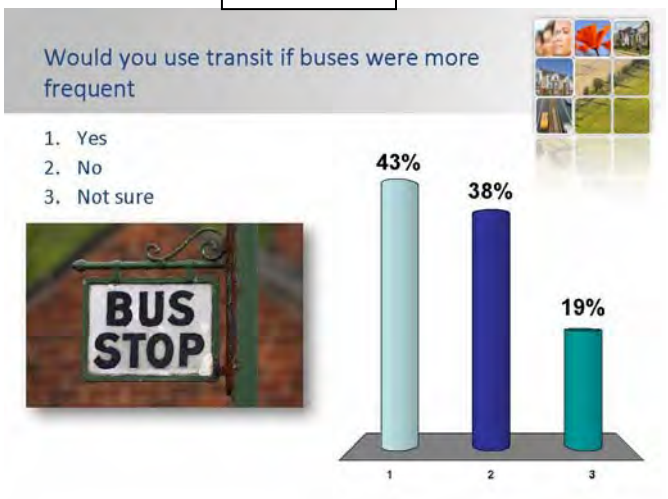
Oakhurst



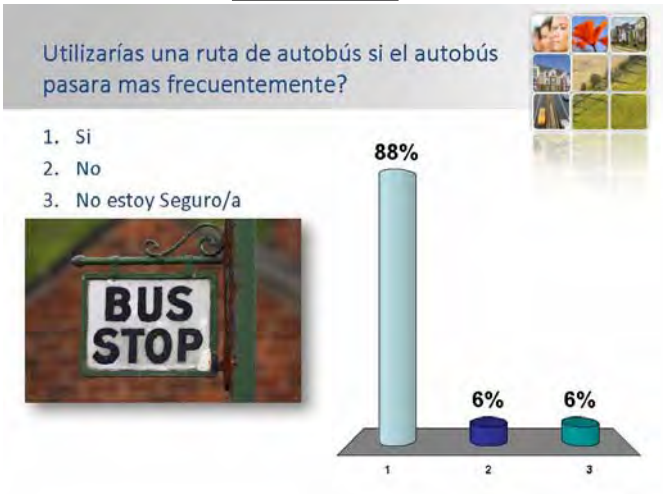
Madera



Chowchilla



Madera EJ



Question 10 – How should we spend our scarce transportation dollars?

As shown below, Oakhurst and Chowchilla had similar results indicating that 39% and 42% of the attendees want scarce funding to be spent on improving local streets and roads, while for both the Madera and the Madera EJ workshops, attendees would want scarce funding spent on enhancing or expanding alternative modes (50% each).

Oakhurst

Madera

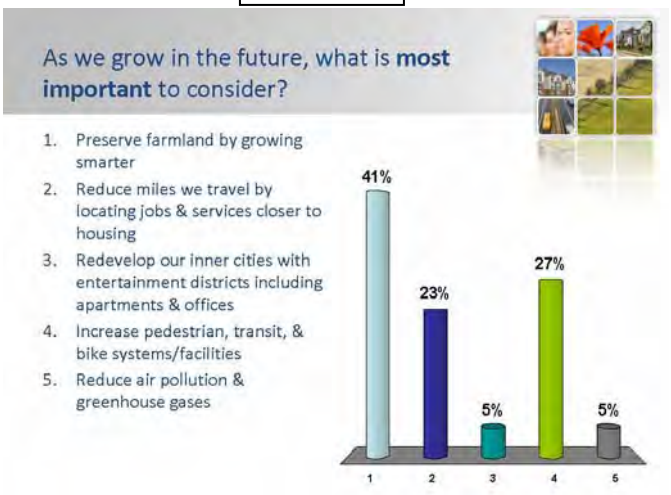
Chowchilla

Madera EJ

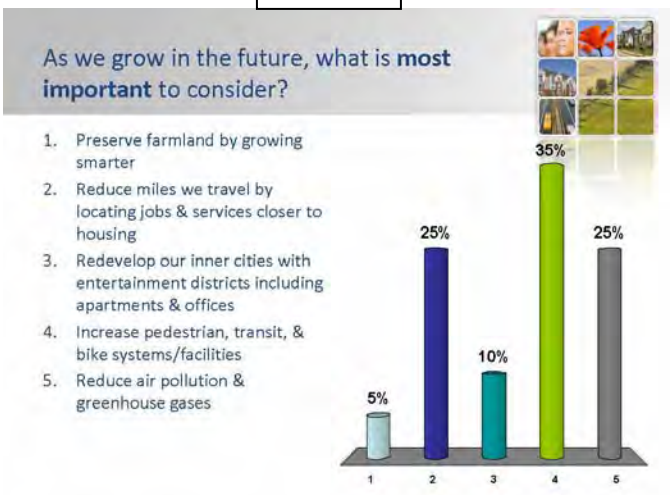
Question 12 – As we grow in the future, what is most important to consider?

As shown below, Chowchilla and Madera EJ had similar results indicating that 45% and 33% of the attendees think that reducing miles we travel by locating jobs & services closer to housing is most important to consider as we grow, while for Oakhurst preserving farmland by growing smarter is most important (41%) and for Madera increasing pedestrian, transit & bike systems/facilities is most important (35%).

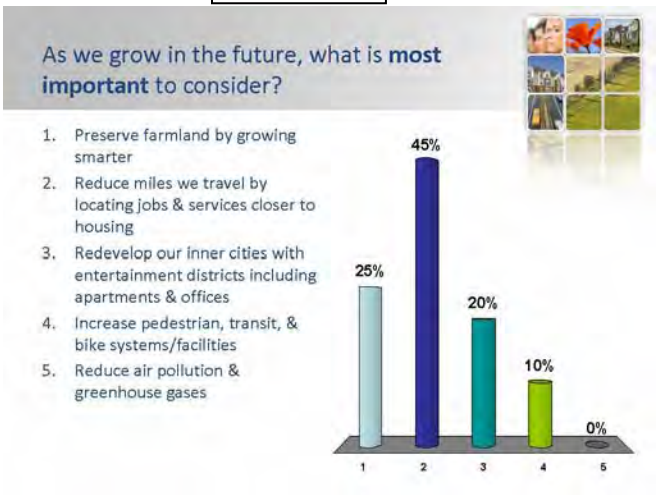
Oakhurst



Madera



Chowchilla

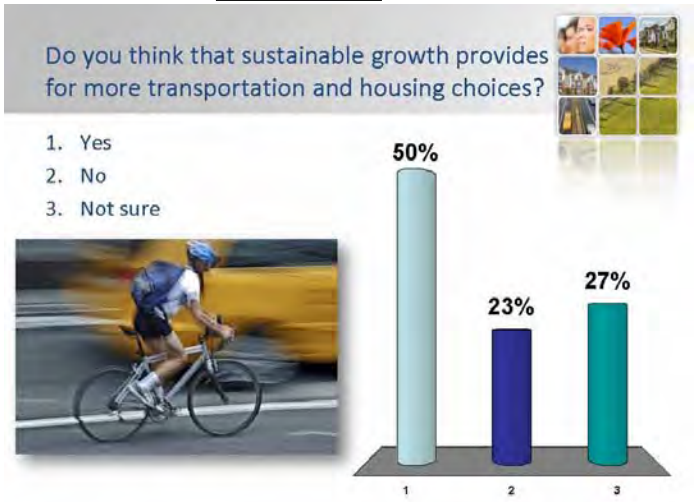


Madera EJ

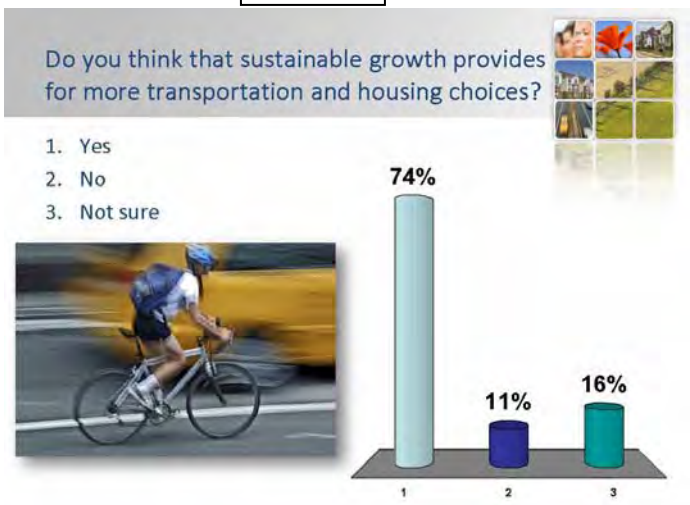
Question 14 – Do you think that sustainable growth provides for more transportation and housing choices?

As shown below, only 50% of Oakhurst attendees agreed that sustainable growth provides for more transportation choices, while Madera, Chowchilla, and Madera EJ had similar results with 74%, 75%, and 100% of attendees agreeing that sustainable growth provides for more transportation choices.

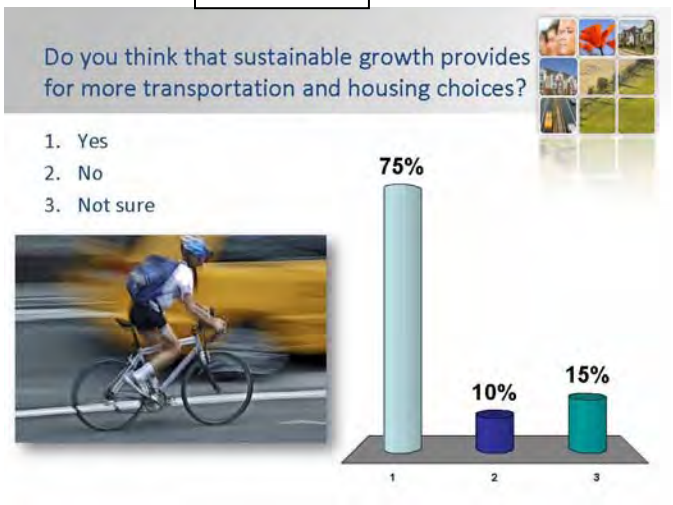
Oakhurst



Madera



Chowchilla

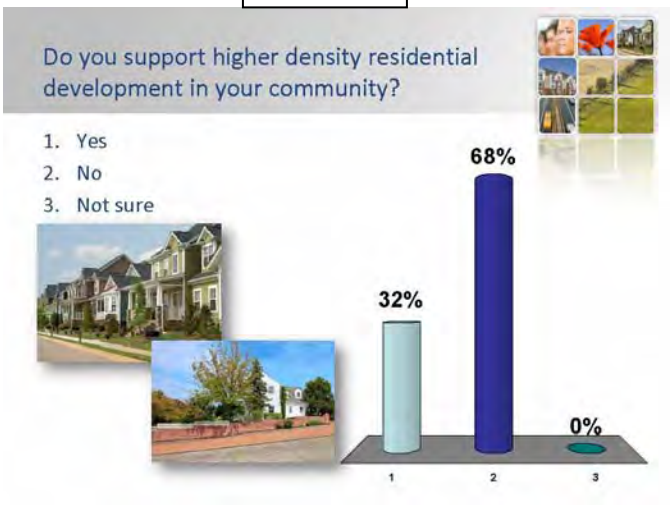


Madera EJ

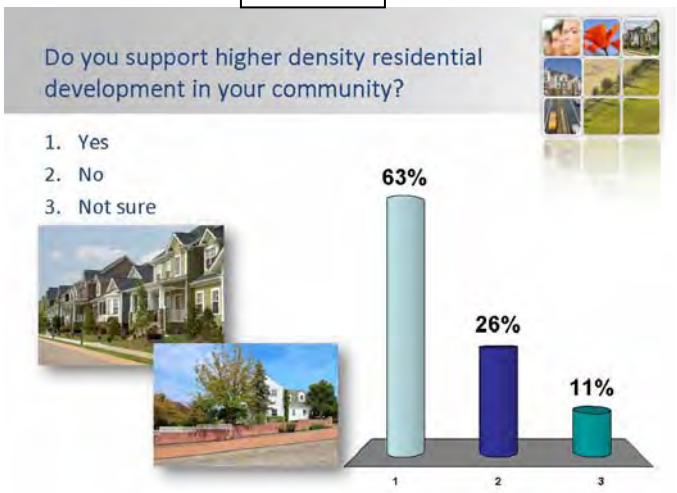
Question 15 – Do you support higher density residential development in your community?

As shown below, Oakhurst and Chowchilla had similar results indicating that a majority (68% and 48%) of the attendees do not support higher density residential development, while for both the Madera and the Madera EJ attendees; a considerable majority does support higher densities.

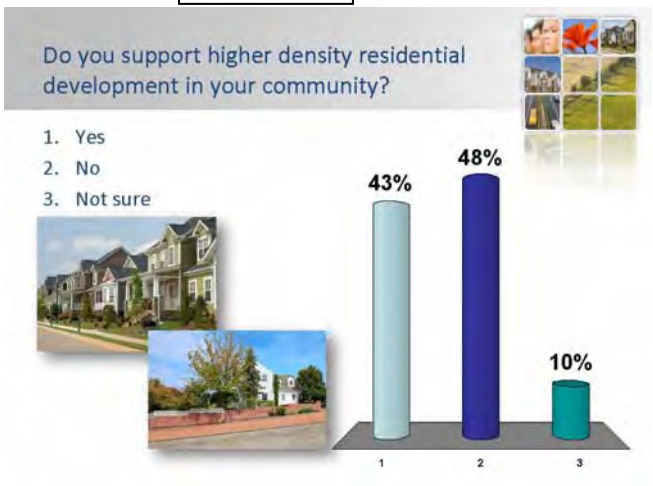
Oakhurst



Madera



Chowchilla



Madera EJ

Question 16 – Do you support a walkable/bikeable streetscape in your community?

Each of the communities (Oakhurst – 72%, Madera - 88%, Chowchilla – 100%, and Madera EJ – 93%) support streetscape improvements.

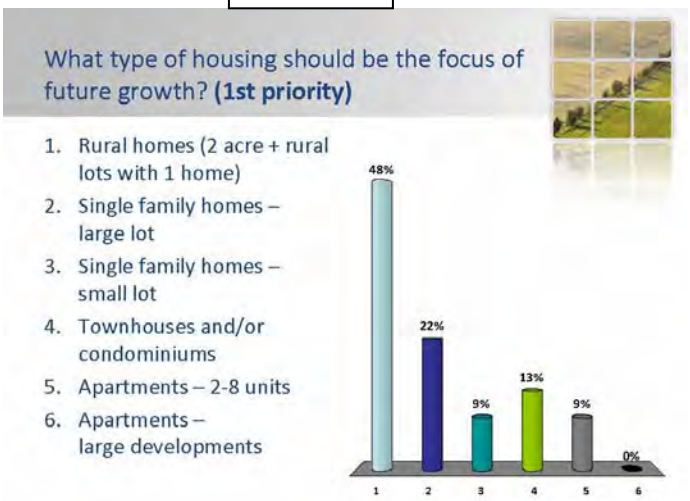
Question 17 – Should the historical approach to land use and transportation planning remain unchanged or would you propose that it be substantially modified?

Each of the communities (Oakhurst – 67% Modified, 72% Substantially Modified, Madera – 0% Modified and 68% Substantially Modified, Chowchilla – 14% Modified & 68 % Substantially Modified, and Madera EJ – 28% Modified & 56% Sunstantially Modified) believe that the historical approach to land use and transportation planning should be modified or substantially modified.

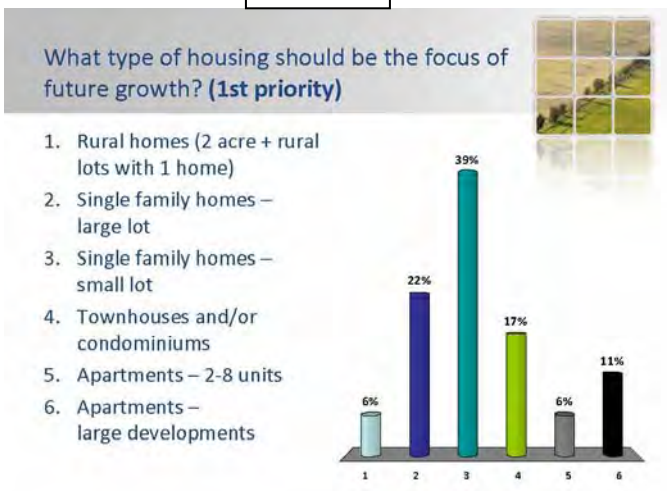
Question 18 – What type of housing should be the focus of future growth?

Oakhurst attendees believe that the focus of future growth should be for rural homes with 2 or more acres per home (48%). A majority of Madera and Chowchilla attendees (39% and 48%) believed that the focus should be on single-family homes with small lots. For the Madera EJ attendees, a majority (41%) believed that the focus should be on single family homes with large lots.

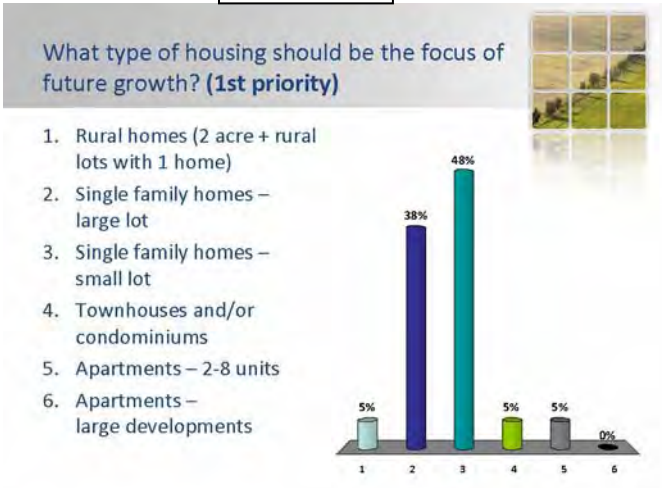
Oakhurst



Madera



Chowchilla



Madera EJ

- Mapping Exercise

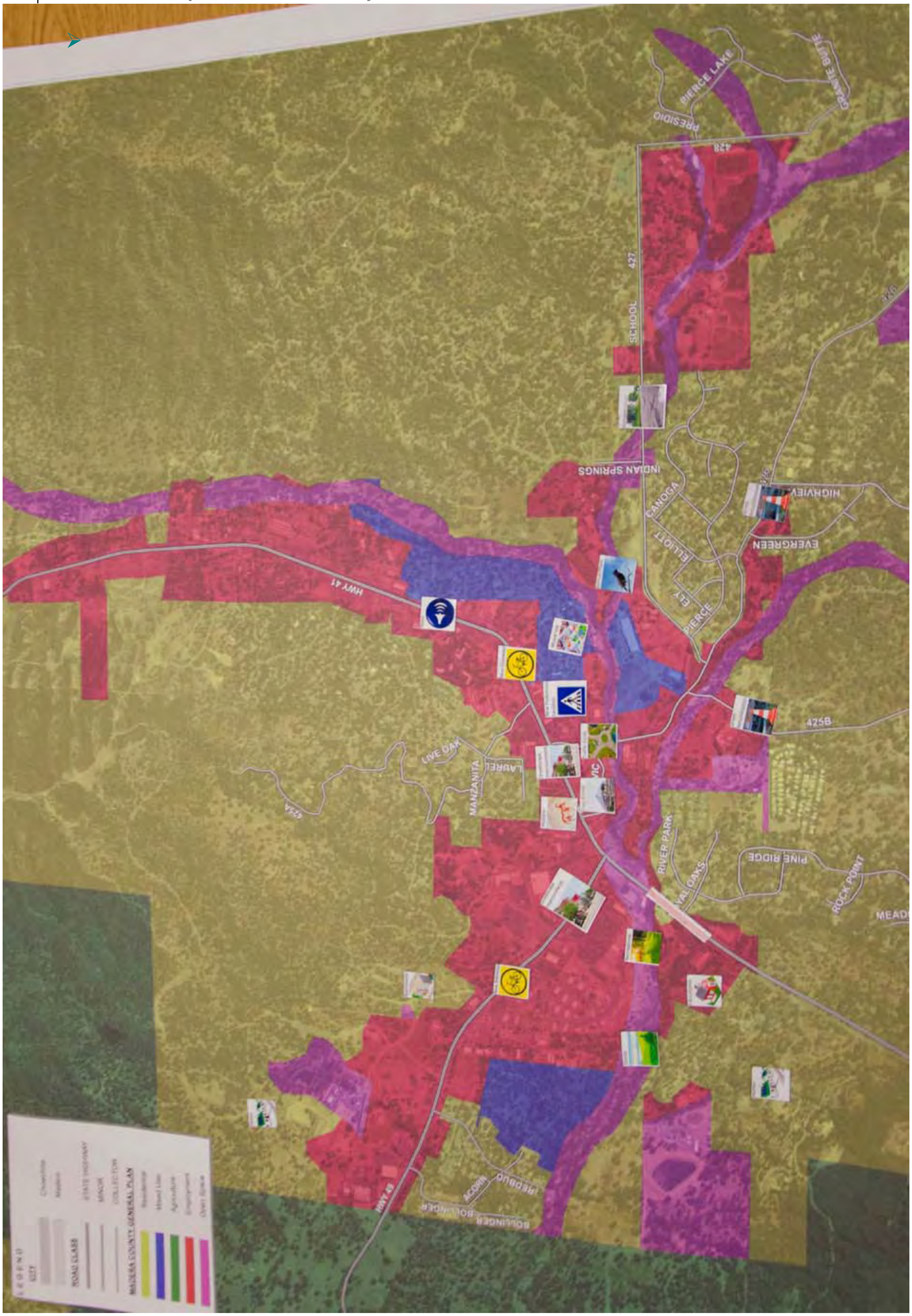
Oversized maps for each of the major subregions in Madera County were mounted on magnetic white boards and attendees were asked to join a break-out group for the mapping exercise. As noted previously, magnetic icons representing transportation improvements, land use types, and environmental constraints or opportunities were provided to each break-out group. The groups were asked to place the icons on the maps of the subregion they were interested in. For the workshop in Oakhurst, a group of three (3) attendees facilitated by Georgiena Vivian placed icons on the Oakhurst area map and then reviewed results with all attendees. A marker was also provided to note thoughts or other issues directly on the maps. The MCTC/VRPA Team was specifically looking for feedback on the following questions:

- Are there areas on the map where new transportation improvements (transit, pedestrian, bicycle, street and highway) are needed?
- Where should new growth (residential uses by type, industrial, shopping centers, office, civic uses, health, educational or other land uses) be located?
- Where are there environmental constraints or issues that should be considered as we plan for future growth and development?

A selected map from each of the workshops and from the EJ workshop and event is provided below with some highlights indicated.

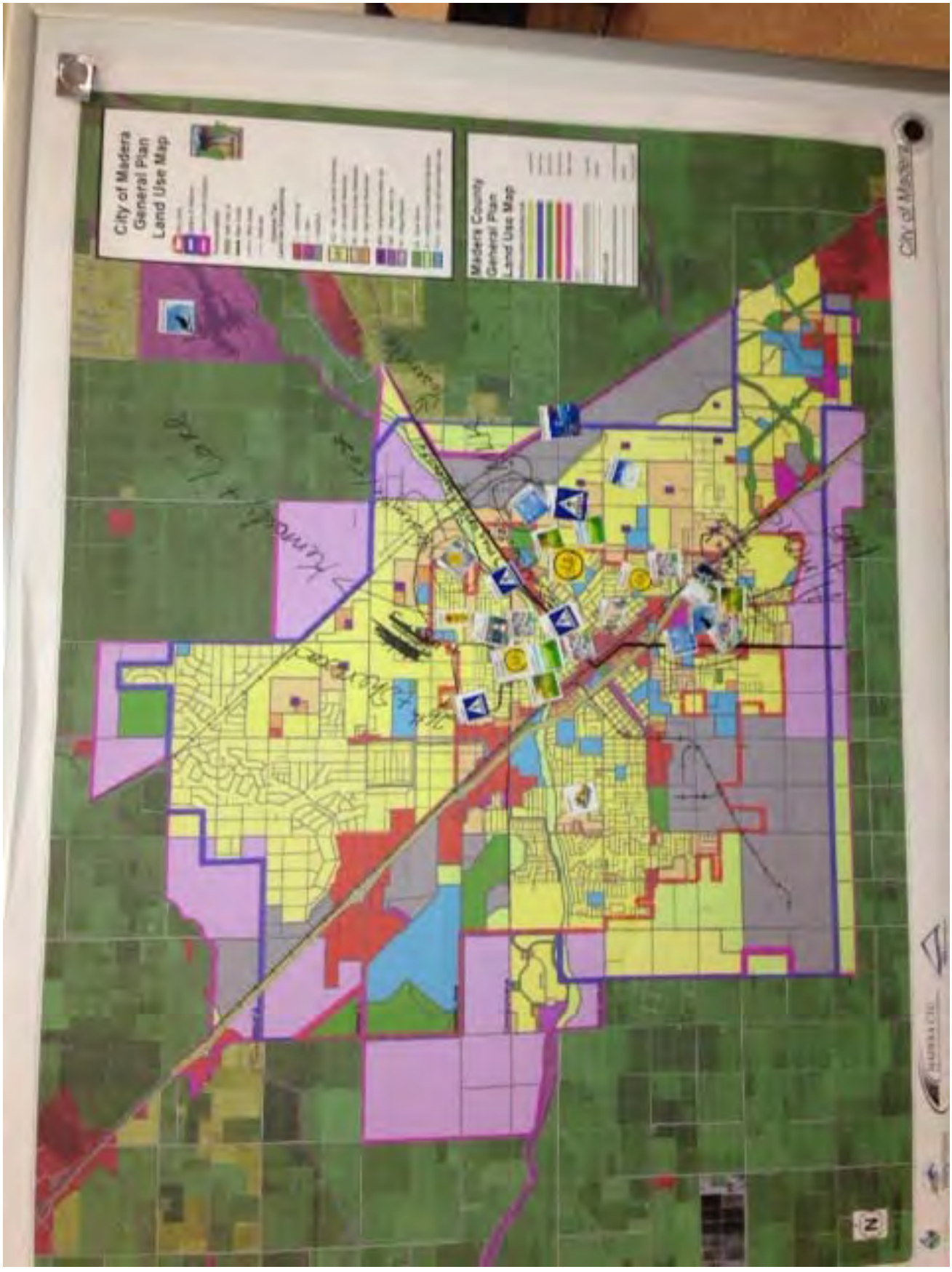
- Oakhurst Workshop Mapping Exercise Results (reference map results on following page - all results are not provided)

1. Streetscape improvements along State Route (SR) 41 and SR 49 through Oakhurst
2. Trail, scenic, and recreational facility improvements along the Fresno River
3. Road rehabilitation along 425B, 426, and 427
4. Bikeway improvements along SR 41 and SR 49
5. Roundabout at Road 426 and Civic Center Drive
6. Civic Center Improvements south of SR 41 along Civic Circle
7. Road widening along SR 41 south of the Fresno River
8. Pedestrian facilities and mixed use west of Civic Circle and south of SR 41
9. Biotic resources along the Fresno River
10. Educational facilities and housing south of Fresno River and west of SR 41
11. Housing and Apartments northwest of SR 41 and SR 49
12. Noise impacts along the north end of SR 41 in Oakhurst


PIERCE LAKE
GRANITE BUTTE
PRESIDIO
428
SCHOOL
427
INDIAN SPRINGS
CANOGA
ELLIOTT
PIERCE
HIGHVIEW
EVERGREEN
HWY 41
425B
LIVE OAK
MANZANITA
LAUREL
425A
RIVER PARK
PINE RIDGE
ROCK POINT
HWY 49
ACORN
REDBUD
BOLLINGER

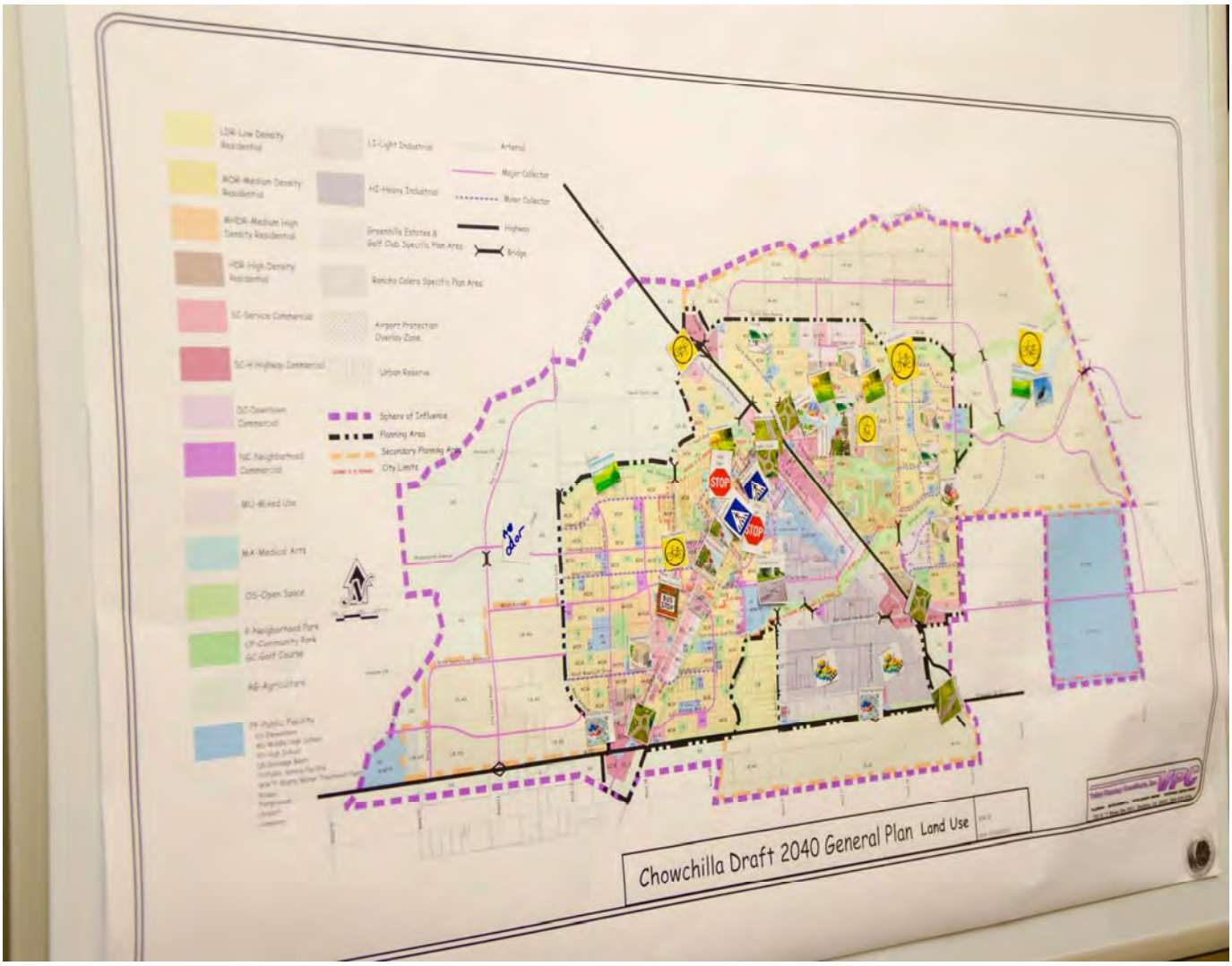
- Madera Workshop Mapping Exercise Results (reference map results on following page – all results are not identified)

1. Streetscape improvements along Yosemite
2. Trail, scenic, and recreational facility improvements along the Fresno River
3. Bikeway improvements in the inner city areas, especially near schools
4. Street rehabilitation improvements in the inner city
5. Biotic resources near SR 99 and Avenue 12
6. Biotic resources along the Fresno River
7. Shopping mall potentially northwest of the city
8. Streetlights within inner city and east of the city
9. Improve Cleveland and Gateway, and other intersecting streets at this major intersection
10. ADA access improvements citywide
11. Reconstruct Rd. 28
12. Burlington Northern Santa Fe (BNSF) Railroad Track noise impacts
13. Traffic signals and stop signs at critically unsafe intersections


City of Madera
General Plan
Land Use Map
Madera County
General Plan
Land Use Map
City of Madera

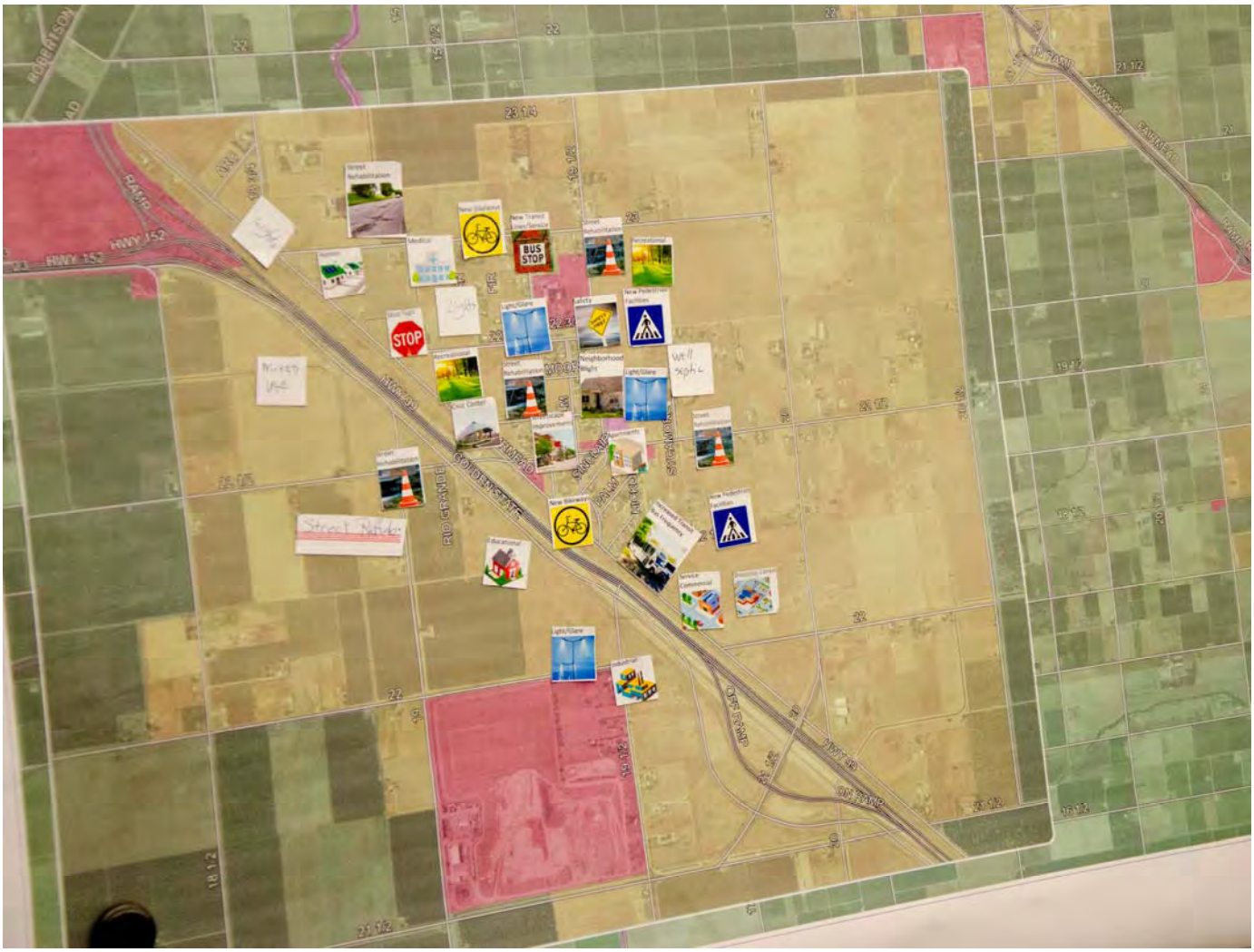
- Chowchilla Workshop Mapping Exercise Results (reference map results below for Chowchilla – all results are not identified)

1. Streetscape improvements along Robinson
2. Pedestrian improvements along Robinson
3. Bikeway improvements along Robinson and north near SR 99 and Ave. 27
4. Street rehabilitation improvements in the inner city and along 5th Street/Road 15
5. Service commercial east of SR 99 at Avenue 26
6. Bus stops and enhanced transit services along Robinson
7. Biotic resources east of the city
8. Stop signs within inner city
9. Industrial development south of the city
10. Roundabouts east or west of SR 99 along Robinson



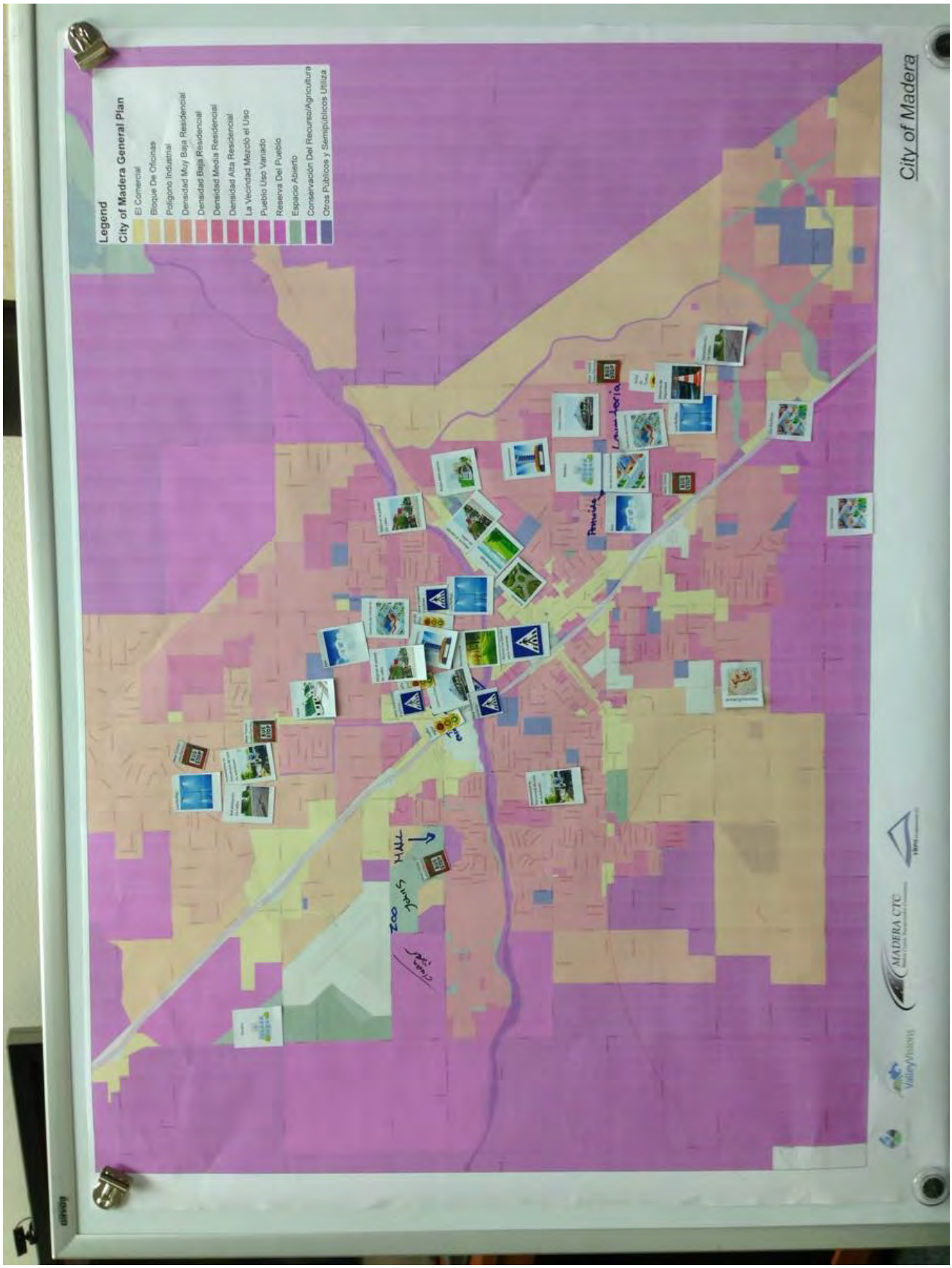
- Chowchilla Workshop Mapping Exercise Results (reference map results below for Fairmead – all results are not identified)

1. Streetscape improvements along Avenue 22 ½
2. Bikeway improvements along Fairmead and along Avenue 23
3. Civic Center at Fairmead and Yates
4. New pedestrian facilities along Ave 23 ¾
5. Safety improvements along Avenue 23 ¾
6. Street lighting along major streets
7. Street rehabilitation improvements along Avenue 22 ½ and along Maple Street
8. Service commercial and shopping center south of town
9. New recreational facilities within inner town



- Madera EJ (Camarena Health Center) Workshop Mapping Exercise Results (reference map results on the following page for Madera EJ – all results are not identified)

1. Streetscape improvements along Yosemite
2. Trail, scenic, and recreational facility improvements along the Fresno River
3. Pedestrian improvements in the inner city areas, especially near schools
4. Round-A-Bout in southeast quadrant
5. Street rehabilitation improvements in southeast area
6. Traffic signals in inner city at critical intersections
7. Streetlights within inner city and east of the city
8. Improve Cleveland and Gateway, etc. intersections
9. Shopping mall in northwest quadrant of the city
10. Enhanced bus services


Legend
City of Madera General Plan
El Comercial
Bloque De Oficinas
Polígono Industrial
Densidad Muy Baja Residencial
Densidad Baja Residencial
Densidad Media Residencial
Densidad Alta Residencial
La Vecindad Mezcló el Uso
Pueblo Uso Variado
Reserva Del Pueblo
Espacio Abierto
Conservación Del Recurso/Agricultura
Otros Públicos y Semipúblicos Utiliza
City of Madera
Laundromat
Zoo
MADERA CTC
ValleyVisions
VRPA TECHNOLOGIES, INC.

- Madera EJ (Earth Day Event) Booth Mapping Exercise Results (reference map results below for Madera – all results are not identified)

1. Better access to Madera City College
2. Light rail or Bus Rapid Transit (BRT) in Madera
3. Stop sign at SR 145 and Juanita to address accidents and unsafe conditions (sight distance problems)
4. Pedestrian improvements in the inner city areas, especially near schools
5. Bicycle facilities along Howard Road and other streets near schools
6. Street rehabilitation improvements in inner city
7. Stop signs in inner city at critical intersections
8. Streetlights within inner city
9. Noise issues associated with Madera Municipal Airport

APPENDIX E
PROOF OF PUBLIC HEARING

Received

JUN - 6 2014

Madera CTC

Proof of Publication

(2015.5 C.C.P.)

NOTICE OF PUBLIC HEARING

RE: DRAFT 2015 FTIP

JUNE 18, 2014

STATE OF CALIFORNIA)
) ss.
County of Madera)

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer of the Madera Tribune, a newspaper of general circulation, published in the City of Madera, County of Madera, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Madera, State of California, under the date of November 9, 1966, Case Number 4875 that the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

MAY 24, 2014

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Ellen Beard

Signature

Date: May 24, 2014

Proof of Publication - The Madera Tribune, P.O. Box 269
Adjudged a newspaper of general circulation by court dec
The Madera Tribun

NOTICE OF PUBLIC HEARING ON THE DRAFT 2015 FEDERAL TRANSPORTATION IMPROVEMENT PROGRAM, THE DRAFT 2014 REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITY STRATEGY, CORRESPONDING DRAFT CONFORMITY ANALYSIS, AND DRAFT ENVIRONMENTAL IMPACT REPORT

NOTICE IS HEREBY GIVEN that the Madera County Transportation Commission (MCTC) will hold a public hearing on June 18, 2014 at 3:00pm at the MCTC office building at 2001 Howard Road, Madera, Ca 93637 regarding the Draft 2015 Federal Transportation Improvement Program (2015 FTIP) and corresponding Draft Air Quality Conformity Analysis for the 2015 FTIP and 2014 RTP/SCS and Draft Environmental Impact Report.

Two public hearings will be held regarding the Draft 2014 Regional Transportation Plan/Sustainable Community Strategy (2014 RTP/SCS and the Draft Environmental Impact Report (EIR). Both will be held at the MCTC office building at 2001 Howard Road, Madera, Ca 93637. The first will be on June 18, 2014 at 3:00pm. The Second will be on June 23, 2014 at 6:00pm.

The purpose of the public hearing is to receive public comments on these documents:

- The 2015 FTIP is a near-term listing of capital improvement and operational expenditures utilizing federal and state monies for transportation projects in Madera County during the next four years.
- The 2014 RTP/SCS is a long-term coordinated transportation/land use strategy to meet Madera County transportation needs out to the year 2040.
- The EIR document provides an analysis of potential environmental impacts related to the implementation of the RTP/SCS as required by the California Environmental Quality Act.
- The corresponding Conformity Analysis contains the documentation to support a finding that the 2015 FTIP and 2014 RTP/SCS meet the air quality conformity requirements for ozone and particulate matter.

Individuals with disabilities may call MCTC (with 3-working-day advance notice) to request auxiliary aids necessary to participate in the public hearing. Translation services are available (with 3-working-day advance notice) to participants speaking any language with available professional translation services.

A 55-day public review and comment period for the Draft 2014 RTP/SCS and Draft EIR began on May 1, 2014 and will conclude on June 26, 2014. The draft documents are available for review at the MCTC office building at 2001 Howard Road, Madera, Ca 93637 and on the MCTC website at www.maderactc.org.

A 30-day public review and comment period for the Draft 2015 FTIP and corresponding Conformity Analysis will begin on May 26, 2014 and will conclude on June 26, 2014. The draft documents are available for review at the MCTC office building at 2001 Howard Road, Madera, Ca 93637 and on the MCTC website at www.maderactc.org.

Public comments are welcomed at the hearings, or may be submitted in writing by 5:00 pm on June 26, 2014 to Dylan Stone at the address below.

After considering the comments, the documents will be considered for adoption by resolution, by the MCTC Policy Board at a regularly scheduled meeting to be held July 23, 2014. The documents will then be submitted to state and federal agencies for approval.

Contact Person: Dylan Stone, Transportation Planner
Madera County Transportation Commission
2001 Howard Rd., Madera, Ca 93637
(559) 675-0721
Dylan@maderactc.org

No. 1145 - May 24, 2014