



2011

Kings County

Regional

Transportation

Plan

Adoption
July 28, 2010

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KINGS COUNTY

2011

REGIONAL TRANSPORTATION PLAN

Prepared by the
Kings County Association of Governments

Adoption
July 28, 2010

The preparation of this report has been financed in part by the State of California Department of Transportation, the Federal Highway Administration, Federal Transit Administration, and the member agencies of the Kings County Association of Governments.

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**BEFORE THE KINGS COUNTY ASSOCIATION OF GOVERNMENTS
TRANSPORTATION POLICY COMMITTEE**

* * * * *

IN THE MATTER OF ADOPTING THE 2011) REGIONAL TRANSPORTATION PLAN, 2011) FEDERAL TRANSPORTATION IMPROVEMENT) PROGRAM AND CORRESPONDING AIR) QUALITY CONFORMITY ANALYSIS)	RESOLUTION NO. 10-10 RE: 2011 RTP, 2011 FTIP AND AIR QUALITY CONFORMITY
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WHEREAS, the Kings County Association of Governments (KCAG) is a Regional Transportation Planning Agency and a Metropolitan Planning Organization, pursuant to State and Federal designation; and

WHEREAS, federal planning regulations require Metropolitan Planning Organizations to prepare and adopt a long range Regional Transportation Plan (RTP) for their region; and

WHEREAS, Section 65080 of the California Government Code requires each regional transportation planning agency to prepare a regional transportation plan and update it for submission to the governing Policy Board for adoption; and

WHEREAS, a 2011 Regional Transportation Plan has been prepared in full compliance with federal guidance; and

WHEREAS, a 2011 Regional Transportation Plan has been prepared in accordance with state guidelines adopted by the California Transportation Commission; and

WHEREAS, federal planning regulations require that Metropolitan Planning Organizations prepare and adopt a short range Federal Transportation Improvement Program (FTIP) for their region; and

WHEREAS, the 2011 FTIP has been prepared to comply with Federal and State requirements for local projects and through a cooperative process between the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the State Department of Transportation (Caltrans), principal elected officials of general purpose local governments and their staffs, and public owner operators of mass transportation services acting through the KCAG forum and general public involvement; and

WHEREAS, the 2011 FTIP program listing is consistent with: 1) the 2011 Regional Transportation Plan; 2) the 2010 State Transportation Improvement Program; and 3) the Corresponding Conformity Analysis; and

WHEREAS, the 2011 FTIP contains the MPO's certification of the transportation planning process assuring that all federal requirements have been fulfilled; and

WHEREAS, the 2001 FTIP meets all applicable transportation planning requirements per 23 CFR Part 450; and

WHEREAS, projects submitted in the 2011 FTIP must be financially constrained and the financial plan affirms that funding is available; and

WHEREAS, the 2011 RTP and 2011 FTIP includes a new Conformity Analysis; and

WHEREAS, the MPO must demonstrate conformity per 40 CFR Part 93 for the RTP and FTIP; and

WHEREAS, the 2011 RTP and 2011 FTIP do not interfere with the timely implementation of the Transportation Control Measures; and

WHEREAS, the 2011 RTP and 2011 FTIP conforms to the applicable SIPs; and

WHEREAS, the documents have been widely circulated and reviewed by KCAG advisory committees representing the technical and management staffs of the member agencies; representatives of other governmental agencies, including State and Federal; representatives of special interest groups; representatives of the private business sector; and residents of Kings County consistent with the public participation process adopted by KCAG; and

WHEREAS, a public hearing was conducted on May 26, 2010 to hear and consider comments on the 2011 RTP, 2011 FTIP, and Corresponding Conformity Analysis.

NOW, THEREFORE, BE IT RESOLVED, that the KCAG Transportation Policy Committee adopts the 2011 RTP, 2011 FTIP, and Corresponding Conformity Analysis.

BE IT FURTHER RESOLVED, that the KCAG Transportation Policy Committee finds that the 2011 RTP and 2011 FTIP are in conformity with the requirements of the Federal Clean Air Act Amendments and applicable State Implementation Plans for air quality.

The foregoing Resolution was adopted on a motion by Commissioner Craighead , seconded by Commissioner Barba , at a regular meeting held on the 28th day of July, 2010 by the following vote:

AYES: Craighead, Barba, Chin, Hornsby, Lerma, Neves, Cox-Kovacevich

NOES:

ABSENT:

KINGS COUNTY ASSOCIATION OF GOVERNMENTS
TRANSPORTATION POLICY COMMITTEE

Dan Chin by Joe Neves
Chair

WITNESS, my hand this 28th day of July, 2010.

Terri King
Terri King, Executive Director

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EXECUTIVE SUMMARY

As mandated by California Government Code Chapter 2.5, Section 65080 (d): “*Except as otherwise provided in this subdivision, each transportation planning agency shall adopt and submit, every four years, an updated regional transportation plan to the California Transportation Commission and the Department of Transportation....*”. The Kings County Association of Governments (KCAG) is a state-designated RTPA and a federally designated Metropolitan Planning Organization (MPO). KCAG has developed the 2011 RTP in coordination with each city in Kings County, the County of Kings, Caltrans, Federal Highways Administration, Federal Transit Administration, the San Joaquin Valley Air Pollution Control District, Kings County Area Public Transit Agency, Tachi-Yokut Tribe, and citizen's groups.

The 2011 RTP, covering the 25-year period from 2010 to 2035, is a continuation of Kings County's transportation planning process which began in 1975 with the adoption of its first RTP. The RTP is intended to serve many purposes:

- Provide the foundation for transportation decisions by local, regional, and state officials.
- Document the region's mobility needs and issues.
- Identify and attempt to resolve regional issues and provide policy direction for local plans.
- Document the region's goals, policies, and objectives for meeting current and future transportation mobility needs.
- Set forth an action plan to address transportation issues and needs consistent with Regional and state policies.
- Identify transportation improvements in sufficient detail to aid in the development of the State Transportation Improvement Program (STIP) and to be useful in making decisions related to the development and growth of the region.
- Identify those agencies responsible for implementing the action plans.
- Document the region's financial resources needed to meet mobility needs.

To fully explore these directives, each RTP must contain three basic elements. The 2011 RTP considers plans and projects in the following elements:

1. Policy Element

- To identify regional transportation goals, policies, and objectives.
- To present significant regional transportation issues.
- To consider the natural environment, social, and economic factors.
- To show implications, impacts, and opportunities that will result from the implementation of the plan.

2. Action Element

- To set forth an action plan to address issues and needs identified in the policy element.

- To show regional transportation improvements in order to aid in the development of a statewide improvement program. The actions are broken down into five, ten, and twenty year time periods to assist in development of the Regional Transportation Improvement Program.
- To provide guidance in making decisions related to regional growth and development.
- To identify responsibilities for project implementation.

3. Financial Element

- To provide cost and revenue assumptions needed to implement the plan.
- To identify revenue sources.
- To analyze the development of new revenue sources.
- To compare costs with anticipated revenues.

The 2011 RTP is divided into eleven chapters and four appendices dealing with Kings County exclusively, and one appendix pertaining to the San Joaquin Valley. Five chapters concentrate on a specific modal area of transportation. For information purposes only, Appendix I is an inventory of regional routes that includes general information such as current road conditions and traffic factors.

Chapter 1: Introduction. This chapter describes KCAG's organization; the organization, background, and purpose of the plan; the regional setting; the plan's relationship to other local and state plans; and the Public Participation Process.

Chapter 2: Overview of Transportation Planning and Programming. This chapter offers an understanding of how KCAG will approach transportation problems and come to decisions and recommendations. It sets forth the basic socioeconomic facts of Kings County; spells out important transportation planning and programming issues which KCAG must consider; and establishes a central goal to guide KCAG's planning.

Chapter 3: Policy Element. This chapter identifies and defines objectives and policies needed to carry out the goals and to respond to the issues of the Regional Transportation Plan concerning each mode.

Chapter 4: The Regional Highway System. This chapter focuses on the most used, and therefore the most significant, component of Kings County's transportation system: the highway system. The 2011 RTP does not study all roads in Kings County. Instead, it identifies the most-used routes which serve regional, rather than merely local, transportation demands. The purpose of this chapter is to document needs and recommend improvements for these regional routes. The issue of how a potential local county sales tax measure, or funding mechanisms such as Senate Bill (SB) 406 (Land Use: Environmental Quality Act) funds will affect the programming of State Transportation Improvement Program (STIP) projects for Kings County will be considered (SB 406 authorizes an additional fee of \$1 or \$2 on vehicle registration through an existing fee mechanism to be used for planning purposes). This chapter also provides a list of State Highway projects contained in the STIP and projects proposed for future "Regional Transportation Improvement Programs" (RTIP).

Chapter 5: Goods Movement. This chapter examines ways to ensure that freight and commodities are efficiently transported through Kings County and the region. The majority of this chapter considers the two significant modes used for goods movement: railroads and freight trucks. Special attention is given to the needs of the agricultural industry in moving its products and the transportation of hazardous materials through Kings County.

Chapter 6: Public Transportation. This chapter provides an inventory of the various public transportation (transit) providers in Kings County. It gives special emphasis to issues surrounding Amtrak and transit services provided by local providers, and discusses ways to meet identified unmet transportation needs. It includes a summary of the findings and policies of KCAG's "2008 Transit Development Plan".

Chapter 7: Aviation. This chapter provides an inventory of public, private, and military air facilities in Kings County. Special attention is given to the role of public airports, the RTP relationship to the local and regional aviation plans, and to the impact of the F/A-18 aircraft now deployed at the Lemoore Air Station.

Chapter 8: Non-Motorized Facilities. This chapter describes opportunities to foster bicycle commuting in Kings County. It is a summary of the findings and policies of KCAG's "2005 Regional Bicycle Plan".

Chapter 9: Transportation System Management. This chapter summarizes the main themes of Transportation System Management (TSM) programs. The TSM program provides a way for decision-makers to evaluate lower-cost measures against more expensive options when transportation improvements are being considered.

Chapter 10: Air Quality. This chapter summarizes the Transportation Control Measures (TCMs) included in the San Joaquin Valley Air Quality Attainment Plan developed as a requirement of the California Clean Air Act.

Chapter 11: Financial Element. This chapter provides a summary of estimated revenues considered to be reasonably available to fund the implementation of the RTP.

Appendix I: Inventory of Countywide Regional Routes. This appendix describes the physical condition, traffic volumes, service levels, and scheduled improvements for selected regional routes. This section is merely for informational purposes and is not to be considered for programming purposes.

Appendix II: Unconstrained Projects List. This appendix lists the Tier II local roads improvement projects, or those for which the funding is not reasonably expected to be available at this time (unconstrained). The project costs for these projects are in FY 2010-11 dollar values.

Appendix III: Environmental Documentation. This section summarizes the characteristics of the proposed project, as well as the project's environmental impacts and recommended mitigation measures. The environmental document for the 2011 RTP is a Program Environmental Impact Report (EIR), which is included in the 2011 RTP by reference.

Appendix IV: San Joaquin Valley. This section provides an inter-regional perspective to transportation planning within the San Joaquin Valley, which consists of the counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and Kern.

Appendix V: Review and Comment. This section provides the proof of publication of the public hearing notice, the notice of public hearing to hear comments on the 2011 RTP, and the responses to comments that were received of the 2011 RTP.

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CHAPTER 1

INTRODUCTION

I. PURPOSE

The chief purpose of this Regional Transportation Plan (RTP) is to show ways that transportation can complement regional goals and objectives. Transportation not only influences, but it is also affected by, local public policy planning for land use, infrastructure, housing, and economic development. Because the need exists to coordinate all facets of community structure, this plan takes into account a broad range of policy matters affecting transportation.

This plan is designed to comply with the 2010 California Regional Transportation Plan Guidelines adopted by the California Transportation Commission (CTC) in April 2010. It is expected to be used as a guide by state and local officials as they strive to upgrade the overall transportation system in Kings County. In addition, this plan is a data source and information document for the general public. As such, it will be of value as a decision-making tool to anyone having the desire to improve and benefit from an upgraded regional transportation system in Kings County.

II. REGIONAL SETTING

The study area includes all of Kings County's 1,396 square miles. Located in the south-central San Joaquin Valley, Kings County is bounded by Fresno, Tulare, Kern, Monterey, and San Luis Obispo counties. Elevations range from 175 feet in the Tulare Lake Basin to 3,473 feet at Table Mountain in the extreme southwestern portion of the county. Two-thirds (613,373 acres) of the county's land area is level, irrigated farmland.

III. BACKGROUND TO THIS PLAN

A. Participating Agencies

This 2011 RTP update was prepared by the staff of the Kings County Association of Governments (KCAG) with the assistance from each of its member agencies: the cities of Avenal, Corcoran, Hanford, and Lemoore and the County of Kings. The Santa Rosa Tachi-Yokut tribe was also consulted during the development of the RTP. Caltrans District 6 and the San Joaquin Valley Air Pollution Control District staff provided an invaluable service by furnishing helpful information, comments, and general support.

B. KCAG Organization

As a council of governments, KCAG addresses inter-jurisdictional public policy matters. Transportation is a major area of concentration. KCAG is a state-designated regional transportation planning agency (RTPA) recognized by the state's Business, Transportation and Housing Agency and a federally recognized Metropolitan Planning Organization (MPO). As an MPO/RTPA, KCAG prepares and maintains the Regional Transportation Plan, prepares a Regional Transportation Improvement Program (RTIP), and the Federal Transportation Improvement Program (FTIP). KCAG also reviews the State Transportation Improvement Program (STIP) and other state transportation programs, monitors local public transit operations, and oversees federal transportation grant proposals. KCAG is also charged with administering the Local Transportation Fund (LTF) and State Transit Assistance (STA) fund.

FIGURE 1-1

Location Map

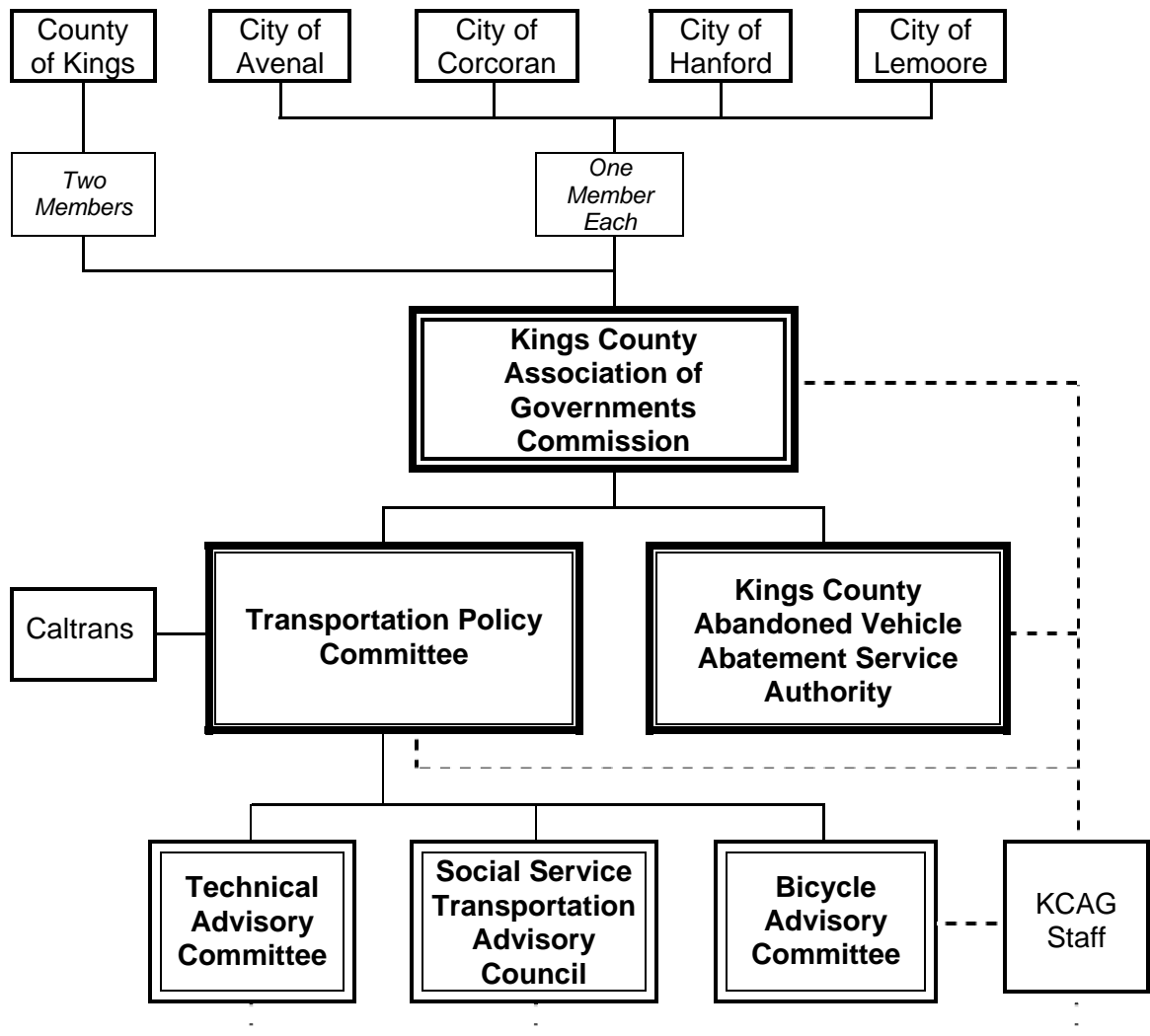


All RTPA activities are governed by the Transportation Policy Committee (TPC) composed of local elected officials from each of the member agencies and the Director of Caltrans.

The TPC is advised by two committees: 1) A Technical Advisory Committee (TAC) whose members include: KCAG staff; county and city public works and planning directors, city managers, and the county administrator; Caltrans staff; Lemoore Naval Air Station (LNAS), San Joaquin Valley Air Pollution Control District (SJVAPCD) and Santa Rosa Tachi-Yokut Tribe representatives as ex-officio members. 2) A Social Service Transportation Advisory Council (SSTAC) includes appointed representatives of social service providers and transit users. The SSTAC provides input to the RTPA on the transit needs of transit dependent and transit disadvantaged persons, including elderly, disabled, and low income persons. Other citizen committees are formed on an ad hoc basis by the TPC.

FIGURE 1-2

KCAG ORGANIZATION



IV. ORGANIZATION OF THIS PLAN

It is the intent of KCAG to produce an informative, readable, and persuasive document that provides a clear exposition of transportation needs and demands in Kings County. To do so, the following format is generally followed:

- A. Relevant socio-economic and transportation assumptions are stated. These are supported by inventories and forecasts.
- B. Emerging and recurring transportation issues are identified and evaluated.
- C. In response to the assumptions and issues, relevant objectives and policies are stated. These are the guidelines for decision making.
- D. To carry out the objectives and policies in light of the issues and assumptions, an implementation strategy for improvements is identified.
- E. Financial resources needed to cover the costs of recommended projects and programs are discussed.

V. RELATIONSHIP TO OTHER PLANS

This plan is a continuation of the transportation planning process that began in Kings County in 1975 with the adoption of the first Kings County Regional Transportation Plan. In general, that plan has provided a foundation for each of KCAG's subsequent RTP updates. Since today's political and economic climate bears little resemblance to that of 1975, this update examines the need for improved facilities and services, while acknowledging current budget constraints. Most importantly, this plan sheds new light on the need for specific major improvements to the regional highway system.

A number of other state and local plans were examined for consistency with this plan. For the most part, there were no areas where these plans conflicted with this document. There were several minor differences among other Regional Transportation Plans in the region, but no major policy conflicts. The plans reviewed include:

- 1. City of Avenal, 2004, Avenal General Plan and Environmental Impact Report
- 2. California Department of Corrections, 1994, EIR, Emergency Bed Project, California State Prison at Avenal
- 3. City of Corcoran, 2007, General Plan Update and EIR
- 4. County of Kings and City of Corcoran, 1997, Corcoran Area Plan
- 5. California Department of Corrections, 1994, EIR, Emergency Bed Project, California Substance Abuse Treatment Facility and State Prison at Corcoran
- 6. California Department of Corrections, 1995, EIR, California Substance Abuse Treatment Facility and State Prison at Corcoran
- 7. City of Hanford, 2002, City of Hanford General Plan
- 8. City of Lemoore, 2008, Lemoore General Plan and 2008 EIR
- 9. City of Lemoore, 1997, EIR, College Park at West Hills Development

10. County of Kings, 2010, Kings County General Plan and 2010 EIR
11. California Transportation Commission, 2010 Regional Transportation Plan Guidelines
12. KCAG, 2007, Kings County Regional Transportation Plan Update
13. KCAG, 2008, 2009 Kings County Federal Transportation Improvement Program
14. KCAG, 2010, Draft 2011 Kings County Federal Transportation Improvement Program
15. KCAG, 2010, Kings County Regional Transportation Improvement Program
16. KCAG, 2005, Kings County Regional Bicycle Plan
17. City of Lemoore, 2001, City of Lemoore Bikeway Plan
18. KCAG, 2009, Kings County Transit Development Plan
19. KCAG, 2001 Social Service Transportation Provider Inventory
20. KCAG, 2008 Human Services Transportation Coordination Plan
21. County of Kings, 1989, Kings County Hazardous Waste Management Plan
22. KCAG, 1988, Urban Service Areas Policy Plan
23. KCAG, 1979, Airport Systems Study
24. City of Hanford, 2010, Hanford Municipal Airport Master Plan
25. City of Hanford, 2010, EIR, Airport Master Plan Improvements
26. U.S. Department of the Navy, 1992, NAS Lemoore Master Plan
27. U.S. Department of the Navy, 1983, Air Installation Compatible Use Zones Study, NAS Lemoore
28. U.S. Department of the Navy, 1998, Final EIS for Development of Facilities to Support Basing US Pacific Fleet F/A-18E/F Aircraft on the West Coast of the United States
29. Caltrans, 1998, Central California Aviation System Plan
30. Caltrans, 2009, California Aviation System Plan, Capital Improvement Plan, 2010-2019
31. Caltrans, 1998, 1999, The California Aviation System Plan, Policy, Inventory, Forecast and Capital Improvement Program Elements
32. Caltrans, 1994, Draft Summary Report, Los Angeles - Bakersfield High Speed Ground Transportation Preliminary Engineering Feasibility Study
33. California Intercity High Speed Rail Commission, 1996, Summary Report and Action Plan, Executive Summary
33. California High Speed Rail Authority, 2005, Final Program EIR/EIS for the Proposed California High-Speed Train System

34. Caltrans, 2008, California State Rail Plan, 2007/08 - 2017/18
35. Caltrans, 2007, San Joaquin Corridor FY 2007-2008 Business Plan
36. San Joaquin Valley Air Pollution Control District, 1992, 1991 Air Quality Attainment Plan, San Joaquin Valley Air Basin
37. SJVAPCD, 1994, Transportation Control Measures Program
38. SJVAPCD, 1994, Revised 1993 Rate of Progress Plan
39. SJVAPCD, 1995, Draft Revised Post 1996 Rate of Progress Plan
40. SJVAPCD, 1994, Ozone Attainment Plan
41. SJVAPCD, 1994, 1994 Serious Area PM10 Plan
42. SJVAPCD, 1997, Proposed PM-10 Attainment Demonstration Plan
43. SJVAPCD, 2003, Proposed 2003 PM-10 Plan
44. Council of Fresno County Governments, 2007, 2007 Regional Transportation Plan
45. Kern Council of Governments, 2007, 2007 Regional Transportation Plan
46. Madera County Transportation Commission, 2007, 2007 Madera County Area Regional Transportation Plan
47. Merced County Association of Governments, 2007, 2007 Regional Transportation Plan Update
48. San Joaquin County Council of Governments, 2007, 2007 Regional Transportation Plan
49. Stanislaus Council of Governments, 2007, 2007 Stanislaus Area Transportation Plan
50. Tulare County Association of Governments, 2007, 2007 Regional Transportation Plan
51. Tachi Yokut Tribe of the Santa Rosa Rancheria, 2001, Transportation Planning Study, Interim Report

VI. SAFE ACCOUNTABLE FLEXIBLE EFFICIENT TRANSPORTATION EQUITY ACT-A LEGACY FOR USERS (SAFETEA-LU) COMPLIANCE

A. INTRODUCTION

On August 10, 2005 President Bush signed into law the Safe, Accountable, Flexible, Efficient, Transportation Equity Act – A Legacy for Users (SAFETEA-LU). SAFETEA-LU is the most recent federal transportation bill, having been preceded by the 1998 Transportation Equity Act for the 21st Century (TEA-21) and the 1991 Intermodal Surface Transportation Equity Act (ISTEA).

In addition to reauthorizing the funding levels for the various federal transportation programs, SAFETEA-LU also established new transportation planning and programming requirements that impact the Regional Transportation Plan and Federal Transportation Improvement Program. This section discusses the development the 2011 Regional Transportation Plan and provides an overview of how KCAG and the San Joaquin Valley as a whole coordinated the development of the 2011 RTP.

B. CHRONOLOGY

For the 2007 RTP, in August 2006, the eight San Joaquin Valley (SJV) Metropolitan Planning Organizations, the Federal Highways Administration (FHWA), and the California Department of Transportation (Caltrans) participated in an RTP and FTIP workshop. The intent of this workshop was to bring together all of the relevant regional, State, and federal agencies to determine the appropriate course of action for the Valley in achieving SAFETEA-LU compliance in our RTPs and FTIPs by July 1, 2007.

As a result of the workshop and the followup items that were identified, the San Joaquin Valley COGs added RTP-related issues to the monthly Model Coordinating Committee (MCC) and Programming Coordination Group (PCG) agendas (now the Interagency Coordination (IAC) calls)

C. GAP ANALYSIS

On November 15, 2006 the California Division of FHWA issued a letter requesting the development of a gap analysis that would compare existing planning and programming activities against the requirements of SAFETEA-LU. The intent of this analysis is to identify SAFETEA-LU compliance items and describe either how they are currently being addressed or how KCAG intends to address them. The 2007 RTP and associated documents addressed many of the SAFETEA-LU requirements. The 2011 RTP addresses all SAFETEA-LU requirements.

D. CONTINUING PARTNERSHIP

The eight SJV MPOs have continued to work cooperatively in the development of our planning and programming documents. We routinely participate in an Interagency Consultation (IAC) process (an evolved process from the MCC and PCG groups) that includes the MPOs, FHWA, the Federal Transit Administration (FTA), Caltrans, the Air District, and the Environmental Protection Agency (EPA). We have held workshops to coordinate the development of the 2011 RTPs and FTIPs.

VII. PUBLIC PARTICIPATION PROGRAM

During the development of the 2011 RTP, KCAG carried out the following public participation process:

- Consultation with various public and local agency representatives who are representatives of the KCAG Technical Advisory Committee (TAC) was undertaken. The Committee's responsibilities were to provide direction on various issues related to the development of the 2011 RTP, including the identification and priority of RTP improvement projects and review and comment on various RTP elements. The general public is invited to attend the KCAG Technical Advisory Committee meetings and meeting announcements are posted at the KCAG office, local newspapers and the KCAG website.
- KCAG Staff attended public meetings of the city councils and board of supervisors for each of our member jurisdictions and provided a presentation on the 2011 RTP and answered questions from the councils, board and public.
- KCAG sent out a news release to all area news media announcing the availability of the draft RTP for review and comment and provided copies at all branch libraries within Kings County.
- The draft 2011 RTP documents were placed on the KCAG website to provide widespread reviewing and to allow comments from many agencies, groups, and individuals.
- Public hearings were noticed and held before the KCAG Transportation Policy Committee regarding review of the 2011 RTP. The general public is invited to attend the KCAG Transportation Policy Committee meetings and meeting announcements are posted at the KCAG office, local newspapers and the KCAG website. Copies of all notices, persons/agency comments, and the KCAG responses are on file at KCAG.

For the 2011 RTP, EIR, FTIP, and Air Quality Conformity documents, the Kings County Association of Governments worked in cooperation and consultation with our member agencies, transit operators, regional, state, and federal agencies, Tribal Government, and the public. To meet our goal of full public and private participation in the development of the FTIP, KCAG provided public notices in the general circulation newspaper, open forum opportunities through public works and citizen groups meetings, (with an extensive agenda mailing list that includes as many interested parties as possible).

KCAG included the document information as part of the agenda for the scoping meeting for the Regional Transportation Plan Environmental Impact Report. KCAG staff attended noticed city council and county Board of Supervisor's meetings with explanations of the document and its affect on transportation in our area. KCAG also conducted an advertised public hearing prior to adoption of the documents.

The KCAG outreach efforts for the development of the documents resulted in comments received from our member agencies, several divisions of Caltrans, the Environmental Protection Agency, the California Department of Energy, and the Federal Highways Administration.

CHAPTER 2

OVERVIEW OF TRANSPORTATION PLANNING AND PROGRAMMING

I. OVERVIEW

This chapter seeks to integrate a wide range of social and economic matters that figure into KCAG's transportation planning process. It offers an understanding of how KCAG will approach transportation problems and come to decisions and recommendations. Its aims are to set forth the basic socio-economic facts of this region; and to spell out important transportation planning and programming issues that KCAG must consider.

II. ASSUMPTIONS AND INVENTORIES

A. POPULATION ASSUMPTIONS

1. Kings County is, and will remain for many years, a predominantly rural, sparsely settled, agricultural county.
2. Kings County is the home of the Lemoore Naval Air Station (LNAS), one of the Navy master jet bases in the United States. The air station will continue to strongly influence the population and cultural characteristics of Kings County by bringing new people into the area. The future role of the U.S. Navy and the closures of military bases around the country may affect LNAS. The Kings County General Plan assumes a constant base population of 7,500 through the year 2030.
3. The City of Lemoore 2030 General Plan has proposed the expansion of the College Park at West Hills area to extend further south encompassing the area from the Iona Avenue alignment down to the SR 198 and closed at the 21st Avenue/ Marsh Drive alignment. This area includes 1,542 acres and included the future proposal of a new interchange at SR 198 and Marsh Drive, whose cost is in the process of being included in a new Westside traffic and streets impact fee anticipated to be adopted by summer 2010. This Master Planned area consists of the existing West Hills College campus along with residential, industrial, commercial, educational, parks, and open space land uses facilities located west of SR 41 and north of SR 198.
4. Kings County will have a large percentage of young adults (due in part to the presence of LNAS), a high birth rate (due in part to the high number of young adults), and a growing elderly population.
5. The surrounding agricultural land preserves and the capacities of sewer and water facilities will restrict growth in the rural communities of Armona, Kettleman City, and Stratford.
6. The community of Armona will continue to grow as a residential community with the possibility of incorporation in the future.

7. The Santa Rosa Rancheria of the Tachi-Yokut Tribe is located 4 miles south of Lemoore on 370-acres of trust land. There are an additional 1,183 contiguous acres of fee lands and 61 acres of non-contiguous fee lands. The Rancheria, first established in 1934 with land purchased by the federal government, is developed as a residential community with 128 homes. Site plans have been prepared for an additional 100+ unit housing development scheduled for completion within five years. Population of the Rancheria according to the most recent Department of Finance is 520.

The Palace Indian Gaming Center, a Tribal Enterprise, is the main source of livelihood and income for tribal members on the Rancheria, and employs more than 1,400 people. Other sources of employment income include the tribal government, farming and ranching. In addition, a tribal headquarters building, Head Start facility, park and playground are located on the Rancheria. The Tribe plans to develop a new 20-acre parcel for replacement and expansion of the casino, parking, hotel, mini-mart, fire station, theatre, and new tribal headquarters. As with the addition of the Palace Indian Gaming Center, the new developments are expected to increase the population residing on the Rancheria, available jobs, and traffic on local and regional roads leading to the Rancheria. The Tribe opened a new 255-room hotel in 2007 as part of the development.

8. Kettleman City will continue as an agricultural employee housing community for the western portion of the County and as a highway service center for statewide travelers on Interstate 5 and State Highway 41.
9. Stratford will continue to function as an agricultural service center and agricultural employee housing community.
10. The California State Prison - Avenal is located about two miles southwest of downtown and occupies about 640 acres. As of March 2010 it employed over 1,500 prison-service workers. Over 300 employees live in Kings County, but only less than 20 percent of those employees live in Avenal. The California Department of Corrections is proposing to add emergency housing facilities at the existing prison site that would accommodate almost 2,000 more prison inmates. It would also create an additional 500 jobs at the prison. Based on employment and housing data resulting from the opening of the prison in 1987, it is assumed that 75% of the new employees would come from outside the local area. About 60% of the relocated employees are expected to reside in the communities of Avenal, Hanford, and Lemoore. As a result of these prison facilities, the population of Avenal as well as other cities in Kings County will continue to expand over the next few years. The Kings County General Plan assumes a constant population of 7,200 through the year 2035. As of March 2010 the estimated inmate population of the Avenal State Prison is 6,432.
11. The California State Prison - Corcoran was opened in 1988 and held 11,150 inmates as of January 1, 1999 and employs about 2,300 workers. It is estimated that 15% of the employees live in Corcoran, 35% in Hanford, and the remaining 50% outside Kings County. The Kings County General Plan assumes a constant population of 12,500 through the year 2035. As of March 2010 the estimated inmate population of the Corcoran State Prison is 5,481.

In addition to CSP-Corcoran, a second state prison and a Substance Abuse Treatment Facility was constructed in 1997 located immediately south of the existing prison. It has the capacity to house 5,130 inmates at the prison and 1,900 inmates at the treatment facility. Employment at these two facilities range from 1,350 to 1,900 persons, depending on the occupancy rate of the facilities. The California Department of Corrections added emergency housing facilities within both prisons. This project would add 606 additional inmates and 152 staff persons at CSP-Corcoran and add 330 inmates and 45 staff persons at the Substance Abuse Treatment Facility. As of March, 2010 the estimated inmate population of this facility is 6,727.

12. The average annual population growth rate in Kings County will continue to be about 2%.
13. Between 1990 and 2000 the total Kings County population increased 27.6% and ranked as the seventh fastest-growing county in the state. There was an 18.5% increase in the number of housing units with 44.1% as renter-occupied. The average household size increased from 3.08 to 3.18 persons during this ten year period.

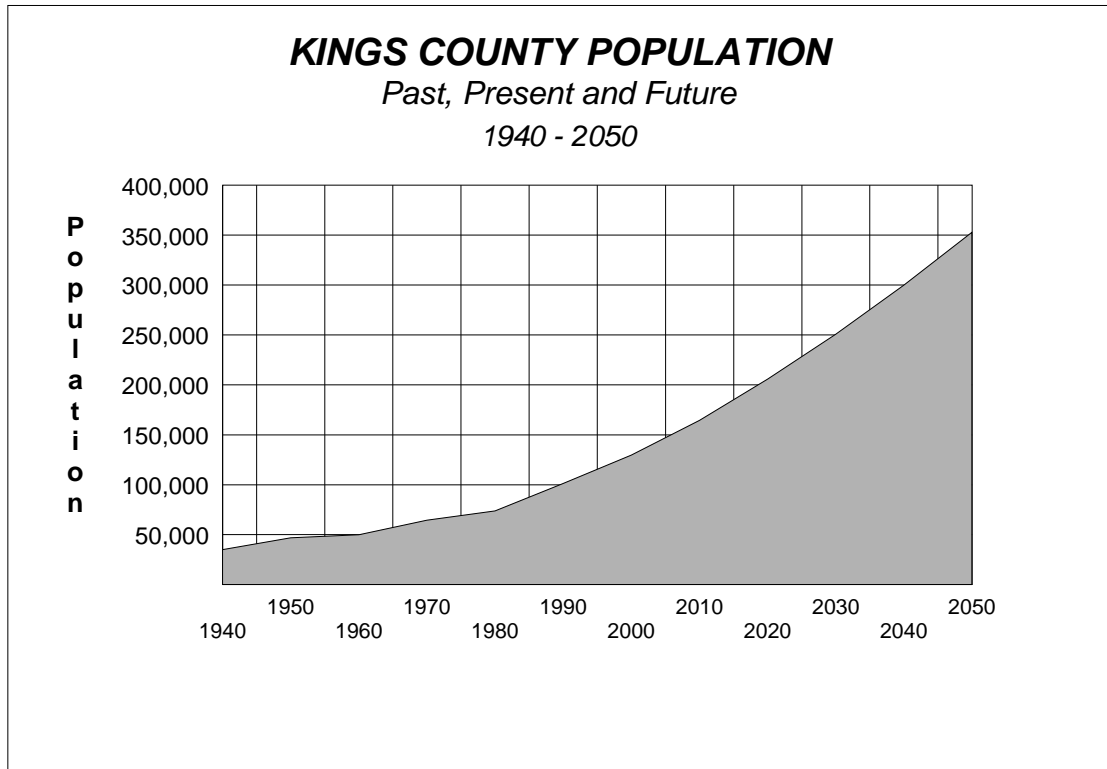
FIGURE 2-1

**POPULATION GROWTH TRENDS IN KINGS COUNTY JURISDICTIONS
1940-2000**

AREA	1950	1960	1970	1980	1990	2000	AVERAGE GROWTH RATE
Kings County Population	46,768	49,954	64,610	73,738	101,469	129,461	
Annual Growth Rate	0.45%	0.68%	2.93%	1.41%	3.75%	2.58%	1.84%
Avenal Population	3,982	3,147	3,035	4,137	9,770	14,674	
Annual Growth Rate		-2.09%	-0.36%	3.63%	13.61%	3.21%	3.70%
Corcoran Population	3,150	4,976	5,249	6,454	13,364	14,458	
Annual Growth Rate	5.05%	5.76%	0.55%	2.29%	10.70%	1.27%	4.87%
Hanford Population	10,028	10,133	15,179	20,958	30,897	41,686	
Annual Growth Rate	2.18%	1.00%	4.98%	3.81%	4.74%	2.59%	3.34%
Lemoore Population	2,153	2,561	4,219	8,832	13,622	19,712	
Annual Growth Rate	2.58%	1.89%	6.47%	10.93%	5.42%	3.05%	5.46%

Source: 2000 U.S. Census; *Includes State Prison inmate population.

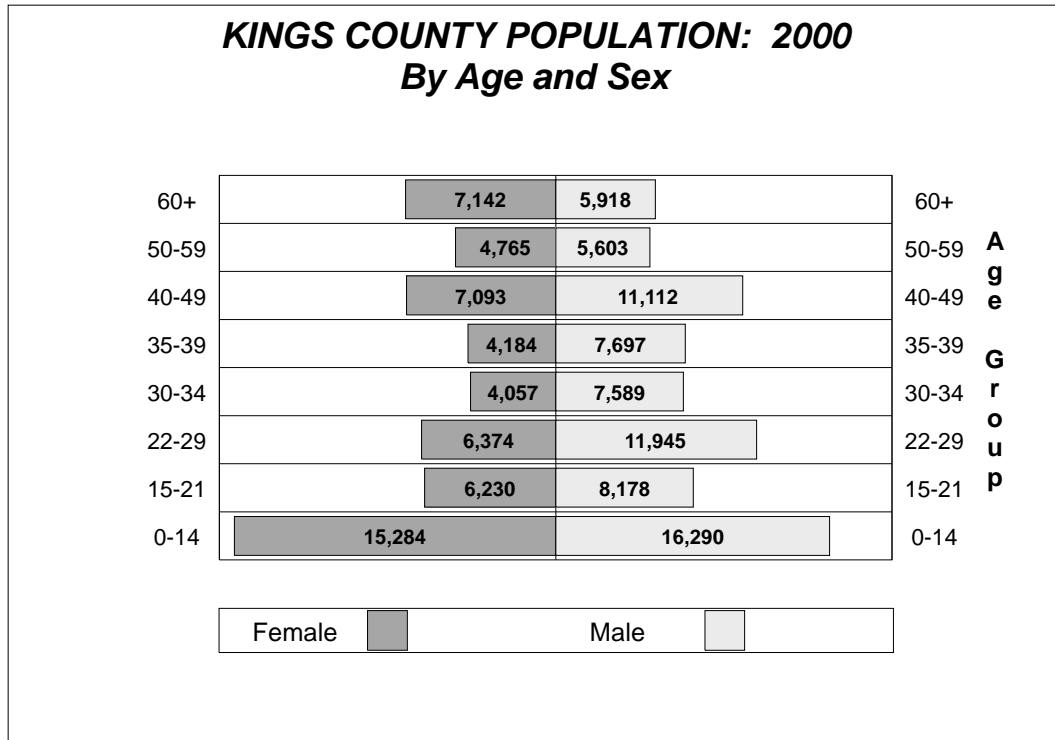
FIGURE 2-2



NOTE: Projections increased significantly in 2007 report from previous projections.

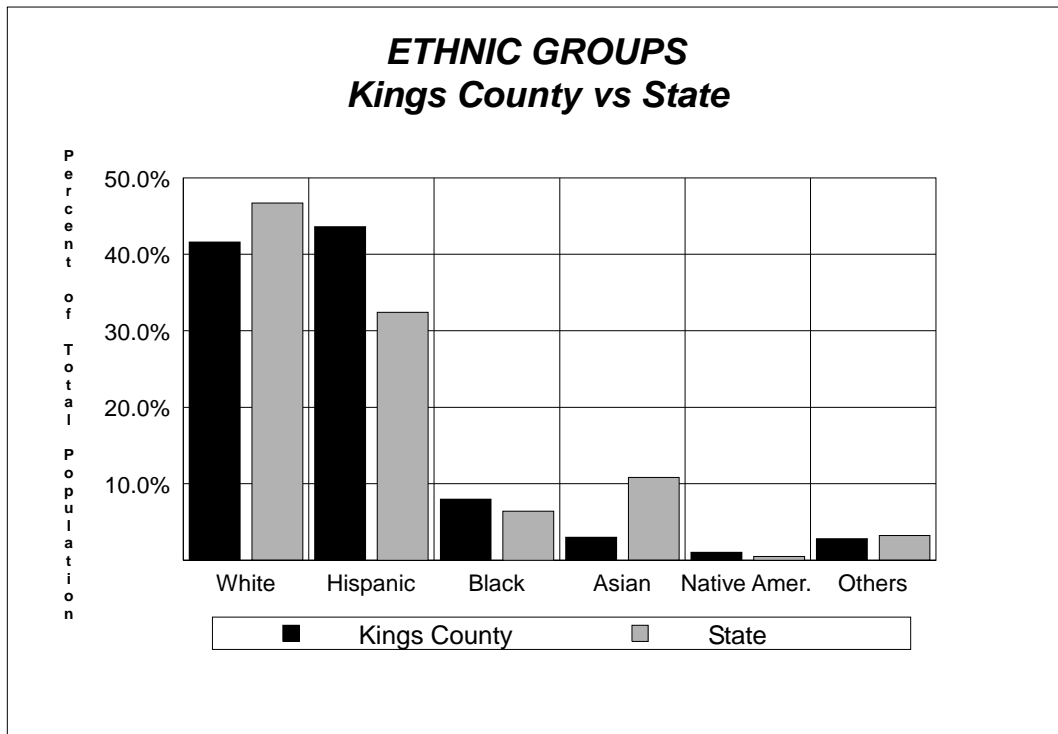
Source: U.S. Census, State Department of Finance

FIGURE 2-3



Source: 2000 U.S. Census

FIGURE 2-4



Source: 2000 U.S. Census

B. ECONOMIC ASSUMPTIONS

1. Agriculture and related industries will remain the dominant sector of this region's economy. That sector, together with LNAS and the California State Prisons in Avenal and Corcoran, will help buffer Kings County from sharp economic fluctuations.
2. Kings County is a low-income county. It will continue having a larger percentage of low-income persons and a smaller percentage of upper-income persons, than does the state overall, due to the large farm worker population and lack of large industries. The annual average unemployment rate for Kings County in 2009 was 14.6 %, while the statewide rate was 11.4%.
3. Through the year 2020, most of the non-agriculture jobs created in Kings County are expected to be in retail trade, services, and manufacturing. Even though government is one of the largest employment industries, the retail trade industry will lead in employment gains. Most of the projected growth in agriculture will occur in agriculture services, while moderate growth is expected in agriculture production.

FIGURE 2-5

**KINGS COUNTY EMPLOYMENT BY INDUSTRY
2000**

INDUSTRY	NUMBER	PERCENT
Agriculture, Forestry, Mining, Fishing and Hunting	5,726	14.5%
Retail Trade	4,136	10.5%
Public Administration	5,198	13.2%
Educational, Health and Social Services	8,323	21.1%
Construction	1,801	4.6%
Professional, Scientific, Management, Administrative, and Waste Management Services	1,903	4.8%
Transportation and Warehousing, and Utilities	1,592	4.0%
Finance, Insurance, Real Estate, and Rental and Leasing	1,209	3.1%
Other Services	1,973	5.0%
Manufacturing	3,369	8.5%
Wholesale Trade	1,192	3.0%
Information	422	1.1%
Arts, Entertainment, Recreation, Accommodation and Food Services	2,667	6.8%
TOTAL	39,511	100%

Source: 2000 U.S. Census

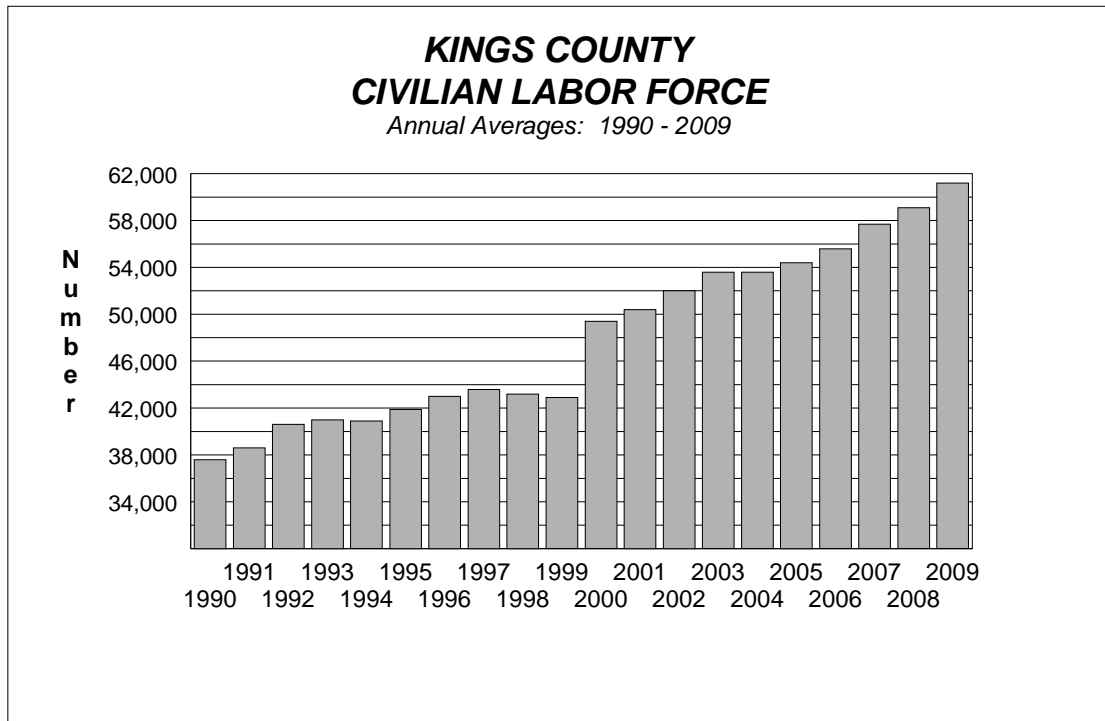
FIGURE 2-6

**REPORTED POVERTY STATUS IN KINGS COUNTY
1969, 1979, 1989, 1999**

	TOTAL COUNTY			
	1969	1979	1989	1999
Persons Below Poverty	12,092	10,386	16,218	21,307
Percent of Group Population	19.20%	14.57%	18.18%	19.50%

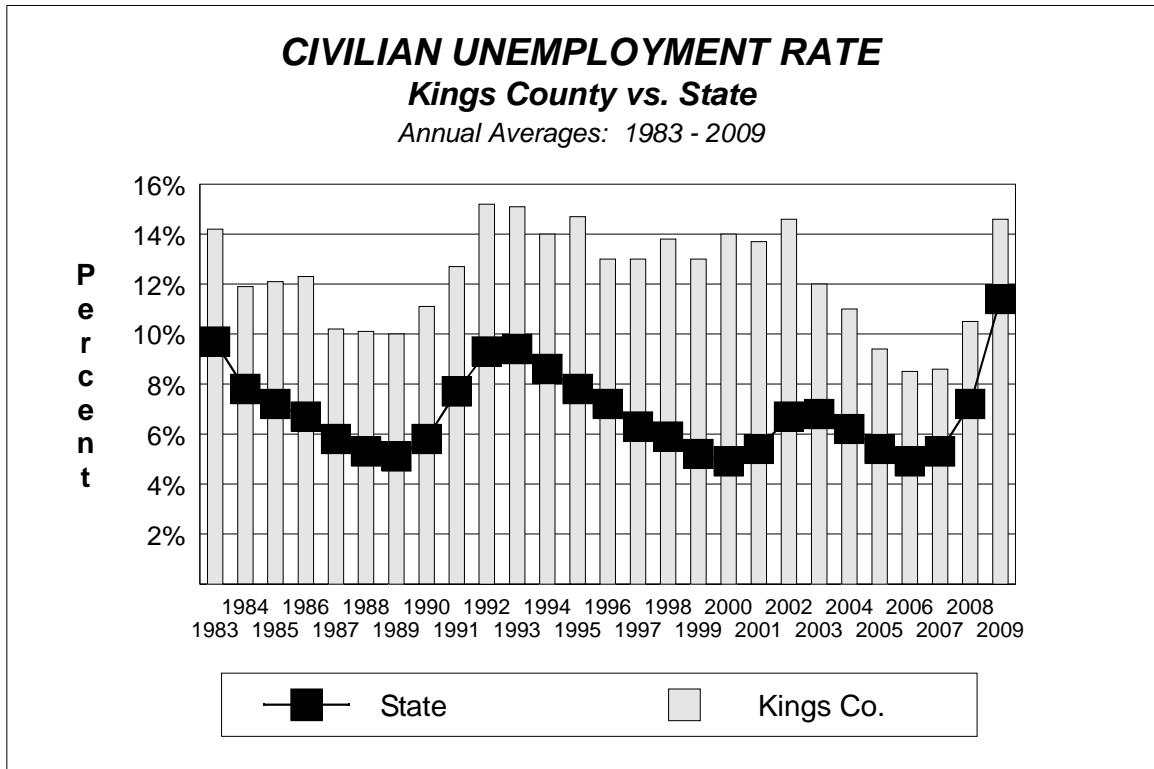
Source: 2000 U.S. Census

FIGURE 2-7



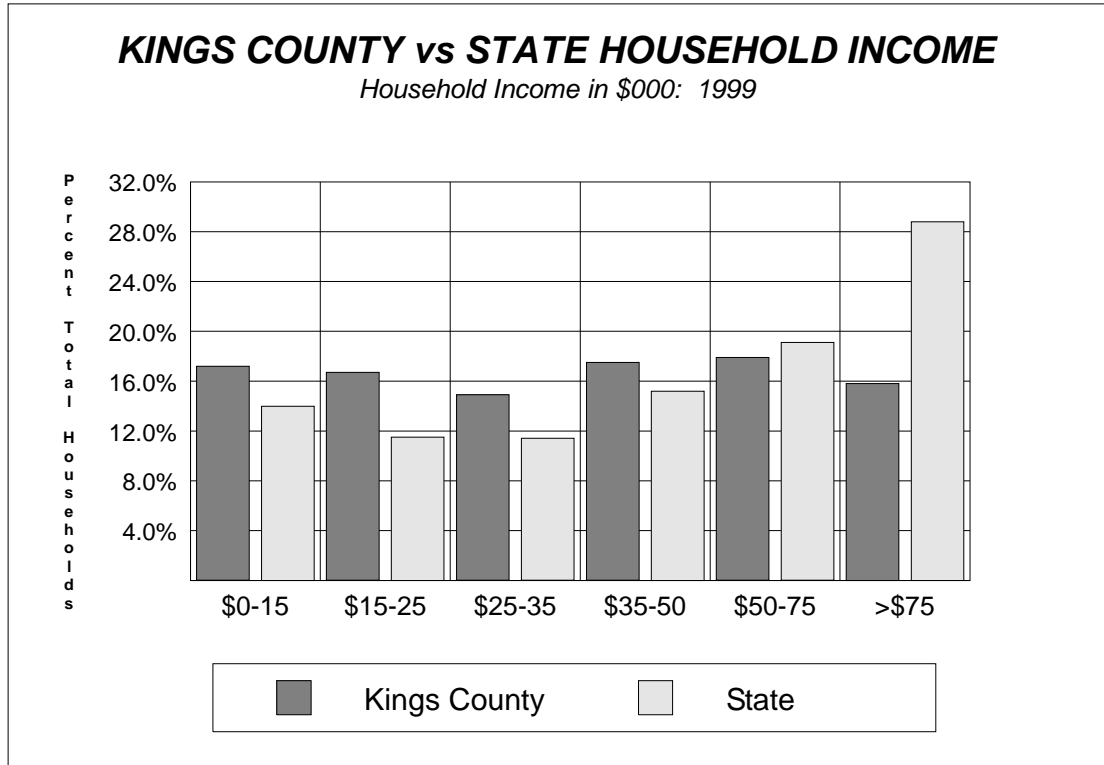
Source: California Economic Development Department

FIGURE 2-8



Source: California Economic Development Department

FIGURE 2-9



Source: 2000 U.S. Census

FIGURE 2-10

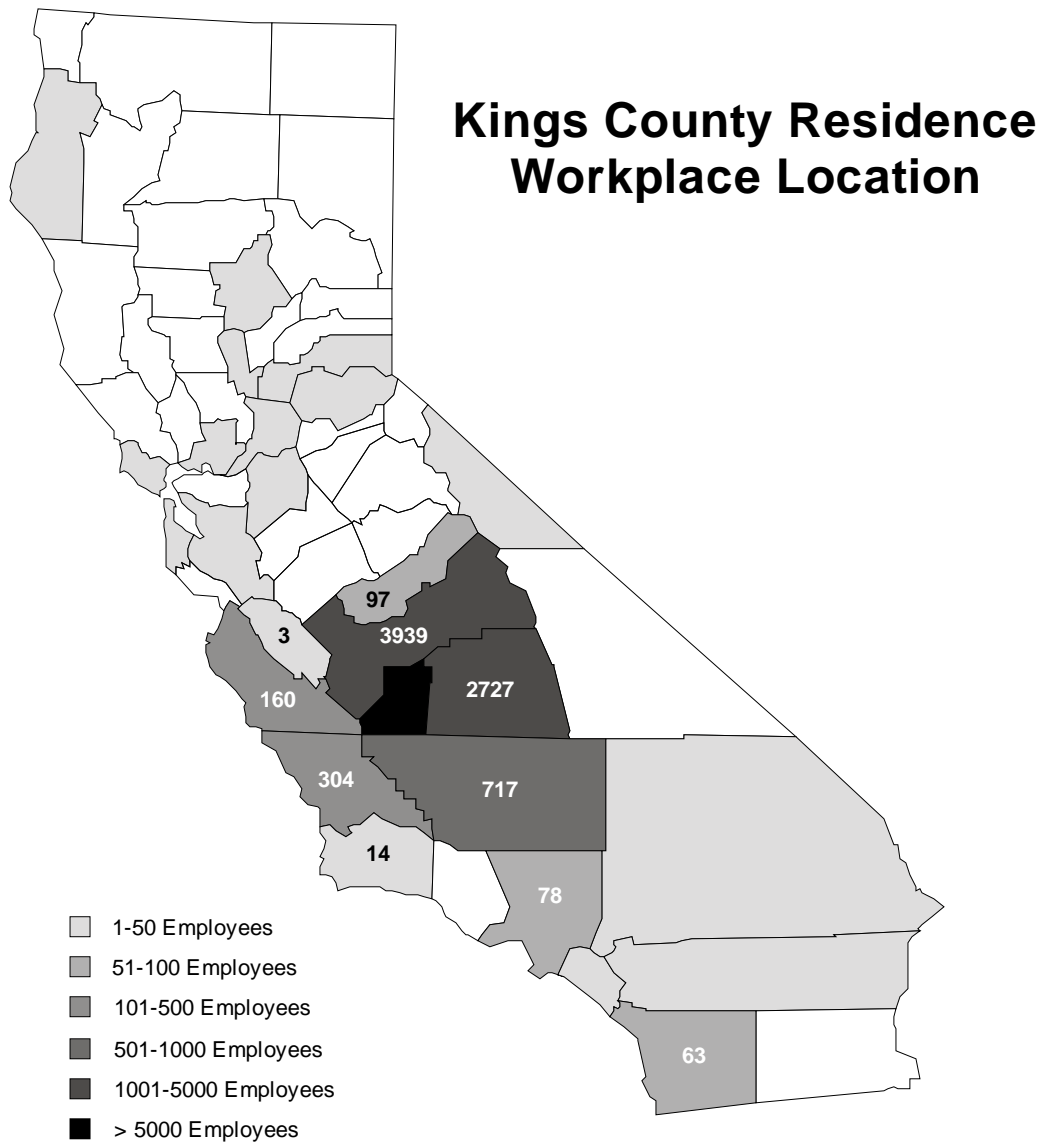
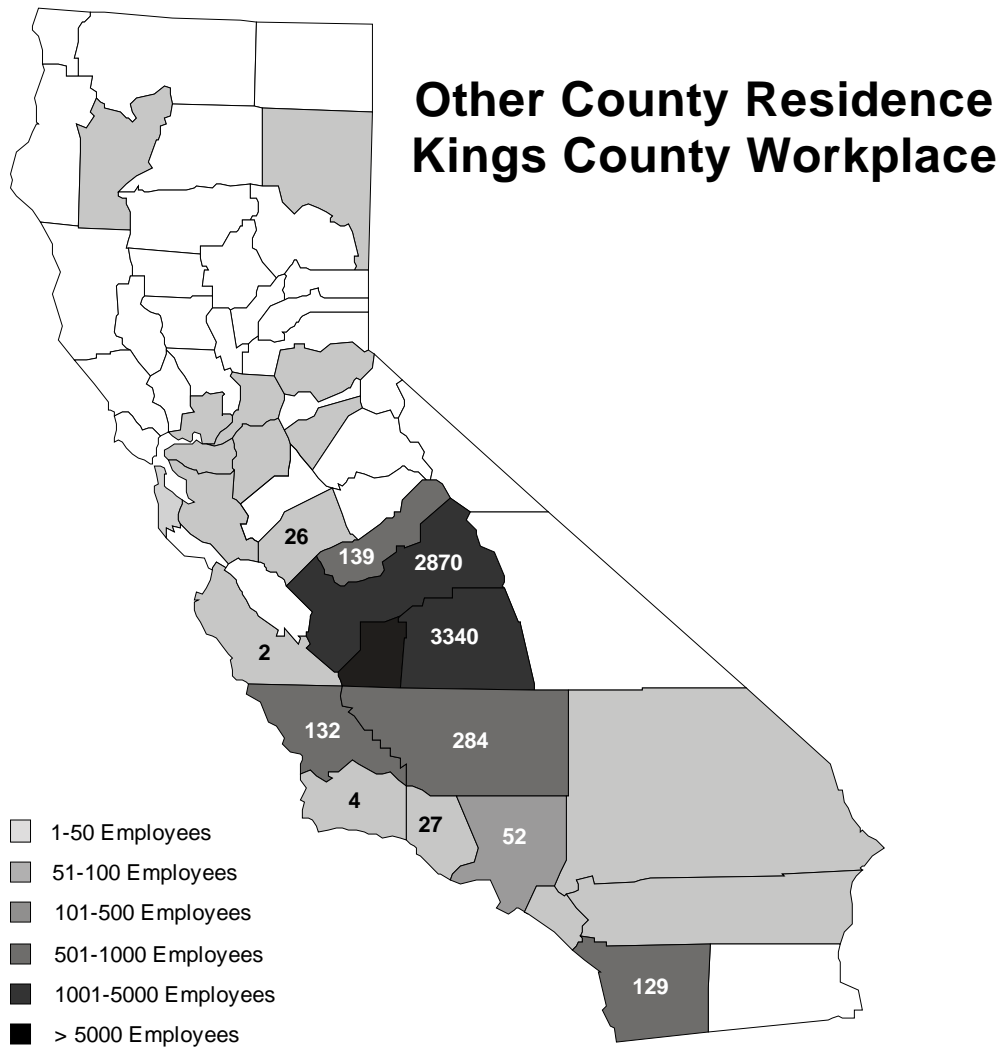


FIGURE 2-11



C. PRINCIPAL LAND USE POLICIES AND ASSUMPTIONS

1. Adopted city and county general plans will continue to direct growth in the region. The following are significant long-term land use policies of city and county general plans. All are based on the premise that development must be contained in those areas where urban services are most readily available. The idea is to lessen public service costs, while slowing the conversion of prime farmland to urban uses. As a whole, these policies will help Kings County maintain its present pattern of development long into the future as a vast expanse of prime farmland with several articulated urban concentrations along state routes.

a. Avenal General Plan

Maintain a growing community that will focus on urban infill and upgrading of its existing urbanized lands. Increase overall residential densities in the city so as to require less urbanization of surrounding agricultural lands.

b. Corcoran Area General Plan

An urban form should be maintained that is compatible with an agricultural setting by accommodating new development within the corporate city limits and encouraging infilling of vacant areas.

c. Hanford General Plan

Guide urban development toward vacant or under-used land within the urbanized area and direct new growth toward contiguous lands to protect agricultural lands and other open spaces used for the managed production of resources from premature urban development.

d. Lemoore General Plan

Promote compact urban growth by providing and maintaining a quantitative balance between various types of land uses. Encourage development of vacant sites by assigning land uses for them based on their locational potential.

Preserve prime farmland while allowing optimum community expansion by encouraging compact urban growth and only selectively allow large lot developments on prime farmlands.

Encourage residential infill on vacant land within developed areas and where adequate infrastructure already exists.

e. Kings County General Plan

The County shall promote the orderly growth of housing along public utility lines and encouraging the infilling of vacant bypassed land within the urban areas in preference to outward expansion.

Require new development in city fringe areas to annex to the city or community services district that provides services. Encourage existing fringe area development to annex to the city or community services district that is providing service.

Require urban growth to be contiguous to existing urban development and to annex to a city or community services district.

f. Urban Service Areas Policy Plan

Promote the orderly growth of Kings County's urban areas by directing new development into incorporated cities where services are provided.

Ensure that growth in unincorporated communities is coordinated with general plan and special district's improvement programs and capabilities.

Prevent haphazard, sprawling, or "leapfrog" growth by infilling vacant or under-utilized lots within the community fringes.

2. As the general plans will guide urban growth into compact, land-sparing configurations, the proportion of persons living in urban and incorporated areas will continue to increase.

FIGURE 2-12

KINGS COUNTY URBAN POPULATION CHANGE 1960 - 1980 – 1990 - 2000

CATEGORY	1960		1980		1990		2000	
	POP	%	POP.	%	POP.	%	POP.	%
Rural Farm	2,666	5.3%	4,659	6.3%	2,679	2.6%	2,520	1.9%
Rural Non-Farm	26,471	53.0%	20,084	27.2%	28,241	27.8%	14,441	11.2%
Urban	20,817	41.7%	48,995	66.4%	70,549	69.5%	112,500	86.9%
TOTAL	49,954	100%	73,738	100%	101,469	100%	129,461	100%

Source: 2000 U.S. Census

Notes:

Rural Non-Farm = Unincorporated areas near cities, and rural towns of less than 2,500 persons.

Urban = A community of 2,500 or more persons.

III. SUMMARY OF TRANSPORTATION PLANNING AND PROGRAMMING ISSUES

- A. The chief interest of KCAG is to ensure that transportation decisions, whether they are made at the local, state or federal level, reflect Kings County area public interests. In terms of state-level decisions, KCAG is aware that rural RTPAs are often overlooked when state officials decide where transportation dollars will be spent. Most of the money goes to northern and southern population centers where the greatest demand exists because of large populations and high densities. Kings and other rural counties are unable to demonstrate as high a degree of urgency (congestion) or political momentum for transportation improvements. Nevertheless, through this document, KCAG intends to make a strong argument for its fair share of the state transportation budget. An overriding goal in Kings County is to see that state revenues are more equitably distributed among the counties.

- B. In seeking to represent itself, KCAG follows all procedural and administrative responsibilities and duties required of RTPAs. KCAG conducts monthly public meetings through its Transportation Policy Committee and Technical Advisory Committee; holds citizen advisory meetings; works with Caltrans District 6 staff on all types of transportation planning projects and the San Joaquin Valley Air Pollution Control District (SJVAPCD) on air quality and transportation issues; and prepares and maintains the Regional Transportation Plan, the Regional Transportation Improvement Program (RTIP) and the Federal Transportation Improvement Program (FTIP). KCAG must consider a number of factors when it prepares RTPs. The following is a summary of these factors and KCAG's responses.
- Public Involvement. KCAG must provide citizens and interested parties a reasonable opportunity to participate in the development of, and comment on, the RTP prior to its adoption. The public and interested parties were informed about the development of the 2011 RTP through notices in local newspapers and public hearings before the KCAG Transportation Policy Committee. The RTP was also reviewed by the KCAG Social Services Transportation Advisory Council. Copies of the 2011 RTP were also distributed and advertised in local newspapers as available at all branches of the Kings County Library for review and comment.
 - Coordination. KCAG must coordinate its transportation planning with transportation providers, air districts, local planning agencies, Caltrans and adjoining RTPAs. KCAG, in conjunction with seven other RTPAs, two Caltrans Districts and the San Joaquin Valley Air Pollution Control District has entered into a memorandum of understanding to ensure maximum compatibility in air quality, transportation planning, and project implementation. These agencies meet quarterly to discuss transportation and air quality issues affecting the Valley and work cooperatively on projects of Valleywide significance. Transit providers are involved in the transportation planning process through participation in Social Services Transportation Advisory Council meetings and the development of transit plans prepared by KCAG. The air quality conformity assessment of the 2011 RTP with the State Implementation Plan for Air Quality was conducted by KCAG, Federal Highway Administration, Federal Transit Administration, Environmental Protection Agency, San Joaquin Valley Air Pollution Control District and regional transportation planning agencies within the San Joaquin Valley. The Santa Rosa Rancheria Tachi Tribe is a member of the KCAG Technical Advisory Committee that reviews plans and programs and provides comments.
 - Planning Assumptions and Forecasts. RTPAs are encouraged to use projections of future population, housing, employment and land use based upon available data and accepted forecasting methodologies. The population forecasts used by KCAG in developing the 2011 RTP are consistent with the Department of Finance. Future housing, land use and employment projections are based on information provided by the Employment Development Department and the general plans of the cities and the county. Revenue and expenditure projections are based either on current levels or based on a trend analysis of previous year levels. Transportation growth forecasts are based on information provided by Caltrans and Census information.

- Planning Analysis. RTPAs are encouraged to develop and evaluate transportation improvements on a corridor, subregional, or regional basis, considering alternative modes and combinations of modes and to integrate social, economic and environmental considerations in the planning analysis. KCAG has reviewed numerous relevant plans during the development of the 2011 RTP. (These are itemized in Chapter 1.) Transportation Systems Management strategies have been evaluated within the RTP to develop transportation improvements on each corridor. Transportation improvements to meet air quality conformity requirements are included within the RTP and will be highlighted in the conformity assessment documentation.
- C. Because revenues needed to build and maintain Kings County's streets and roads fall short of the costs, this plan looks at ways to garner more dollars for road improvements.

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CHAPTER 3

THE POLICY ELEMENT

I. OVERALL GOAL; PLANNING AND PROGRAMMING OBJECTIVES AND POLICIES

This chapter seeks to establish a central goal to guide the Regional Transportation Plan and to define objectives and policies needed to meet the goal and to respond to the issues that KCAG must consider. State guidelines require RTPA's and MPO's to develop realistic goals, policies, and objectives to guide state and local planning efforts. The following definitions are prescribed:

A goal is the end toward which effort is directed; it is general and timeless.

A policy is a direction statement that guides present and future decisions on specific actions.

An objective is a result to be achieved by a stated point in time. It is capable of being quantified and realistically attained considering probable funding and political constraints. Objectives are successive levels of achievement in the movement toward a goal, and should be tied to a time-specific period for implementation.

In compliance with these guidelines and the SAFTEA-LU Planning Factors as outlined in 23 U.S.C. §134(h), an overall goal is presented to cover all aspects of KCAG's transportation planning endeavors. The goals, objectives, and policies found in this plan were developed from a number of sources: the various editions and supplements to the Kings County Regional Transportation Plan; general plans of the cities and county; and the comments of the KCAG Transportation Policy Committee, Technical Advisory Committee and the Social Services Transportation Advisory Council.

A. OVERALL GOAL

To develop a transportation system that encourages and promotes the safe and efficient development, management, and operation of surface transportation systems to serve the mobility needs of people and freight (including accessible pedestrian walkways and bicycle transportation facilities) and foster economic growth and development, while minimizing transportation-related fuel consumption and air pollution.

B. PROGRAM POLICY AND OBJECTIVES

Policy

Continue making full use of KCAG's decision-making forums, including their regular meetings, to examine alternative solutions to transportation needs and problems.

Objectives

1. Transportation decisions shall be made on the basis of the broadest range of Kings County area public interests.
2. KCAG shall provide clear and firm guidance to the California Transportation Commission, Caltrans, and local agencies on all transportation matters affecting Kings County.
3. Transportation decisions shall include Transportation Systems Management (TSM) evaluations.

4. Public safety, retention and maintenance of the existing system, and system efficiency shall be used as criteria in evaluating projects.
5. Total route or system development shall be considered when selecting projects.
6. Funding sources for all transportation modes shall be identified, evaluated and developed. With these, a complete system that is accessible, safe, and efficient shall be built.
7. Public and private transportation facilities shall be planned and developed consistent with overall growth and development policies contained in city and county general plans.

C. ENVIRONMENTAL POLICY AND OBJECTIVES

Policy

The environmental consequences of transportation project shall be taken into account. Of particular importance are impacts relating to air quality, energy use, noise, and changes in land use.

Objectives

1. Using TSM evaluations, consider those alternative solutions that lessen environmental problems, yet serve transportation needs.
2. Seek to mitigate unavoidable adverse impacts associated with selected alternatives.
3. Use environmental documents such as Initial Studies and EIRs as decision-making tools.
4. Coordinate transportation control measures with the San Joaquin Valley Unified Air Pollution Control District and the latest air quality attainment plan for the San Joaquin Valley.
5. Consult with lead agencies on projects having environmental effects, of statewide, regional, or areawide significance on transportation facilities.
6. Maintain modeling capability that will respond to state and federal reporting requirements and the need for accurately projecting travel demand in future years.

D. PUBLIC PARTICIPATION POLICY AND OBJECTIVES

Policy

Transportation facilities and services should meet the needs of all segments of the population. KCAG employs an environmental justice approach to its public participation policy and procedures and welcomes community comment and guidance in its transportation planning and decision making process.

Objectives

1. Continue building an active citizen participation forum.

2. Seek representation from the entire community, including the elderly, poor, persons with disabilities, and the census-identified environmental justice areas of Kings County.
3. Hold citizen meetings at convenient times and places.
4. Seek citizen comments early in the planning process, preferably in the problem-identification stage of project preparation.
5. Work to create an atmosphere that encourages the expression of all viewpoints, allowing both obvious and latent issues to be brought into the open.
6. Explore alternative methods of obtaining the public's views. Use surveys, make presentations to special interest groups, etc.
7. Keep local media informed of transportation issues and encourage their attendance at public meetings held by KCAG.

II. REGIONAL HIGHWAY SYSTEM GOALS, POLICIES AND OBJECTIVES

A. HIGHWAY SYSTEM GOAL, POLICY AND OBJECTIVES

Goal

Maintain, upgrade and complete a regional system of roadways which is convenient, safe, and efficient, and which serve the needs of all its users.

Policy

Maintenance shall be continuous to keep the regional highway system from falling further into disrepair. The system shall be upgraded and completed as revenues allow.

Objectives

1. Maintain and rehabilitate the regional system; reconstruct deteriorated road sections.
2. Provide safety improvements to reduce the number, severity, and probability of accidents.
3. Undertake new construction projects to upgrade and complete the regional system, and to close gaps in local and state highway systems.
4. Implement operational improvements (such as road widening, relief of parking congestion, traffic signals, passing lanes, and turn lanes) to maximize service and efficiency.
5. Carry out landscaping and maintenance projects to help make highways compatible with their surroundings.
6. Enforce local ordinances regulating oversize truck terminal access.
7. Work with Caltrans and local agencies to obtain right-of-way dedications at designated future interchanges and along mainline portions of state highways within the regional transportation system.

8. Petition the California State Legislature and the California Transportation Commission to adopt equitable laws and policies for apportioning fuel taxes and funding highway projects. Ensure that Kings County receives its fair share of available transportation dollars.
9. Work more closely with other Regional Transportation Planning Agencies in the area to foster coordinated highway facilities planning.

B. HIGHWAY SAFETY POLICY AND OBJECTIVES

Policy

Improve routes of regional significance to promote the safe operation of vehicular traffic, especially during high accident probability times such as times of heavy winter fog, night, etc.

Objectives

1. Assist night and especially fog driving by providing and maintaining highly reflective "fog" or edge striping, and center divider lines on routes of regional significance.
2. Provide adequate shoulder areas on all state highways and rural regional routes.
3. Install traffic control measures on roads and at intersections when such measures are deemed necessary in accordance with the FHWA Uniform Traffic Control Device Manual.
4. Improve and maintain regional route road surfaces and drainage.
5. Widen or rehabilitate bridges where needed.
6. Provide adequate railroad grade protection devices.
7. Encourage the enforcement of posted speed limits.

III. GOODS MOVEMENT POLICY AND OBJECTIVES

A. Policy

Support the efforts of the trucking and rail industries to transport commodities safely and efficiently.

Objectives

1. Designate and maintain regional and local truck routes to prevent major pavement deterioration on local streets and roads that are not designed for heavy truck traffic.
2. Where needed, widen regional highways to accommodate them to heavy truck traffic.
3. Support enforcement of local truck route ordinances.
4. Develop plans to mitigate congestion on local streets and at intersections where heavy truck traffic occurs.

5. Support efforts to require all trucks carrying hazardous materials to have a manifest, including identification and instructions for handling materials in case of spills. Also support efforts to improve hazardous waste containers so that spillage or leakage does not occur.
6. Support truck weight fees that equitably provide for the highway maintenance costs resulting from heavy trucking.
7. Encourage the improvement of railways with the end purpose of increasing the efficiency of goods movements.
8. Support the installation of automatic grade protection devices at all grade crossings in urban areas.
9. Improve rail grade crossings that impede traffic flows.
10. Encourage the efficient movement of goods through California ports.
11. In concert with Caltrans, the California Highway Patrol, and local jurisdictions, restrict roads available for hazardous waste trucking to mitigate potential adverse affects associated with transportation.

IV. PUBLIC TRANSPORTATION POLICIES AND OBJECTIVES

A. Public Transit Policy

Provide public transit services for those needs defined as "Unmet Transit Needs" which are "Reasonable to Meet".

Objectives

1. Continue operating the Kings Area Rural Transit and Corcoran Dial-a-Ride systems to provide dependable services for those living in Kings County's urbanized areas who have "unmet transit needs" which can be met at a cost KCAG determines to be reasonable.
2. Provide assistance to social service agencies to improve the efficiency and effectiveness of coordinated transportation services for their clients.
3. Encourage transit operators to minimize transit system operating costs by increasing ridership through the following examples.
 - a. Implement route and schedule modifications.
 - b. Implement equipment and maintenance improvements.
 - c. Implement an aggressive marketing program to improve the image of public transit.
 - d. Follow up on comments of the Social Service Transportation Advisory Council.
4. Follow recommendations of the KCAG 2008 Kings County Transit Development Plan.
5. Assist all eligible claimants, both public and private, in applying for federal transportation grants.

6. Encourage the practice of ridesharing/vanpooling as an alternative to single occupant vehicle commuting.
7. Utilize the Social Services Transportation Advisory Council to identify unmet transit needs of the transit dependent.
8. Promote the coordination of transit with other transportation modes.
9. Encourage and support the enhancement of transit services as a transportation control measure to improve air quality.
10. Support the coordination and consolidation of transit services where appropriate through the development and implementation of the Action Plan and Inventory of Social Service Transportation Providers.

B. Intercity Rail and Bus Policy

Preserve an effective and convenient intercity public transportation system of regularly scheduled bus and rail services.

Objectives

1. Monitor and respond to all legislation that could impact bus or rail services in Kings County. Continue the use of KCAG as the forum through which public discussion on bus and rail matters is formalized into public policy recommendations.
2. Work with adjacent RTPA's and Caltrans to unify regional support for keeping and upgrading intercity bus and rail services.
3. Continue Federal and State support of the Amtrak San Joaquins trains.
4. Support aggressive marketing programs for Amtrak trains and intercity buses.
5. Seek to coordinate local transit service schedules with those of intercity modes.
6. Support the programming of grade crossing improvements to increase the speeds of intercity rail services.
7. Support state efforts to implement a high speed rail corridor in the San Joaquin Valley.

V. AVIATION GOAL, POLICIES AND OBJECTIVES

Goal

A fully functional and integrated air transportation and airport system that is complementary to the regional transportation system.

A. Policy

Work with local agencies to ensure compatible land uses around existing airports to reduce noise conflicts.

Objectives

1. Support the Kings County's Airport Land Use Compatibility Plan and the local airports in their efforts to ensure compatible land uses around airports.
2. Support the local airports in their attempts to acquire the land surrounding the airports.
3. Support noise abatement procedures around the local airports.

B. Policy

Maintain alternative modes of transportation to and from the Hanford Municipal Airport and the Corcoran Airport.

Objective

1. Support local transit service to and from the Hanford Municipal Airport and the Corcoran Airport.

C. Policy

Promote the development and maximum utilization of public and private airports to provide for county and regional general air transportation needs.

Objectives

1. See that the existing county wide airport system is maintained and upgraded. Where warranted, use federal, state, local, or private funds to carry out improvements.
2. Ensure that public expenditures for airport development are consistent with demonstrated public demand.
3. Support the retention of scheduled passenger air service at Fresno and Visalia to provide convenient and dependable links to major commercial airports.
4. Airport improvements, in particular at the Lemoore Naval Air Station, shall be protected by coordinated city or county land-use regulations in aviation easements. Such easements should be used to minimize the nuisance effect of airports on their surroundings, and to prevent the encroachment of uses that are incompatible with air operations.
5. Follow the recommendations of the Kings County Airport Land Use Compatibility Plan and the Hanford Municipal Airport Master Plan.
6. Recognize and allow airstrips necessary for servicing agricultural needs.
7. Explore the feasibility of establishing public airports in Avenal and Corcoran.
8. Support increases in aviation capital improvement funds and sources for rural general aviation public use airports.

VI. NON-MOTORIZED POLICY AND OBJECTIVES

A. Policy

Improve the existing transportation system to better accommodate bicycles and pedestrians as well as automobiles and trucks; improve public awareness of and competence in bicycle use; and improve public and private sector responsiveness to bicycle and pedestrian transportation.

Objectives

1. Provide a well-developed, safe and convenient, intermodally-connected system of bikeways complete with support facilities.
2. Ensure that future development supports and facilitates the expansion, improvement, and maintenance of the bikeway system.
3. Provide on-going bicycle safety education and information programs.
4. Implement bikeways that will connect major employers, educational facilities and recreational areas.
5. Encourage partnerships between private, non-profit, governmental and citizens groups to implement bicycle and pedestrian improvements.
6. Fund road maintenance that will also provide better roads for bicycles.
7. Correct roadway surface and hazards on bikeways.
8. Provide theft-resistant parking facilities at high-use destinations.
9. Eliminate physical barriers to bicycle travel.
10. Encourage enforcement of bicycle traffic laws.
11. Keep State Route 198 closed to bicycles to prevent children from playing on the freeway. However, KCAG staff should investigate the feasibility of issuing permits to touring cyclists to allow temporary access on SR 198.
12. Start public awareness programs to increase acceptance of the bicycle.
13. Integrate bicycle and pedestrian considerations into local planning agendas.
14. Encourage local jurisdictions to implement complete streets and other multi-modal concepts as outlined by the California Complete Streets Act of 2008 (AB 1358), as well as Caltrans Deputy Directive 64-R1 (DD-64-R1).
15. Encourage the use of bicycle and pedestrian modes of transportation to enhance air quality and improve human health.
16. Implement the projects identified in the "2005 Kings County Regional Bicycle Plan".
17. Utilize the Bicycle Advisory Committee in the prioritization and programming of bicycle improvements.

VII. TRANSPORTATION SYSTEMS MANAGEMENT POLICIES AND OBJECTIVES

State planning guidelines suggest that TSM objectives be time-specific and quantified. This is to allow year-by-year analysis of progress toward TSM targets. These requirements apply to Transportation Management Agencies (TMA). Kings County (KCAG) is not a TMA and is not required to participate in the Congestion Management Program (CMP). Because of this distinction, the objectives in KCAG's program are not themselves quantified or time-specific. Staff acknowledges that Kings County, although considered a small urbanized area based on population, is very rural and its transportation improvements are small in scale compared to those of larger urbanized areas. While Kings County's size does not preclude TSM planning, it does make it hard to set realistic or meaningful target figures. The attainment of TSM objectives can be documented by periodic studies of the effectiveness of TSM measures in future RTPs.

A. Policy

Maintain and improve the quality of the existing transportation system.

Objectives

1. Shorten the travel time required to move people and goods on the existing system.
2. Lower travel costs required to move people and goods on the existing system.
3. Increase the safety of the existing system.
4. Improve the personal security of persons using the existing system.
5. Improve the comfort and convenience of the existing system.
6. Enhance the reliability of the existing system.

B. Policy

Increase the efficiency of the existing transportation system.

Objectives

1. Seek to reduce dependency upon the automobile for single occupant vehicle commuting by encouraging carpooling.
2. Encourage use of Kings County's transit system.
3. Facilitate pedestrian and bicycle travel.

C. Policy

Minimize the costs to improve the quality and efficiency of the existing transportation system.

Objectives

1. Find cost-effective ways to upgrade the existing system.
2. Minimize the operating costs of the existing system.

D. Policy

Minimize the undesirable environmental impacts of existing transportation facilities and services.

Objectives

1. Reduce noise and vibration caused by the existing system.
2. Reduce air quality impacts caused by the existing system.
3. Reduce the amount of energy consumed by users of the existing system.

E. Policy

Promote desirable and minimize undesirable social and economic impacts of the existing transportation system.

Objectives

1. Provide adequate transportation services to the disadvantaged and transit dependent at a reasonable cost.
2. Provide reasonably priced public transit.
3. Minimize neighborhood impacts caused by transportation improvements.
4. Complement the long-range land-use policies of local general plans.

CHAPTER 4
THE REGIONAL HIGHWAY SYSTEM

I. OVERVIEW

This chapter focuses on the most used, and therefore, the most critical component of Kings County's transportation system: the highway system. The purpose of this chapter is to recommend and justify improvements for the regional highway system. It does so by:

- Outlining assumptions guiding KCAG's highway planning efforts;
- Defining those roads which are of regional significance;
- Itemizing those issues affecting highway planning;
- Presenting projects needed to maintain and upgrade the regional system;
- Delegating responsibilities for project implementation; and
- Estimating project costs and assigning priorities.

There are about 1,490 miles of surfaced roads in Kings County. This total is maintained by the State, the County of Kings, and by the four cities. Virtually all travel depends upon these roads, their bridges, overcrossings, interchanges, and traffic control devices. Because highway facilities are so vital to the social and economic well-being of this region, this chapter is presented as the focal point for this Regional Transportation Plan.

FIGURE 4-1

**MAINTAINED ROAD MILEAGE IN KINGS COUNTY
2010**

JURISDICTION	MAINTAINED MILEAGE	PERCENTAGE OF COUNTYWIDE TOTAL
Interstate	26.7	1.7%
State System	130.0	8.7%
Kings County*	944.92	63.4%
Avenal*	32.6	2.2%
Corcoran*	51.4	3.4%
Hanford*	215.81	14.5%
Lemoore*	86.05	5.8%
U.S.BIA	2.5	.17%
TOTAL	1489.98	100.0%

* Does not include state or interstate highway mileage.

This plan does not study all roads in Kings County. Instead, it identifies and examines the most-used routes which serve regional, rather than merely local, transportation demands. Local planning for circulation and parking belongs in city and county general plans and must be done by local agencies. To provide the reader with a broad perspective on the highway system, this section is divided into two areas of study. These include the Countywide Regional System that includes the most heavily used county and state rural roads; and Regionally Significant Roads in Urban Areas which include busy roads that transect urban areas, yet are important because they also serve regional traffic.

A. FUNCTIONAL CLASSIFICATION SYSTEM

Caltrans and local agencies have practiced a method of classifying roads by their function for many years. The idea is to sort streets and highways by their expected level of service. This method furnishes an important link between transportation and land-use planning. A rational land development program cannot be realized if road designs and capacities are not related to the intensity of use they will serve. Every road has a unique role to play, and each must be calculated in its relationship with the larger network of roads.

There are three street and highway classes where through traffic predominates: Major Arterials, Minor Arterials, and Collectors. Major Arterials serve the high-volume corridors that connect the major traffic generators. Minor Arterials serve less concentrated traffic-generating areas, acting as boundaries to neighborhoods and collect traffic from Collector streets. Although the prime function of Minor Arterial streets is the movement of through traffic, they also provide direct access to residential areas and neighborhoods, collecting traffic from local access streets and distributing it to the arterial system. Minor Collector streets would serve less traffic than Major Collectors.

The map shown in Figure 4-2 is based on the functional classifications approved for the county by the Federal Highway Administration. The maps shown in Figures 4-3 through 4-6 are based on the general plans of each city.

B. THE COUNTYWIDE REGIONAL SYSTEM

The roads that make up the countywide regional network are known collectively as Routes of Regional Significance (see Figure 4-2). They comprise a system whose roles are to:

- serve inter-county and intra-county travel;
- link important population centers;
- join with other regional routes to form a comprehensive network; and
- provide access between agricultural areas and processing facilities and markets.

Included in this system are 156.7 miles of state-maintained regional routes (including Interstate 5). These are among the most important roads in this area because they serve most of the travel between Kings and surrounding counties, and they carry a very significant portion of intra-county traffic. Regionally significant, county maintained roads satisfies the majority of the remaining inter-county demand.

The following are considered in their role as "Routes of Regional Significance." (See Figure 4-2 for rural functional classification.)

Interstate and Other Principal Arterials

Interstate 5	(Kern Co. to Fresno Co.)
State Route 41	(Kern Co. to Fresno Co.)
State Route 43	(Excelsior Ave. to Houston Ave.)
State Route 137	(SR 43 to Tulare Co.)
State Route 198	(Fresno Co. to Tulare Co.)

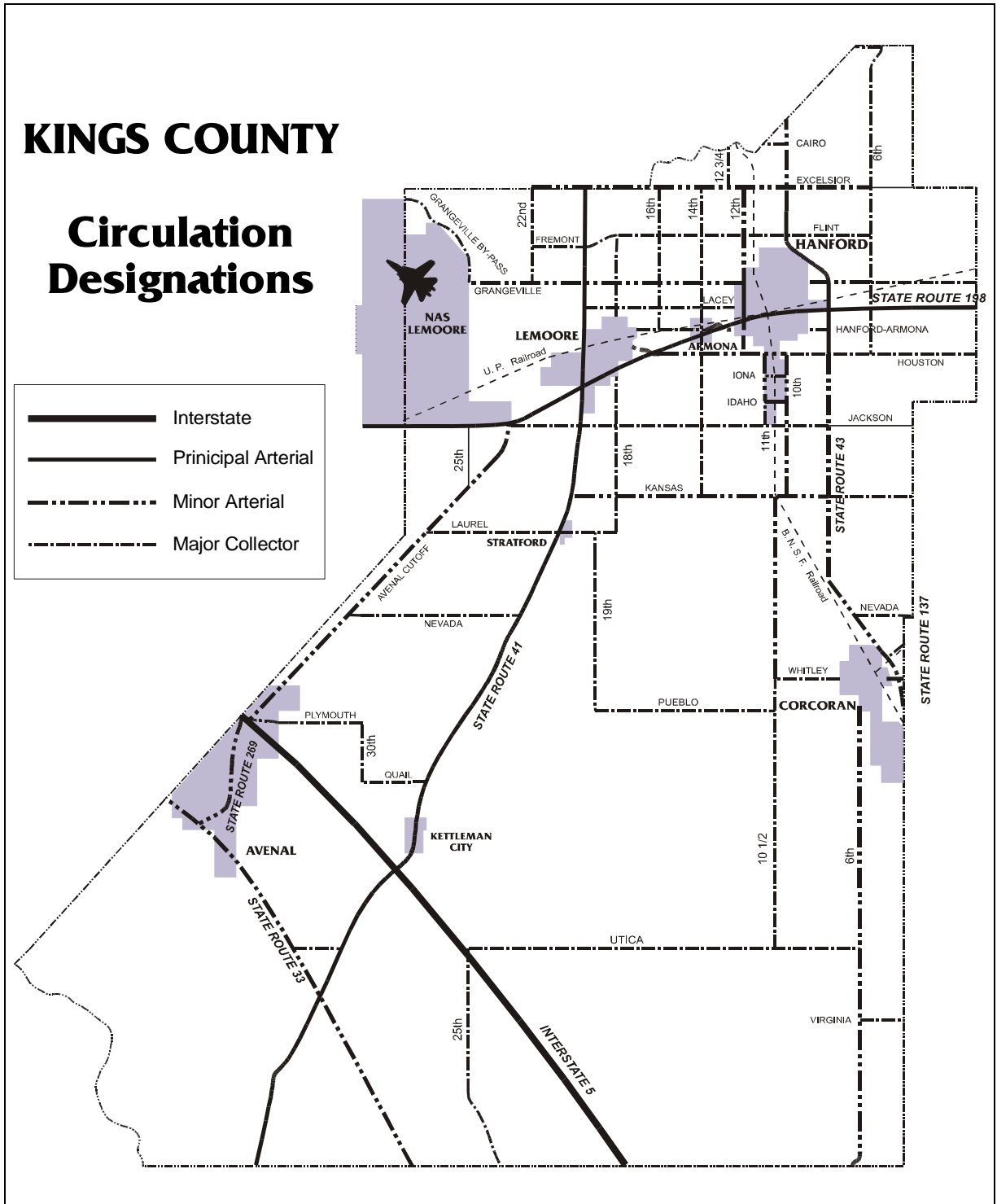
Minor Arterials

6th Avenue	(Ottawa Ave. to Kern Co.)
10th/10 ½ Avenue	(SR 43 to Whitley Ave.)
11th Avenue	(Idaho Ave. to City limits)
12th Avenue	(Excelsior Ave. to City limits and Houston Ave. to City limits)
Avenal Cutoff Road	(SR 198 to SR 33)
Excelsior Avenue	(6th Ave. to 22nd Ave.)
Grangeville Blvd.	(LNAS gate to City limits and 6th Ave to City Limits)
Houston Avenue	(City limits to 10th Ave.)
Idaho Avenue	(10th Ave. to 11th Ave.)
Kansas Avenue	(SR 43 to SR 41)
Whitley Avenue	(SR 43 to Sweets Canal)
State Route 33	(Kern Co. to Fresno Co.)
State Route 43	(Excelsior Ave. to Fresno Co. and Houston Ave. to Tulare Co.)

Major Collectors

5 ½ Avenue	(Benicia Ave. to Boston Ave.)
6th Avenue	(Houston Ave. to Fresno Co.)
10th Avenue	(Whitley Ave. to Utica Ave.)
11th Avenue	(Jackson Ave. to Idaho Ave.)
12 ¾ Avenue	(Excelsior Ave. to Fresno Co.)
14th Avenue	(Excelsior Ave. to Kansas Ave.)
16th Avenue	(Excelsior Ave. to Hanford Armona Rd.)
18th Avenue	(Flint to City limits and Laurel Ave. to City limits)
19th Avenue	(Laurel Ave. to Pueblo Ave.)
22nd Avenue	(Grangeville Blvd. to Excelsior Ave.)
25th Avenue	(I-5 to Kern Co.)
30th Avenue	(Plymouth Ave. to Quail Ave.)
Benecia Avenue	(5 ½ Ave. to 6th Ave.)
Boston Avenue	(5 ½ Ave. to Fresno Co.)
Cairo Avenue	(SR 43 to Fresno Co.)
Flint Avenue	(6th Ave. to 22nd Ave.)
Grangeville Bypass	(Grangeville Blvd. to Fresno Co.)
Grangeville Blvd.	(6th Ave. to Tulare Co.)
Hanford Armona Road	(City limits to SR 43 and City limits to City limits)
Houston Avenue	(10th Ave. to Tulare Co.)
Iona Avenue	(10th Ave. to 11th Ave.)
Jackson Avenue	(SR 43 to SR 198)
Kansas Avenue	(SR 43 to Tulare Co.)
Lacey Blvd.	(City limits to SR 41)
Laurel Avenue	(18th Ave. to Avenal Cutoff)
Nevada Avenue	(SR 43 to Tulare Co. and SR 41 to Avenal Cutoff)
Pueblo Avenue	(10 ½ Ave. to 19th Ave.)
Plymouth Avenue	(30th Ave. to Avenal Cutoff)
Quail Avenue	(30th Ave. to SR 41)
Utica Avenue	(6th Ave. to I-5 and SR 41 to SR 33)
Virginia Avenue	(Tulare Co. line to 6th Ave.)
Waukena	(SR 137 to SR 43)
Whitley Avenue	(City limits to 10 ½ Ave.)

FIGURE 4-2



Source: Caltrans, Kings County

1. Santa Rosa Rancheria

General. Established by 1921 on a 40-acre parcel of land, the Santa Rosa Rancheria is the Native American community of the Tachi Yokuts. The Rancheria now includes 370 acres of trust land and 1,500 acres of fee land for a total of 1,600 acres. There are currently 128 housing units for a total population of 720. The main source of revenue is the Palace Indian Gaming Center, which employs about 1,400 persons.

Growth Trends. An additional 100+ housing units are planned for construction within the next five years, which will double the Rancherias' population. Expansion plans for The Palace Indian Gaming Center include a 1,200 all-suite hotel, gas station/convenience store, conference center, ballroom, fire station, and theater. A transportation planning study was conducted to identify the impacts of these developments on the Rancheria's road system, as well as the adjacent local road system, and to provide a list of improvements to meet the current and projected transportation needs.

Inventory of Routes. Indian Reservation Roads (IRR) include public roads that are located within or provide access to an Indian reservation, Indian trust land, or restricted Indian land that is not subject to fee title alienation without the approval of the federal government, or Indian communities in which Indian natives reside. Bureau of Indian Affairs (BIA) Roads System is included in the IRR system and includes those existing and proposed roads for which the BIA has or plans to obtain legal rights-of-way. This includes only roads for which the BIA has the primary responsibility to construct, improve, and maintain. Any additions or deletions to this system must be supported by resolution from the Tribes. Tribal Roads System includes those roads whose rights-of-way are under the jurisdiction of a Tribe.

There are 5.1 miles of public roads inventoried on the Santa Rosa Rancheria lands. These roads include 3.3 miles of Bureau of Indian Affairs (BIA) system roads and 1.8 miles of county roads. The transportation study has recommended changes to the BIA's Santa Rosa Rancheria road system. This study recommends adding 11.2 miles to the BIA/IRR system. The following is an inventory of existing and proposed BIA roads on the Santa Rosa Rancheria road system.

Alkali Road	
Alkali Drive	
Atwell Court	
Saltgrass Road	
Davis Circle (Proposed)	
Coyote Court / Monic Lane (Proposed)	
Saltgrass Court (Proposed)	
Tachi Court (Proposed)	
Yokut Court (Proposed)	
15th Avenue	(Jersey Ave. to Kent Ave.)
16th Avenue	(Jersey Ave. to Proposed extension to Kansas Ave.)
17th Avenue	(Jersey Ave. to Proposed extension to Kansas Ave.)
Jersey Avenue (Proposed)	(15th Ave. to 18th Ave.)
Kent Avenue (Proposed)	(15th Ave. to 18th Ave.)
Kansas Avenue (Proposed)	(16th Ave. to 18th Ave.)

D. REGIONALLY SIGNIFICANT ROADS IN URBAN AREAS

1. Avenal

General. Incorporated in 1979, Avenal is a community with an estimated population of 15,871 located in extreme southwestern Kings County. With 19.5 square miles, Avenal has the largest land area of any city in the county, although only 2.5 square miles is urbanized. Historically, its economy had been based on the petroleum industry. In the 1970's, the California Aqueduct and Interstate 5 were completed which brought water and access and a shift from an oil-based economy to one based on agriculture.

Growth Trends. A state prison facility was constructed near Avenal in 1987. As of January 2010, the prison inmate population was 6,687, or roughly 42% of the total Avenal population. Nearly 1,500 jobs have been created to serve the prison population. Only about 16 to 18 percent of the prison employees live in Avenal, with many of the employees commuting from Coalinga, Lemoore, and Hanford. As a result, state and local roads serving Avenal have experienced higher levels of local and commuter traffic than that of the past.

Inventory of Regional Routes: See Figure 4-3 for rural functional classification and the Appendix for general information such as current road conditions and traffic factors.

Interstate and Other Principal Arterials

Interstate 5 (Within City Limits)

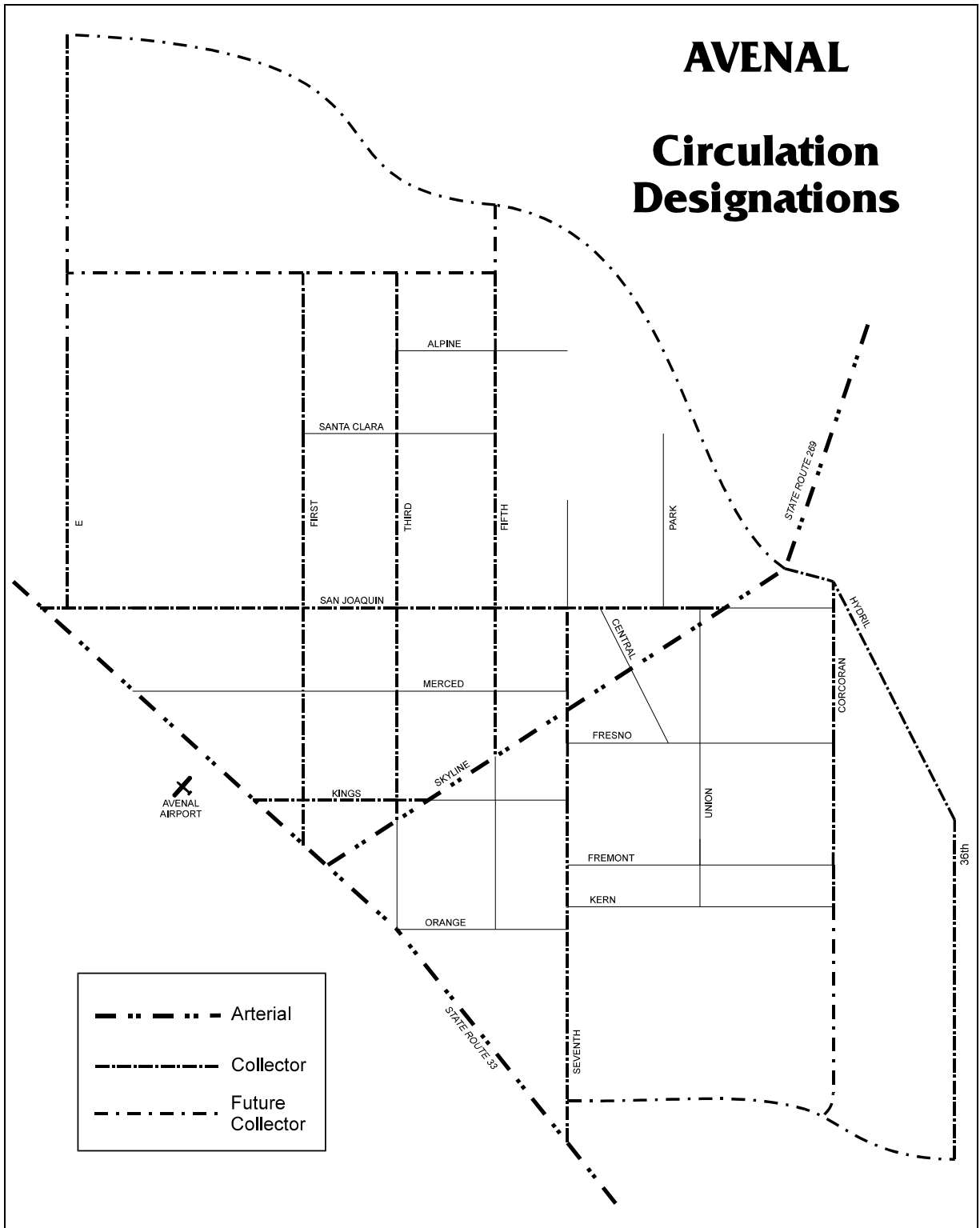
Arterials

State Route 33 (Fresno Co. to 36th Ave.)
 State Route 269 (I-5 to SR 33)
 Avenal Cutoff Road (SR 269 to Avenal City Limits)

Collectors

Corcoran Avenue (Hydril Rd. to Future Street)
 E Avenue (San Joaquin St. to Future Street)
 Hydril Road (SR 269 to 36th Ave.)
 Kings Street (SR 33 to Skyline Blvd.)
 Plymouth Avenue (Avenal Cutoff to Avenal City Limits)
 San Joaquin Street (Skyline Blvd. to SR 33)
 First Avenue (SR 33 to Future Street)
 Third Avenue (Skyline Blvd. to Future Street)
 Fifth Avenue (Skyline Blvd. to Future Street)
 Seventh Avenue (San Joaquin St. to SR 33)
 36th Avenue (Hydril Rd. to Future Street)
 Future Street (E Ave. to Skyline Blvd.)
 Future Street (Seventh Ave. to 36th Ave.)
 Future Street (E Ave. to Fifth Ave.)

FIGURE 4-3



Source: City of Avenal

2. Corcoran

General. Corcoran is located in southeastern Kings County, about 18 miles south of Hanford on SR 43. It is the home of several major agricultural corporations that farm the Tulare Lake Basin. Cotton ginning, grain milling, and plant oil extraction dominate the city's industries. The estimated total population of the area for 2009 was approximately 25,893 persons.

Growth Trends. Corcoran is California's center for industrialized farming, and is the home of several trucking and farm equipment companies. This means extensive use of heavy trucks and machinery over local streets and roads and State Route 43, which is a major factor in pavement wear. Special attention is needed to maintain those regional routes serving the Corcoran area.

Because modern farming is highly mechanized, there exists only a limited demand for farm labor in Corcoran. Unless new job-producing industries can be attracted there, the area's population is expected to continue growing at its slow, yet sustained, rate. Such growth can be easily contained within the urban limits set by the city's general plan.

A state prison facility was constructed near Corcoran and opened in early 1988. The California Department of Corrections also constructed a substance abuse treatment center adjacent to the existing prison facility. It is estimated that employment of this facility ranges from 1,350 to 1,900 persons, depending on the occupancy rate of the facility. As of January 2010, the inmate population of both facilities combined was 12,190, which is approximately 47% of the city's total population. It has been estimated that about 15% of the approximately 1,600 prison employees live in Corcoran, 23% in Hanford, 6% in Lemoore and the remaining 51% outside Kings County.

Traffic volumes on regional routes can expect to increase due to additional commuters. The State Department of Corrections and the City of Corcoran have upgraded some intersections and streets in Corcoran leading to the prison to mitigate the traffic impacts. With the new facility, some adverse impacts on the circulation would be mitigated by the placement of traffic signals.

Inventory of Regional Routes: See Figure 4-4 for urban functional classification and the Appendix for general information such as current road conditions and traffic factors.

Interstate and Other Freeways or Expressways

State Route 43 (Niles Ave. to Sweets Canal)

Other Principal Arterials

None

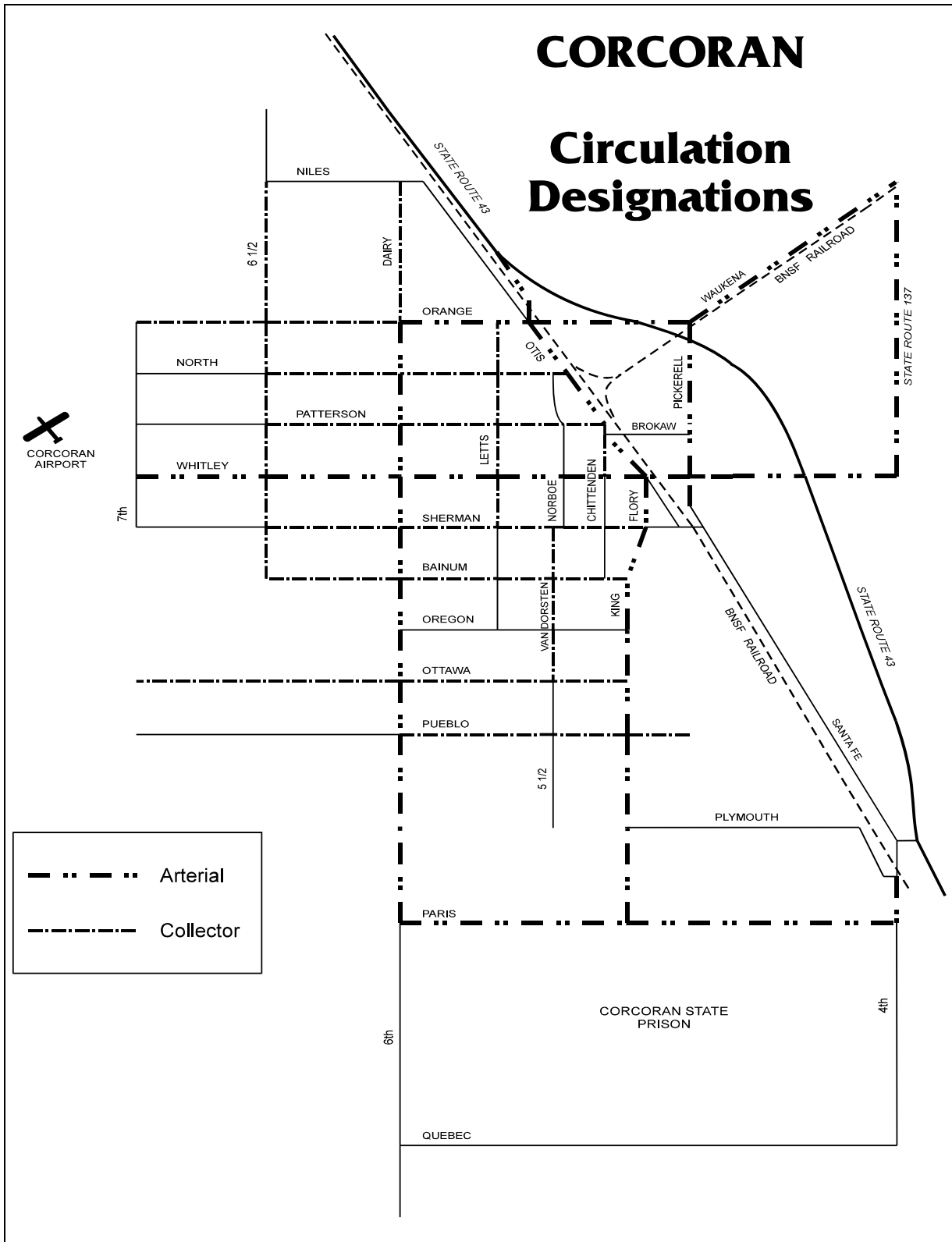
Arterials

State Route 137	
Dairy (6th) Avenue	(Pueblo Ave. to Orange Ave.)
Flory Avenue	(Whitley Ave. to King Ave.)
King Avenue	(Bainum Ave. to Paris Ave.)
Orange Avenue	(Dairy Ave. to Otis Ave.)
Otis Avenue	(Orange Ave. to Whitley Ave.)
Paris Avenue	(Dairy Ave. to 4th Ave.)
Pickerell (5th) Ave.	(Orange Ave. to Sherman Ave.)
Waukena Avenue	(SR 137 to Orange Ave.)
Whitley Avenue	(City limits to SR 43)
New Entryway	(SR 43 to Orange Ave.)
4th Avenue	(Paris Ave. to Santa Fe Ave.)

Collectors

6 ½ Avenue	(Sherman Ave. to Niles Ave.)
Bainum Avenue	(6 ½ Ave. to Flory Ave.)
Chittenden Avenue	(Otis Ave. to Whitley Ave.)
Dairy Avenue	(Niles Ave. to Orange Ave.)
Letts Avenue	(Orange Ave. to Sherman Ave.)
North Avenue	(Otis Ave. to 6 ½ Ave.)
Orange Avenue	(Dairy Ave. to 7th Ave.)
Ottawa Avenue	(King Ave. to 7th Ave.)
Patterson Avenue	(Otis Ave. to 6 ½ Ave.)
Pueblo Avenue	(Dairy Ave. to King Ave.)
Sherman Avenue	(Flory Ave. to 6 ½ Ave.)
Van Dorsten Avenue	(Ottawa Ave. to Sherman Ave.)

FIGURE 4-4



Source: City of Corcoran

3. Hanford

General. Hanford is the county seat of Kings County, as well as its largest city, with approximately 52,687 residents. The city itself is compacted into an area of about 6 square miles. Several rural residential concentrations are scattered throughout the territory surrounding the city. The community of Armona lies three miles to the west, adding to the total area roughly 3,600 residents.

Growth Trends. Like most communities in the San Joaquin Valley, Hanford's economic livelihood is squarely based on farm-service enterprises. In recent years, other sectors of the city's economic community have flourished such as retail sales and professional service enterprises. Added with the many military residents, these factors have created more jobs and helped Hanford enjoy significant growth since 1970. In spite of the estimated 12,950 local jobs, almost half of the employed persons residing in Hanford commute elsewhere for employment such as LNAS, Visalia and Fresno.

Generally, new residential growth is occurring north of Grangeville Boulevard, and in pockets east of 10th Avenue and west of 11th Avenue. Additional residential growth is planned to occur in the southwest corner of the city as well. Many retail establishments are compacted in the downtown core, although three major shopping centers, including a regional mall, are located in the area of 12th Ave. and Lacey Blvd. Industrial uses are located south of Houston Avenue, between 10th and 11th Avenues. City planners indicate that only modest extensions of the city's urban area will be needed to handle Hanford's growth needs for several years. The annual percent of population growth is anticipated to be 2.04%.

Inventory of Regional Routes: See Figure 4-5 for urban functional classification and the Appendix for general information such as current road conditions and traffic factors.

State Route 198 (SR 43 to ½ mile west of 12th Ave.)

Other Principal Arterials

None

Arterials

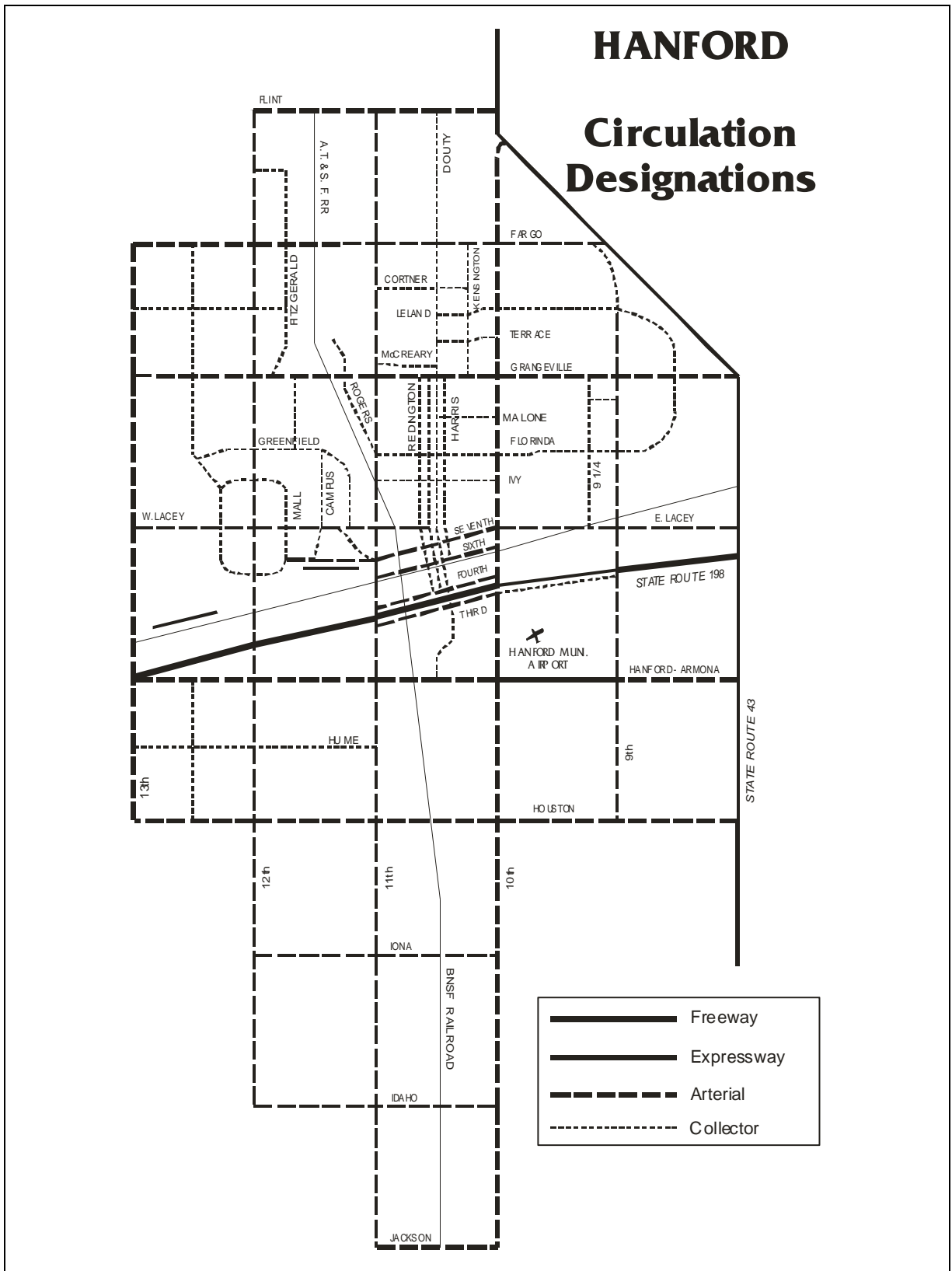
State Route 43	(10th Ave. to Houston Ave.)
Future 9th Avenue	(Houston Ave. to Fargo Ave.)
10th Avenue	(Jackson Ave. to SR 43)
11th Avenue	(Jackson Ave. to Flint Ave.)
12th Avenue	(Idaho Ave. to Flint Ave.)
13th Avenue	(Houston Ave. to Fargo Ave.)
Fargo Avenue	(13th Ave. to SR 43)
Flint Avenue	(12th Ave. to SR 43)
Grangeville Blvd.	(13th Ave. to SR 43)
Hanford-Armona Rd.	(13th Ave. to 10th Ave., 9th Ave. to SR 43)
Houston Avenue	(13th Ave. to SR 43)
Idaho Avenue	(10th Ave. to 12th Ave.)
Iona Avenue	(10th Ave. to 12th Ave.)
Jackson Avenue	(10th Ave. to 11th Ave.)

Lacey Blvd.	(SR 43 to 10th Ave. and 13th Ave. to Irwin St.)
Third Street	(10th Ave. to 11th Ave.)
Fourth Street	(10th Ave. to 11th Ave.)
Sixth Street	(10th Ave. to 11th Ave.)
Seventh Street	(10th Ave. to Mall Dr.)

Collectors

Campus/University	(Grangeville Blvd. to Sixth St.)
Centennial Drive	(Lacey Blvd. to Grangeville Blvd.)
Cortner Street	(Kensington Way to 11th Ave.)
Douty Street	(Flint Ave. to Hanford-Armona Rd.)
Fitzgerald Lane	(Grangeville Blvd. to ½ mile n/o Fargo Ave.)
Florinda Avenue	(11th Ave. to 9th Ave.)
Garner Street	(11th Ave. to Lacey Blvd.)
Greenfield Avenue	(Lacey Blvd. to 13th)
Harris Street	(Grangeville Blvd. to 6th St.)
Hume Avenue	(11th Ave. to 13th Ave.)
Irwin Street	(4th St. to Grangeville Blvd.)
Ivy Street	(10th Ave. to 11th Ave.)
Kensington Way	(Fargo Ave. to Grangeville Blvd.)
Leland Way	(9th Ave. to Douty St.)
McCreary Avenue	(Douty St. to 11th Ave.)
E. Malone	(10th Ave. to Douty St.)
Mall Drive	(Ring Road around Lacey Blvd. to 12th Ave.)
9 ¼ Avenue	(Grangeville Blvd. to Lacey Blvd.)
Redington Street	(Grangeville Blvd. to 4th St.)
Rogers Road	(11th Ave. to Mulberry Ave.)
Terrace Drive	(10th Ave. to Douty St.)
Third Street	(10th Ave. to 9th Ave.)
Future Streets in South Hanford including:	
11 ½ Avenue	(Houston Ave. to n/o Hume Ave.)
12 ½ Avenue	(Hanford-Armona Rd. to Houston Ave.)
Future Streets in North Hanford including:	
12 ½ Avenue	(Greenfield Ave. to Fargo Ave.)
Florinda Street	(9 ¼ Ave. to Fargo Ave.)
Leland Way	(9 ¼ Ave. to 9th Ave.)
W. Seventh Street	(Mall Dr. to 13th Ave.)

FIGURE 4-5



Source: City of Hanford

4. Lemoore

General. Lemoore is a city of approximately 24,818 persons situated in north-central Kings County, near the intersection of SR 41 and SR 198. Unlike most cities in this region, Lemoore's economy is not principally based upon agricultural services. Instead, it is the home of many military and civilian persons employed at the nearby Lemoore Naval Air Station. Accordingly, Lemoore is populated by many young single adults and new families.

Growth Trends. Lemoore's population has increased at a much faster pace than the rest of the county the past several years. Most of this is attributed to the increasing dominance of LNAS as a military training center. While Lemoore generally provides housing and services for LNAS personnel, employment opportunities do exist at a large dairy processing facility. Some of the Avenal and Corcoran Prison employees have made Lemoore their home.

NAS Lemoore is the mandated Base Realignment and Closure (BRAC) site for the relocation of Navy aircraft, personnel, and equipment from other NAS sites. It was projected that 5,000 people, military personnel and their dependents, would be moving to the NAS Lemoore region in 1999. Approximately a quarter of the incoming persons were expected to reside off-station in Lemoore.

As of its 2008 general plan, the City of Lemoore has been growing at a rate of 4% since 1992. In terms of traffic demands, the Lemoore area can expect elevated and sustained traffic loads on all regional and local roads serving their area.

Inventory of Regional Routes: See Figure 4-6 for urban functional classification and the Appendix for general information such as current road conditions and traffic factors.

Interstate and Other Freeways or Expressways

State Route 198 (18th Ave. to City limits and 19th Ave. to w/o SR 41)

Other Principal Arterials

State Route 41 (Hanford Armona Rd. to SR 198)

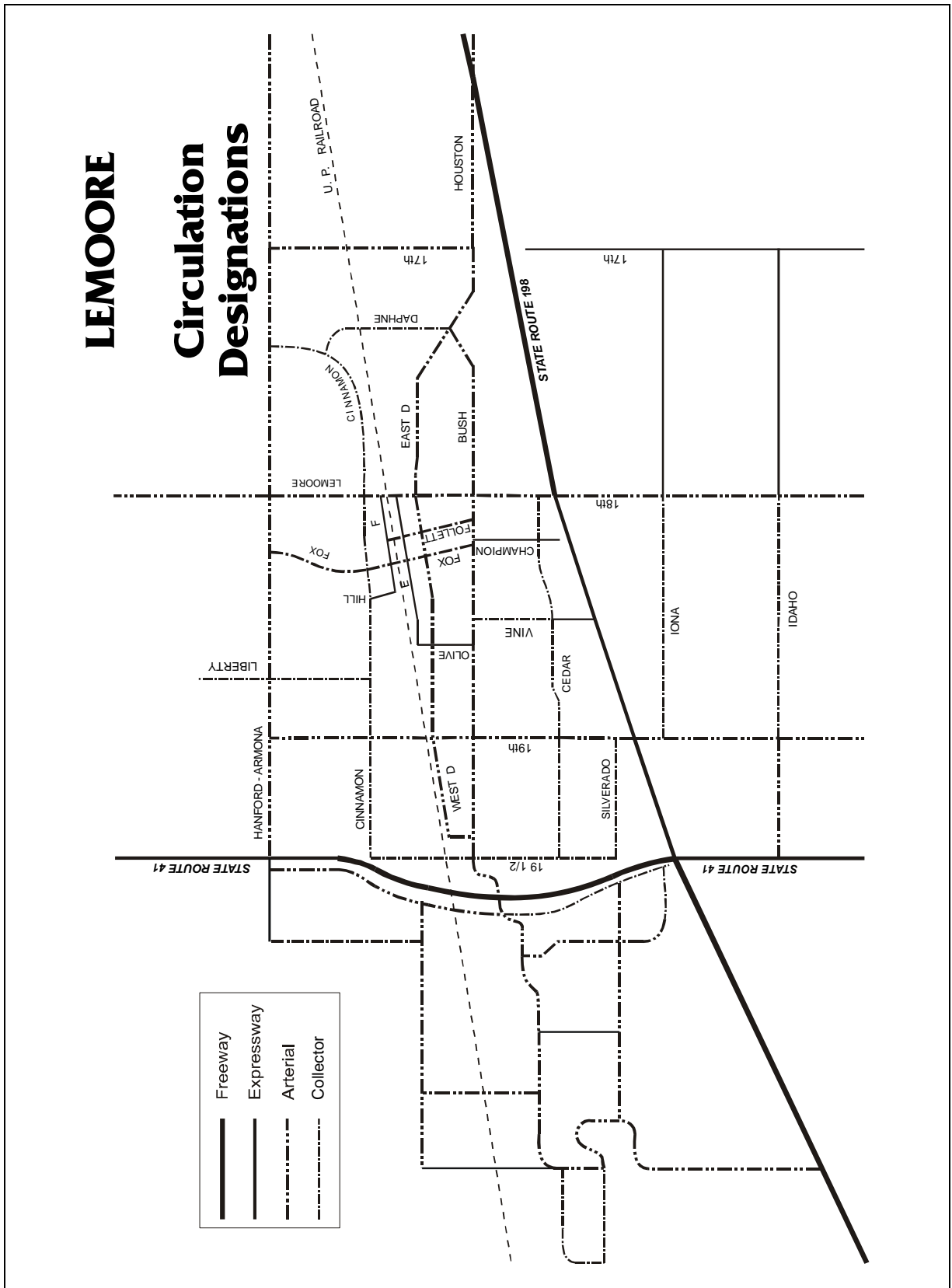
Arterials

Hanford Armona Rd.	(Lemoore Canal to SR 41)
D Street	(17th Ave. to W. Bush St.)
Bush Street	(East D St. to SR 41)
Idaho Avenue	(19th Ave. to SR 41)
18th Avenue	(Lacey Blvd. to Indiana Ave.)
19th Avenue	(Hanford Armona Rd. to Idaho Ave.)

Collectors

Belle Haven Drive	(Bush St. to Hanford Armona Rd.)
Cedar Lane	(18th Ave. to 19 ½ Ave.)
Cinnamon Drive	(Hanford Armona Rd. to 18th Ave. and 18th Ave. to 19 ½ Ave.)
College Avenue	(Bush St. to Pedersen Dr.)
Follett Street	(Cinnamon Dr. to Bush St.)
Fox Street	(Bush St. to Hanford Armona Rd.)
Liberty Drive	(Lacey Blvd. To Cinnamon Dr.)
Iona Avenue	(18th Ave. to 19th Ave.)
Silverado Drive	(19th Ave. to 19 ½ Ave.)
Vine Street	(Bush St. to Cedar Lane)
19 ½ Avenue	(Cinnamon Dr. to Silverado Dr.)

FIGURE 4-6



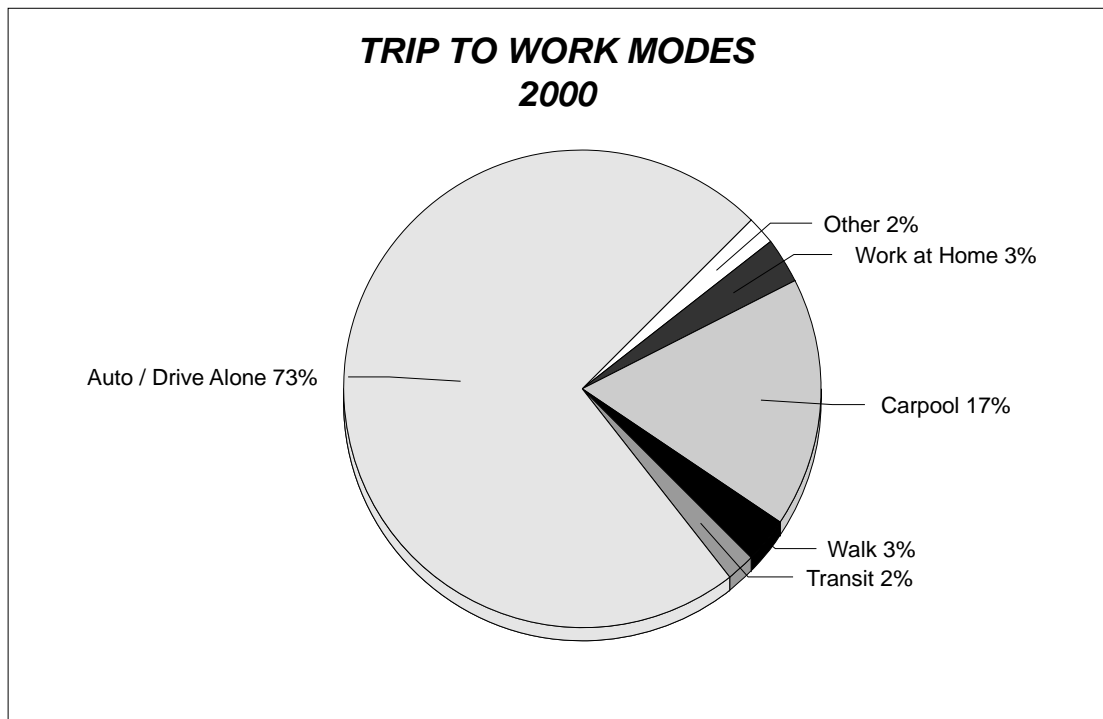
Source: City of Lemoore

II. ASSUMPTIONS AND INVENTORIES

A. HIGHWAY TRAVEL ASSUMPTIONS

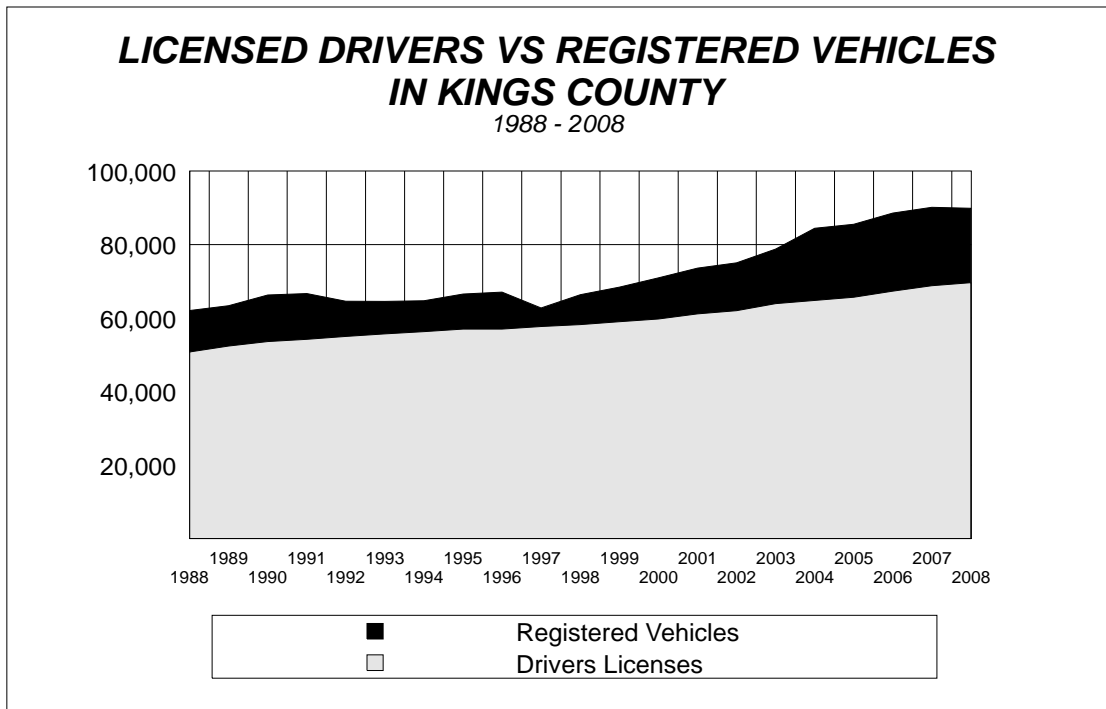
1. Automobiles and pickups will remain this county's preferred means of personal transportation. (See Figure 4-7)
2. The number of Kings County residents operating motor vehicles will continue to increase. (See Figure 4-8)
3. Existing mobile source emissions will be reduced through Transportation Control Measures to help meet air quality standards, resulting in these actions:
 - a. Ridesharing will increase.
 - b. More people will walk and commute by bicycle.
 - c. More people will use the Kings Area Rural Transit (KART) system, Amtrak trains, Orange Belt buses, and other local transit services.
4. With continuing growth in the Fresno and Visalia metropolitan areas, and local growth attributed to LNAS, the Corcoran Prison and the Avenal Prison, traffic along the state highways and local regional routes will increase, and public demands will be made to upgrade these highways. (See Figure 4-9)
5. Because Kings County's population centers are widely dispersed, many county residents will commute long distances to work. (See Figures 4-10 through 4-13)

FIGURE 4-7



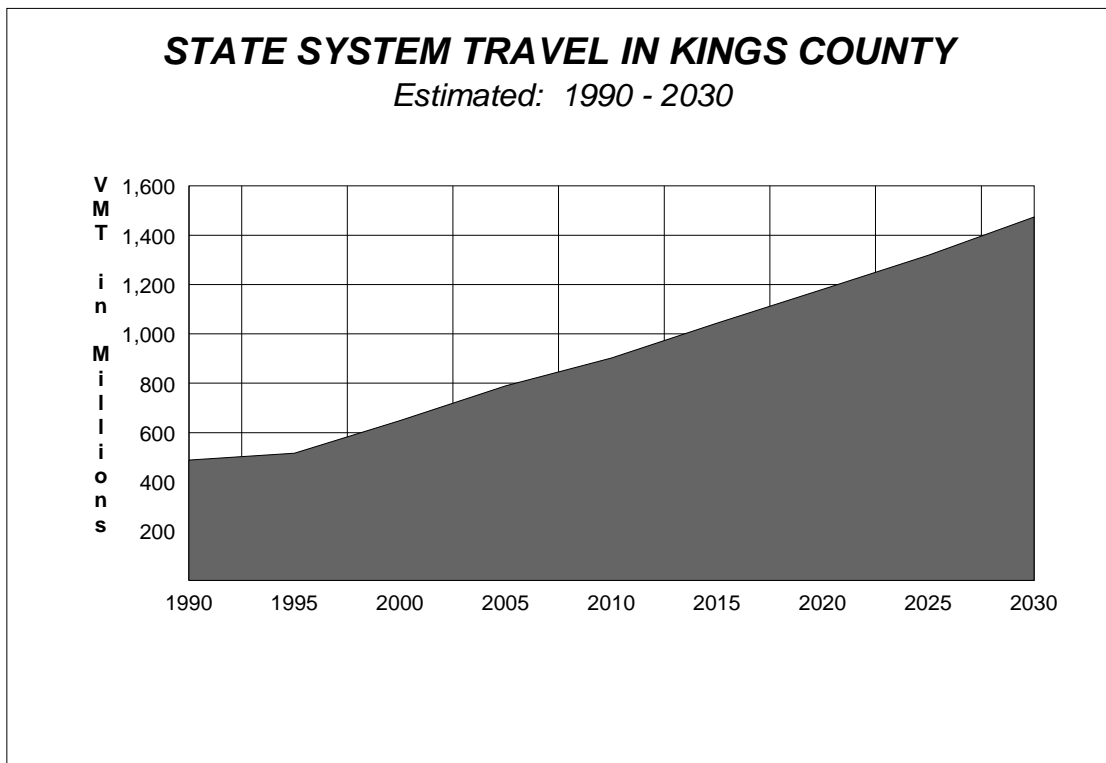
Source: 2000 U.S. Census

FIGURE 4-8



Source: CHP <http://www.chp.ca.gov/switrs/>

FIGURE 4-9



Source: Caltrans <http://www.dot.ca.gov/hq/tsip/otfa/mtab/MVSTAFF/MVSTAFF05.pdf>

FIGURE 4-10

**INTRA-COUNTY TRAVEL ON STATE ROUTES IN KINGS COUNTY
2000-2008-2035**

ROUTE	LOCATION	AVERAGE ANNUAL DAILY TRAVEL			PERCENT CHANGE	
		2000	2008	2035	2000-2008	2008-2025
<u>I-5</u>	Kern County Line to SR 41	27,500	32,500	48,660	18.2%	49.7%
	SR 41 to Fresno Co. Line	28,500	30,000	47,603	5.3%	58.7%
<u>SR 33</u>	Kern County Line to Avenal	1,950	1,350	4,636	30.8%	243.4%
	North of Avenal to I-5	2,000	2,300	4,636	15.0%	100.2%
<u>SR 41</u>	Kern Co. Line to Excelsior	6,400	6,400	7,965	0.0%	24.5%
	Excelsior to Fresno Co. Line	9,000	16,000	26,793	77.7%	67.5%
<u>SR 43</u>	Tulare Co. Line	4,000	4,100	7,327	2.5%	78.7%
	Fresno Co. Line	8,900	10,300	17,764	15.7%	72.4%
<u>SR 137</u>	Jct. SR 43 N. of Jct Waukena	2,150	2,600	3,297	20.9%	26.8%
	Tulare Co. Line	2,750	3,200	7,193	16.4%	125.8%
<u>SR 198</u>	Fresno Co. Line to the LNAS Main Gate	7,000	7,000	11,293	0.0%	61.3%
	7th Ave. to Tulare Co. Line	13,600	19,000	30,147	26.5%	58.6%
<u>SR 269</u>	Jct. SR 33	4,200	2,500	3380	40.4%	35.2%
	Fresno Co. Line	4,050	5,200	7,522	28.4%	44.7%

Source: <http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/2008all.htm>

FIGURE 4-11

**WORK LOCATIONS FOR ALL OF KINGS COUNTY
2000**

WORK LOCATION	NO.	PERCENT OF WORKFORCE
In Kings County	33,257	79.3%
Outside Kings County	8,346	19.9%
Outside of California	341	0.8%
TOTAL	41,603	100.0%

Source: 2000 U.S. Census

FIGURE 4-12

**WORK LOCATIONS FOR KINGS COUNTY CITIES
2000**

WORK LOCATION	AVENAL		CORCORAN		HANFORD		LEMOORE	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Same City	600	24.2%	1,453	50.1%	8,185	50.9%	2,464	30.0%
Elsewhere in Kings County	512	20.7%	1,027	35.4%	4,977	31.0%	4,123	50.2%
Outside Kings County	1,366	55.1%	422	14.5%	2,905	18.1%	1,631	19.8%
TOTAL	2,478	100.0%	2,902	100.0%	16,067	100.0%	8,218	100.0%

Source: 2000 U.S. Census

FIGURE 4-13

**TRIP TO WORK TRAVEL TIMES FOR ALL OF KINGS COUNTY
2000**

TRAVEL TIME IN MINUTES	NO.	PERCENT OF WORKFORCE
0-9	9,660	23.7%
10-19	14,484	35.5%
20-44	12,314	30.1%
45>	4,388	10.7%
TOTAL	40,846	100%

Source: 2000 U.S. Census

FIGURE 4-14

**TRIP TO WORK TRAVEL TIMES FOR KINGS COUNTY CITIES AND LNAS
2000**

TRAVEL TIME IN MINUTES	AVENAL		CORCORAN		HANFORD		LEMOORE		LNAS	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
0-9	580	23.6%	1,127	39.5%	3,663	23.2%	1,364	17.1%	572	21.4%
10-19	244	9.9%	718	25.2%	5,677	36.0%	3,026	38.0%	1,633	61.0%
20-44	916	37.3%	783	27.5%	4,905	31.1%	2,772	34.8%	403	15.0%
45>	719	29.2%	224	7.8%	1,520	9.7%	808	10.1%	69	2.6%
TOTAL	2,459	100.0%	2,852	100.0%	15,765	100.0%	7,970	100.0%	2,677	100.0%

Source: 2000 U.S. Census

B. HIGHWAY SAFETY ASSUMPTIONS

1. Dense "Tule Fog" will always impose severe transportation difficulties and safety problems in Fall and Winter. (See Figures 4-15 and 4-16)
2. Collisions involving other vehicles and fixed objects will remain the largest cause of vehicular fatalities and injuries in Kings County; many will be caused by unsafe or improper driving, some by inadequate facilities. In addition to strict enforcement of motor vehicle laws, more operational and safety improvements, including new facilities, are needed to help lower the probability of regional system accidents. (See Figures 4-16 through 4-19).

FIGURE 4-15

**OCCURRENCE OF FOG AT CITY OF HANFORD
2008-2009**

No. of Days with any Fog Condition	NOV 08	DEC 08	JAN 09	FEB 09	MAR 09	APR 09	MAY 09	JUN 09	JUL 09	AUG 09	SEP 09	OCT 09	ANNUAL AVERAGE
		28	29	31	24	19	6	2	2	0	9	9	22

Source: National Weather Service Forecast Online <http://www.weather.gov/climate/index.php?wfo=hnx>

FIGURE 4-16

**ACCIDENTS IN FOG vs. ALL ACCIDENTS IN KINGS COUNTY
2008**

JURISDICTION	ACCIDENTS IN FOG	TOTAL ACCIDENTS	PERCENT OF ACCIDENTS IN FOG
January	119	14,344	0.8%
February	100	14,141	0.7%
March	24	15,085	0.2%
April	9	14,542	0.1%
May	20	14,738	0.1%
June	10	13,833	0.1%
July	22	13,819	0.2%
August	21	14,402	0.1%
September	50	14,525	0.3%
October	63	14,348	0.4%
November	165	14,321	1.2%
December	314	14,502	2.2%
TOTAL	917	172,600	0.5%

Source: California Highway Patrol

FIGURE 4-17

**MOTOR VEHICLE COLLISION TYPES IN KINGS COUNTY
2008**

Motor Vehicle Involved With:	No.	% of All Accidents	Number Killed	% of Killed	Number Injured	% of Injured
Other Vehicle	1,361	57.3%	24	63.2%	793	64.7%
Fixed Object	448	18.9%	10	26.2%	147	12.0%
Non-Collision	138	5.8%	2	5.3%	97	7.9%
Parked Vehicle	181	7.6%	0	0.0%	25	2.0%
Bicycle	58	2.4%	0	0.0%	38	3.1%
Other Object	50	2.1%	0	0.0%	5	0.4%
Pedestrian	73	3.1%	2	5.3%	67	5.5%
Animal	15	0.6%	0	0.0%	0	0.0%
Vehicle on Other Road	42	1.7%	0	0.0%	26	2.1%
Not Stated	6	0.3%	0	0.0%	0	0.0%
Train	4	0.2%	0	0.0%	28	2.3%
TOTAL	2,376	100%	38	100%	1,226	100%

Source: California Highway Patrol

FIGURE 4-18

**PRIMARY COLLISION FACTORS IN KINGS COUNTY
2008**

PRIMARY FACTOR	NO. OF ACCIDENTS	% OF ALL ACCIDENTS	NUMBER KILLED	% OF KILLED	NUMBER INJURED	% OF INJURED
DUI/BUI	157	8.9%	7	21.2%	71	9.7%
Impeding Traffic	1	0.06%	0	0.0%	0	0.0%
Unsafe Speed	356	20.1%	6	18.2%	186	25.4%
Following Too Closely	30	1.7%	0	0.0%	11	1.5%
Wrong Side of Road	49	2.8%	1	3.0%	23	3.1%
Improper Passing	231	13.1%	0	0.0%	6	0.8%
Unsafe Lane Change	17	0.9%	2	6.1%	8	1.1%
Improper Turning	350	19.8%	10	30.3%	148	20.2%
Automobile Right-of-Way	262	14.8%	4	12.1%	160	21.9%
Pedestrian Right-of-Way	17	0.9%	1	3.0%	14	1.9%
Pedestrian Violation	12	0.7%	0	0.0%	11	1.5%
Traffic Signals and Signs	86	4.9%	2	6.1%	43	5.8%
Unsafe Starting or Backing	81	4.6%	0	0.0%	21	2.9%
Brakes	1	.06%	0	0.0%	0	0.0%
Other Equipment	4	0.3%	0	0.0%	0	0.0%
Other Hazardous Violation	11	0.6%	0	0.0%	1	0.1%
Other Improper Driving	10	0.6%	0	0.0%	7	1.0%
Other Than Driver	34	1.9%	0	0.0%	8	1.1%
Unknown	36	2.0%	0	0.0%	8	1.1%
NOT STATED	20	1.1%	0	0.0%	5	0.7%
TOTAL	1,765	100.00%	33	100.0%	731	100.0%

Source: California Highway Patrol

FIGURE 4-19

**ACCIDENT TIMES IN KINGS COUNTY
2008**

TIME PERIOD	UNINCORPORATED		ALL CITIES		TOTAL	
	Number	%	Number	%	Number	%
3-7 AM	141	8.9%	47	6.0%	188	7.9%
7-11 AM	273	17.3%	147	18.7%	420	17.8%
11-3 PM	344	21.8%	182	23.2%	526	22.2%
3-7 PM	421	26.6%	224	28.5%	645	27.3%
7-11 PM	249	15.8%	131	16.7%	380	16.0%
11-3 AM	120	7.6%	50	6.4%	170	7.2%
Unknown	32	2.0%	5	0.6%	37	1.6%
TOTAL	1,580	100%	786	100%	2,366	100%

Source: California Highway Patrol

III. SUMMARY OF HIGHWAY ISSUES

A. LOCAL RESPONSES TO FAILING ROADS

As with any structure, roads require a long-term commitment of money to keep them in service. Theoretically, a well-constructed road can last about 15 years before needing extensive renovation. Preventive maintenance applied during this period will extend the life of the road and delay the need for reconstruction. Even with preventive maintenance, however, roads will eventually wear out.

Many factors cause roads to deteriorate:

1. Changing air temperature, low humidity, and ultra-violet radiation oxidize oils and make the pavement shrink and become brittle.
2. Winter rains wash sand out of road mixes, causing surface raveling.
3. More weight is being placed on trucks. In terms of road wear, one heavily loaded truck can be equated to 3,000 to 6,000 automobiles.
4. Because Kings County is a major cotton producer, cotton module movers are used on local roads. In just a few seasons, these vehicles can cause extensive road damage.
5. As the natural ponding basin for the Kings, Kaweah, and Tule Rivers, Kings County occasionally experiences flooding. Extensive road damage has been caused by past flooding.

The level of funding for local roads has not kept pace with the number of lane miles of roads needing rehabilitation or reconstruction. In response to road needs and limited revenues, major changes were made to local road programs:

1. There was a change in emphasis from road reconstruction to maintenance with an increase in the use of asphalt concrete overlays for road improvements.
2. On badly deteriorated sections, heavier, longer-lasting seals have been used.
3. Reconstruction of major roads has been delayed as long as possible.

The effects of these cost-saving strategies have fully impacted all areas of Kings County. The surface quality of many roads has deteriorated so severely that total reconstruction is the only remaining option. Even though funding shortfalls continue, local governments are now beginning to shift their road programs to these courses of action:

1. Putting more money into reconstruction of deteriorated major arterials.
2. Continuing maintenance on high-use roads.
3. Further service cut-backs for minor streets and roads.
4. Convert roads to gravel.
5. Seeking new sources of funding for local roads.

B. HIGHWAY IMPROVEMENTS

The vast majority of all travel in Kings County occurs on its streets and highways as compared to air, rail, bicycle, and walking modes. No change in this pattern is expected. The existing regional highway system represents a very large investment of public funds and should be maintained and upgraded to more efficiently and safely accommodate automobile as well as heavy truck traffic. Areas of concern are outlined below.

1. Maintenance of Regional Routes

Locally, pavement failures are found on many regionally significant roads. Parts of these roads will require total reconstruction. All regional routes should be maintained to prevent future costly repairs.

2. Safety Improvements

Three conditions affecting vehicular safety are of great concern in this region. These are: 1) heavy winter fogs that reduce visibility and make driving very dangerous; 2) "blind" or obstructed intersections from vegetation; and 3) at-grade intersections along state highways. Improvements are needed on local and state systems to lessen the possibility of accidents resulting from these conditions.

3. Operational Improvements

To maximize the service and efficiency of the existing regional system, wider roads and bridges, turn lanes, and interchanges are needed in places along state routes 41, 43, and 198. Severe parking congestion exists along Seventh Street in downtown Hanford. These deficiencies are discussed at length in the Appendix.

4. New Projects

Due to increasing numbers of vehicle miles traveled, growth in Kings County's urban areas, steadily increasing numbers of registered automobiles and drivers, regional population growth resulting in greater inter-county travel, continuing expansion of LNAS, the presence of oversize trucks on SR 198 and the state prisons in Avenal and Corcoran, new projects are needed to complete the regional system in Kings County. These include new interchanges, road widening, pavement reconstruction, new roads, overpasses, and grade separations.

Three state routes serving Kings County should be improved to either four-lane freeway or two or four-lane expressway status to close service gaps in the state system. Currently, these are two-lane highways that carry a large percentage of inter-county travel: 1) SR 41 between I-5 and SR 198; 2) SR 198 between I-5 and LNAS; and 3) SR 43 between Fresno County and Kern County.

C. RIGHT-OF-WAY PROTECTION FOR FUTURE HIGHWAY IMPROVEMENTS

Local officials want to make sure that adequate right-of-way is protected from encroachment at areas this plan shows for improvements. There is a need to coordinate local general plans with Caltrans' right-of-way dedication policy at key points along SR 198, SR 41, and SR 43. The need for this protection was graphically shown in Tulare County west of Visalia on SR 198, where closely-abutted urban development existed at important intersections. Needed improvements could not have been realistically considered there without very expensive right-of-way acquisition. KCAG wants to avoid such impasses in Kings County.

D. LOCAL PERCEPTION OF STATE'S INATTENTION TO RURAL AND SMALL URBAN NEEDS

Local officials and area residents believe that state transportation officials are insensitive to the transportation needs of the rural and small urban areas. This belief is reinforced annually by the State Transportation Improvement Program's (STIP) distribution of interregional improvement program funds. The method of establishing project priority by Caltrans favors large urban counties where past growth is now causing serious congestion. While it is recognized that the state has limited revenues which are not sufficient to take care of every county's needs, more consideration for programming in rural and small urban counties should be shown.

As mentioned above, KCAG has identified the need for several costly new construction and operational improvements. KCAG realizes that from the state's perspective, such projects may not seem as cost-effective or important as some in more urbanized areas, and that they appear to serve local needs. KCAG contends that this perspective is oblique; such programming policies are generally created by, and biased in favor of, metropolitan areas. The recommendations of this plan are intended to improve the safety, mobility, and economy of this region, and to reduce congestion on the state system.

E. HIGHWAY SPHERES OF INFLUENCE

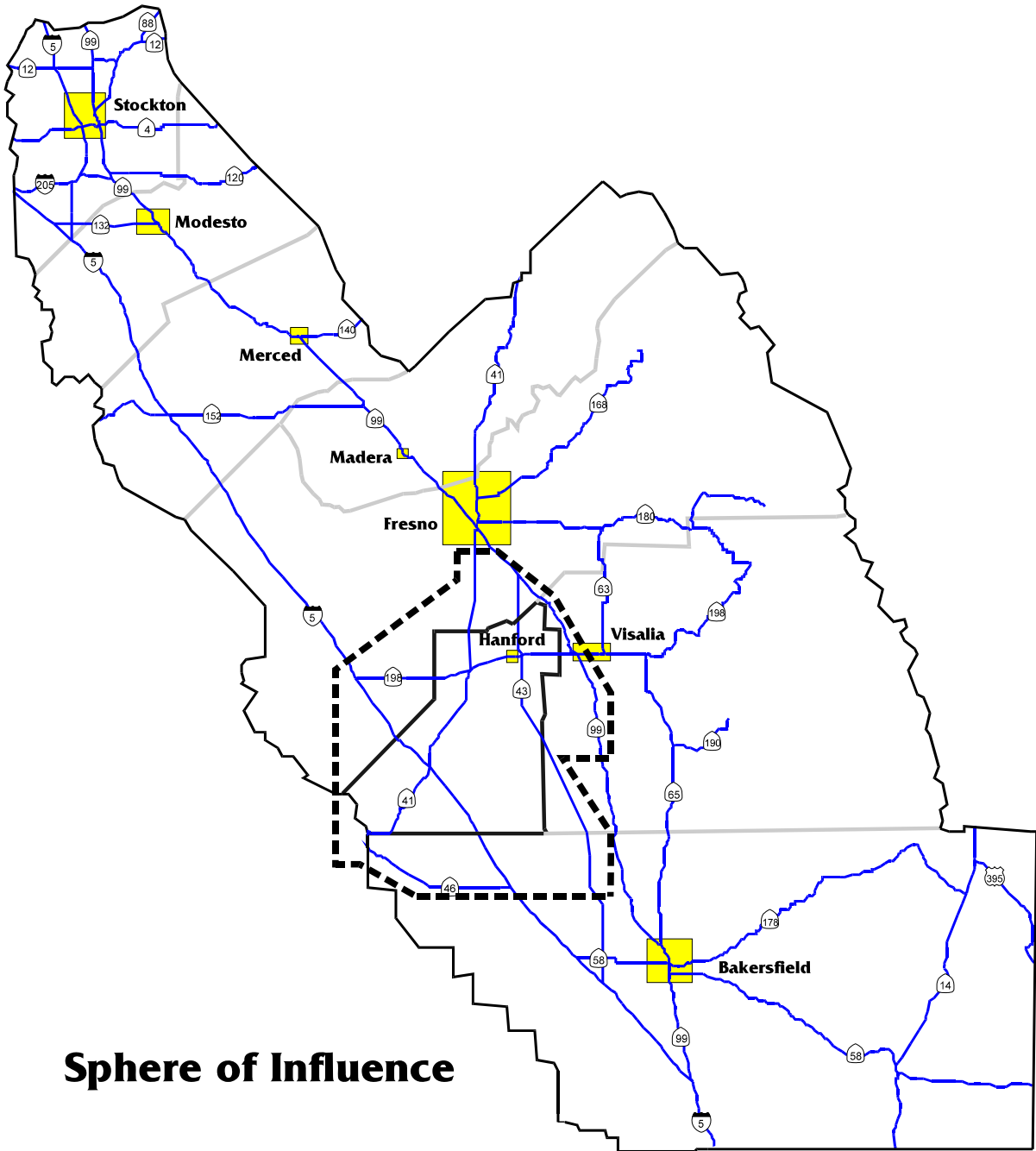
An examination of previous Regional Transportation Plans of Valley agencies revealed that no RTPA viewed transportation from a truly regional perspective on transportation issues. The respective RTPAs confined their studies to their own county areas, as if their interest in a road suddenly stops at the county boundary.

The result was a patchwork of partially coordinated transportation plans. Not only did this situation hinder cooperative planning for county maintained road improvements, but also it seemed to furnish a reason for the state to continue to overlook this area's requests for projects. District 6 counties (Kings, Tulare, Kern, Fresno, and Madera) will probably enjoy much better success in obtaining state funding for state system projects if we agree on what we want, and speak with one voice. Kings and Tulare Counties have coordinated efforts in past Regional Transportation Improvement Programs by programming regional dollars for the widening of SR 198.

A "Highway Sphere of Influence" is shown in Figure 4-20. This is simply an expanded planning area. It extends into neighboring counties and identifies segments of county and state maintained regional roads that serve both jurisdictions. As a practical matter, the sphere shows an area that should be monitored for changes in land use and circulation patterns that will affect Kings County.

As part of the 2011 Regional Transportation Plan update, a chapter is included which is devoted strictly to the San Joaquin Valley which emphasizes the coordinated planning efforts among the Valley RTPAs. In addition to this, Caltrans has prepared a Transportation Concept Report that identifies the improvements necessary for each *corridor*. As a condition of receiving Proposition 1B Corridor Mobility Improvement Account (CMIA) funds, Caltrans has prepared a Corridor System Management Plan (CSMP) for the SR 198 corridor between SR 99 and Lemoore NAS.

FIGURE 4-20



F. FUNDING CONSTRAINTS

Every agency that deals with planning, building, or maintaining roads shares the problem of preserving its facilities with the available funding. Finding money for new facilities is an even bigger problem. Road projects are primarily paid for by gas taxes that are collected on a per-gallon basis.

Because of more efficient vehicles, the amount of gas purchased has declined, while the number of miles driven has increased. Thus, fewer gas tax dollars are available for road improvements. In spite of the recent state and federal gas tax increases that took effect, there is still not enough available money to repair and maintain all the regional routes, or to build new facilities. The need exists to evaluate ways to find more dollars for road improvements.

1. Regional and Interregional Shares

The California Transportation Commission (CTC) is required to distribute state highway funds to each county according to "regional shares." Of the funds available in the STIP, 75 percent are committed to the Regional Improvement Program and 25 percent to the Interregional Improvement Program. Each county's share of its respective north or south county group expenditures is based on 75 percent population and 25 percent state highway miles (Streets and Highway Code, Sec. 188.8).

One problem is that not all routes are eligible for Interregional Improvement Program funds. Many of Kings County's highest priority projects are not eligible for the Interregional Improvement Program funds because they are considered to be local projects, or are on routes that are not on the Interregional system. SR 43 is not an eligible Interregional route and interchanges on eligible routes are considered to be "local" projects. Kings County's regional share is not enough to fund all priority projects.

The CTC also gives higher priority to funding Interregional Improvement projects that are partially funded with Regional Improvement Program funds. Caltrans indicates that it would like to have locals pay a considerable portion of the costs for other state system projects that also serve local needs.

2. "Local Option Fuel Tax"

Counties have been authorized to implement "local option fuel taxes" if voters approve a local, per-gallon, excise tax. So far, voters in those counties where this tax has been proposed have rejected the option. Currently, the ability to sell a local gas tax to the voters of Kings County is questionable, but a two-cent tax would mean a boost in revenues to upgrade the regional system. For this reason, the "local option fuel tax" could be considered.

3. Amend Apportionment Formulas

Kings County has voiced opposition to paragraph "f" of Section 2104 of the Streets and Highways Code. This law apportions state gas tax revenues among counties and cities. A large portion of Section 2104 dollars are distributed to counties according to the county's portion of the states registered vehicles. In doing so, the law unfairly awards large payments to 14 urban counties that have a high proportion of registered vehicles to county-maintained road mileage.

4. Local Sales Tax

A county could impose a local sales tax of up to 1% for not longer than 20 years, upon voter approval, to help finance state highway projects, local streets and roads, transit, and non-motorized transportation modes. A sales tax measure could not be placed on the ballot until an expenditure plan has been developed and agreed upon by the county and a majority of the cities with a majority of the county population to show how the acquired funds would be used.

Fresno County was the first within Caltrans District 6 to approve a local sales tax for transportation improvements. Madera County voters passed a ½ % sales tax measure for road purposes in 1990. Tulare County voters approved a ½ cent sales tax measure in 2006. Kern County has placed sales tax measures before their voters but has not yet been successful. . It is estimated that a ½ % local sales tax over a 20 year period could generate \$114 million to finance local transportation projects in Kings County.

5. Impact Fees

The City of Hanford currently has a transportation development impact fee for all new developments within the general plan boundary area, as described in the Financial Element of this chapter.

The County of Kings considered the adoption of a transportation impact fee ordinance, but a study conducted to determine the benefit of an impact fee based on projected future growth determined that the fee would not produce an acceptable benefit. The County instead adopted a policy in their General Plan that all development would take place in the urbanized areas of the cities.

Since 1992, the City of Lemoore has maintained Development Impact Fees for City traffic-related infrastructure needs directly attributable to new development. These fees have been indexed in time with the California Construction Cost Index, as costs for the identified project have increased over time. As part of a citywide study in 2005, it was determined that the separate fees should be determined for areas with significantly different existing infrastructure: the mostly-developed portion of the City east of 19 ½ Avenue, and the almost undeveloped western portion of the City. The Eastside Streets and Thoroughfares Fee was adopted in 2006; the Westside Streets and Thoroughfares Fee is currently the subject of a new study, and will likely be set in May 2010. In keeping with the Mitigation Fee Act, the collected fees are used exclusively for new infrastructure, and never used for maintenance of existing or upgrading of existing deficiencies in the infrastructure level.

IV. ACTION ELEMENT

This section presents outlines for state, county, and city road projects for both long-range (more than ten years) and short-range (up to ten years) implementation. The central features of this section are implementation tables that are broken out for each responsible agency. Costs are shown in year of expenditure dollars where estimates are available. A summary of all proposed regional projects are included in tables 4-32 through 4-36.

The listed projects have either been considered by Caltrans through its systems planning documents; by KCAG, through its regional road surveys; or through local agency monitoring programs. All local projects are broken out for specific improvements: reconstruction, overlays, and maintenance. Short-range state system projects are presented under several programs, including the State Transportation Improvement Program (STIP) (Figures 4-21 and 4-26) and the State Highway Operation and Protection Program (SHOPP) Figures 4-27 and 4-29).

Caltrans' system planning products include, among others, the Interregional Transportation Improvement Plan, and Transportation Concept Reports for each state highway. Caltrans has identified routes 5, 41, and 198 as significant routes through Kings County. KCAG believes that SR 43 must be included as a significant route when improvement projects are considered for the STIP, particularly since it is considered as an alternative route to SR 99 which has high traffic volumes. A legislative bill was introduced by Assemblywoman Parra in the FY 05-06 session that would have made SR 43 eligible for the Interregional Road System, however the bill did not pass the final hurdle in the Senate. KCAG continues to engage local legislators in an effort to realize this goal.

Project implementation will continue to be the responsibility of the individual jurisdictions. This will include planning, preliminary engineering, project environmental studies, citizen review, funding, and construction.

A. LONG-RANGE HIGHWAY PLAN

What follows is a very brief description of what Kings County desires for an efficient highway system. Its time-frame is 2015 and beyond 2035. What is described here provides general direction for short-range planning and shows the end result of having implemented this chapter's policies and objectives.

1. Long-Range Proposals

The long range plan for regional highways is shown on Figures 4-21 and 4-22. It should provide an ample system to serve traffic loads expected before the year 2035. However, funding constraints will delay the actual construction of the needed projects until after 2035. The main features of the plan are:

- a. Expressways linking Hanford and Lemoore with Fresno and Tulare Counties, and with I-5 in western Kings County.
- b. Expressways linking Hanford with Corcoran on SR 43; and expressway status for SR 41, between SR 198 and SR 46 in San Luis Obispo County.
- c. Well-maintained two-lane arterials linking Avenal with northern Kings County and with Coalinga in Fresno County, and linking the major regional routes together.
- d. Widening I-5 to six lanes.

FIGURE 4-21

**LONG RANGE
STATE HIGHWAY PROJECTS
2021 - > 2035
(Unconstrained)**

STATE ROUTE	POST MILE	LOCATION	PROJECT DESCRIPTION	CODE
198	R19.7/R20.3	At 9th Avenue	Construct Interchange	a,b,c
41	R41.6/R45.2	Grangeville Boulevard	Construct Interchange	a,c
198	9.7	At 13th Avenue / Hanford Armona Road	Reconstruct Interchange	b,c
43	22.3/27.3	Fresno Co. Line to 10th Avenue	Widen to 4 lane Expressway	a,c
43	16.3/22.3	10th Avenue to Houston Avenue	Widen to 4 lane Expressway	b,c
41	R38.5/R37.8	SR 198 to Jackson Avenue	Widen to 4 lanes and Construct Interchange	b,c
198	12.7	At 16th Avenue	Construct Overcrossing	b,c
198	7.16	At 21st Avenue Alignment	Construct Interchange	b
41	16.5/38.5	Kettleman City to Jackson Avenue	Widen from 2 to 4 lanes	a,b,c
41	8.1/16.3	SR 33 to I-5	Widen from 2 to 4 lanes	b
41	0.0/8.1	Kern Co. Line to SR 33	Widen Shoulders and Construct Passing Lanes	b
I-5	0.0/26.7	Kern Co. Line to Fresno Co. Line	Widen from 4 to 6 lanes	a
43	0.0/16.3	Houston Avenue to Tulare Co. Line	Widen to 4 lane Expressway	b,c
198	0.0/2.8	Fresno Co. Line to LNAS	Construct Passing Lanes	a
198	23.0	At 6th Avenue	Construct Interchange	b,c
198	27.0	At 2nd Avenue	Construct Interchange	b,c

NOTE: Project cost estimates are not available at this time.

Project Source Code: (a) Caltrans District 6 Route Concept Report Project
 (b) Locally-Supported Project only
 (c) Requires Local Funding

B. REGIONAL FUTURE DEVELOPMENT LIST

A Project Study Report (PSR) is required to be prepared for any capacity-increasing project before it can be included in the STIP. KCAG may prepare a future development list of capacity-increasing state highway projects for the purpose of initiating PSRs. Caltrans has either completed or have scheduled for completion any PSRs that need to be done for the 2010 STIP based on the amount of funds expected to be available for Kings County's regional share.

The regional future development list, as shown in Figure 4-23, includes each of the prioritized capacity increasing projects that has been scheduled by Caltrans to have the required PSR prepared.

FIGURE 4-23

REGIONAL FUTURE DEVELOPMENT LIST OF PROJECT STUDY REPORTS FOR CAPACITY-INCREASING PROJECTS

PRIORITY	STATE ROUTE	POST MILE	LOCATION	PROJECT DESCRIPTION	PROJECT COST (\$000)	CODE
1	41	42.1	At Hanford Armona Road	Construct Interchange	N/A	(b)
2	198	9.7	At 13th Avenue / Hanford Armona Road	Reconstruct Interchange	N/A	(b)
3	198	R19.7/R20.3	At 9th Avenue	Construct Interchange	N/A	(a)
4	41	R41.6/R45.2	At Grangeville Boulevard	Construct Interchange	N/A	(b)
5	41	R37.8/ R38.5	Jackson Avenue to SR 198	Widen to 4 lane Freeway and Construct Interchange	N/A	(b)
6	43	22.3/27.3	10th Avenue to Fresno Co. Line	Widen to 4 lane Expressway	N/A	(b)
7	43	16.3/22.3	Houston Avenue to 10th Avenue	Widen to 4 lane Expressway	N/A	(b)
8	43	0.0/16.3	Tulare Co. Line to Houston Avenue	Widen to 4 lane Expressway	N/A	(b)
9	198	7.16	At 21st Ave. alignment	Construct Interchange	N/A	(b)
10	198	12.7	At 16th Avenue	Construct Overcrossing	N/A	(c)
11	41	27.2/30.6	Newton Avenue to 22nd Avenue	Construct Passing Lanes	N/A	(b)
12	41	3.8/6.4	Avenal Creek to s/o SR 33	Construct Passing Lanes	N/A	(b)
13	41	11.6/16.2	Utica Avenue to I-5	Construct Passing Lanes	N/A	(b)
14	41	18.2/R38.5	Kettleman City to Jackson Avenue	Widen to 4 lane Expressway	N/A	(b)
15	I-5	0.0/26.7	Kern Co. Line to Fresno Co. Line	Widen from 4 to 6 lanes	N/A	(c)
16	198	0.0/2.8	Fresno Co. Line to LNAS	Construct Passing Lanes	N/A	(c)
17	198	10.6	At 18th Avenue	Modify Interchange	N/A	(c)
18	198	27.0	At 2nd Avenue	Construct Interchange	N/A	(c)
19	198	23.0	At 6th Avenue	Construct Interchange	N/A	(c)

Project Source Code: a) Project Study Report Completed
 b) Project Study Report Scheduled
 c) Project Study Report Not Scheduled

C. SHORT-RANGE HIGHWAY PLAN

The State Transportation Improvement Program (STIP) is a county-by-county schedule for project delivery of all major projects to be funded from state transportation funds and covers a four year period. The California Transportation Commission (CTC) adopts the STIP biennially by April 1 of every even-numbered year. Projects included in the adopted STIP are limited to those that are included in prior STIPs and projects submitted or recommended from Caltrans' Interregional Transportation Improvement Program (ITIP) and the regional agency's Regional Transportation Improvement Program (RTIP).

Other programs outside the STIP interact with the above mentioned programs. These are the State Highway Operation and Protection Program (SHOPP), Environmental Enhancement and Mitigation (EEM) and the Transportation Enhancement (TE) Activities programs. Each of these programs is briefly described later.

1. Senate Bill 45

Senate Bill 45 (Kopp, 1997) restructured the state transportation improvement program process which provided for more flexible use of state transportation funds, streamlined the process by combining numerous separate programs into one, and limited the State's involvement in regional project priority setting. Under SB 45, the STIP now consists of two broad programs: a regional program funded from 75% of new STIP funding and an interregional program funded from 25% of new STIP funding.

Under the old system, Caltrans would propose projects for programming in each county based on "county minimums". Kings County continued to be a deficit county as projects to meet its county minimum funding level were seldom programmed in the STIP. Under the new funding system, the state allocates a set amount of funding to each region in the form of "regional shares" and the regional transportation planning agency then decides how to program the funds for local projects in the Regional Improvement Program.

2. AB 1012

In order to facilitate project development work on needed transportation projects to produce a steady flow of construction projects, AB 1012 (Torlakson, 1999), added an advance project development element (APDE) to the STIP beginning with the 2000 STIP cycle. AB 1012 requires that the STIP Fund Estimate designate an amount to be available for the APDE. Regions may propose projects from their share of APDE funds for any of the STIP's four years, but can only be used for two project development components: 1) environmental and permits and 2) plans, specifications and estimates. If all or a portion of any county APDE share is not programmed in that STIP cycle, that amount will be available for any project phase in the next STIP cycle. Figure 4-24 below shows the status of Kings County's STIP regional shares in preparation of the 2010 STIP.

FIGURE 4-24

2010 STIP PROGRAMMING
2009/10 - 2014/15
Dollars in \$1,000's

2010 STIP Programmed at Fund Estimate	\$66,794
2010 STIP Fund Estimate Formula Distribution	\$418
2010 STIP Share Balance Advanced	\$22,925
2010 STIP Transportation Enhancement Target	\$721
Total County Share June 30, 2009:	\$46,458

2. Regional Transportation Improvement Program

A Regional Transportation Improvement Program (RTIP) must be prepared by transportation planning agencies and county transportation commissions. The RTIP is to be prepared, adopted, and submitted to the CTC on or before December 15 of each odd-numbered year and must be consistent with the RTP, the FTIP, the STIP Fund Estimate, and regional shares. The fund estimates and projections utilized in the RTIP, the FTIP and the (first four years of the) RTP are consistent with the currently adopted STIP.

The RTIP spans a five-year period and is to include a priority list of projects and programs proposed to be funded, in whole or in part with regional share funds. Projects in other programs may be included for informational purposes.

The 2010 Kings County RTIP was prepared and submitted by KCAG. The 2010 RTIP consisted of respreading currently programmed projects from the 2008 STIP. The 2010 STIP maintains the advance of share funds to complete the 19th Avenue Interchange project, as well as applying for CMIA cost savings for the project. The projects proposed for programming in the STIP through the 2010 Regional Transportation Improvement Programs included:

- Retained and added funding for preliminary engineering work for construction of an interchange at 19th Ave. and SR 198.
- Programmed additional funds to complete reconstruction improvements of the interchange at 12th Ave. and SR 198.
- Programming of Transportation Enhancement Reserve Funds.
- Programming of Planning, Programming, and Monitoring funds for KCAG.

Figures 4-25 and 4-26 represent those state highway projects to be considered for future short range regional program funding through 2015.

FIGURE 4-26

**SHORT RANGE
REGIONAL IMPROVEMENT PROGRAM
KINGS COUNTY
2010 – 2020
(Financially Constrained)**

SHORT RANGE PRIORITY	STATE ROUTE	POST MILE	LOCATION	PROJECT DESCRIPTION	PROJECT COSTS (\$000)	ESTIMATED DATE OF COMPLETION	CODE
1	198	R8.6/R9.7	At 19th Avenue	Construct Interchange	38,426	2013	a,b
2	198	R19.7/R20.3	At 12th Avenue	Reconstruct Interchange	26,724	2015	a,b,d

Project Source Code: (a) 2010 RTIP Project
 (b) Route Concept Report Project
 (c) Locally-Supported Project Only
 (d) Requires Local Funding

3. Interregional Transportation Improvement Program

Caltrans prepares and submits to the CTC by December 15 of every odd numbered year the Interregional Transportation Improvement Program (ITIP) to propose projects in the STIP from the interregional program funding. Interregional Improvement Program (IIP) funding is available for state highway, intercity rail, grade separation and mass transit guideway improvements. Sixty percent of the IIP funds, or 15% of the total funds available for the STIP, is limited in use for interregional routes outside urbanized areas and intercity rail. No less than fifteen percent of this amount, or 2.25% of the total amount of funds available for the STIP, must be spent on intercity rail. The remaining 40%, or 10% of the total funds available for the STIP, is available for use anywhere on the state highway system, as well as for intercity rail, grade separations, and mass transit guideways.

In 1998, Caltrans prepared the "Interregional Transportation Strategic Plan" as a guide for proposing projects in the Interregional Improvement Program for the STIP. Eligible interregional road system routes and intercity rail routes for this program are identified in Sections 164.10 through 164.20 of the Streets and Highways Code. Within Kings County, Interstate 5 and State Highways 41 and 198 are specified as eligible routes, along with the *San Joaquins* intercity rail service. These routes are also categorized as high emphasis routes focus routes and gateways, which should be considered a priority for programming improvements in the STIP. Project improvements to meet the concepts of the Strategic Plan for each route are included in the short and long range highway plans.

4. State Highway Operation and Protection Plan

The State Highway Operation and Protection Plan (SHOPP) covers a four year period and includes programming for rehabilitation, safety, and operational improvements on the state highway system. The “Ten-Year State Highway System Rehabilitation Plan” prepared by Caltrans in 1998, to be updated every two years, is used as a basis for programming projects in the SHOPP.

Caltrans develops a biennial SHOPP that is adopted by the CTC prior to April 1 of each even-numbered year. To manage the SHOPP program, Caltrans prepares a comprehensive review and the CTC programs additional projects in a mid-cycle revision every other year.

Figures 4-27 and 4-28 represent the projects for Kings County that are included in the adopted 2010 SHOPP. Figures 4-29 and 4-30 identify the short-range state highway projects that are candidates for future SHOPP programming.

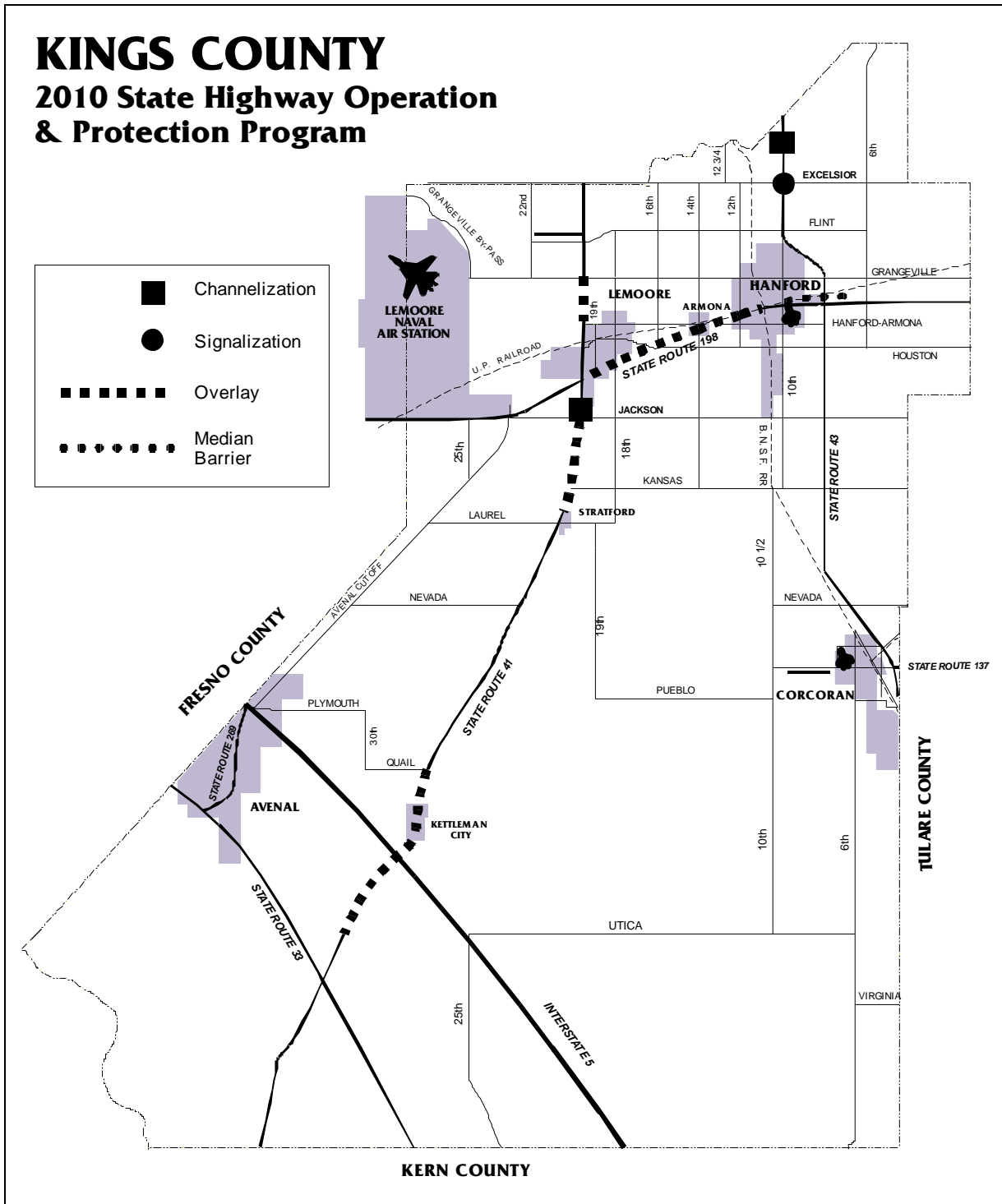
FIGURE 4-27

**2010 PROGRAMMED PROJECTS
STATE HIGHWAY OPERATIONS AND PROTECTION PROGRAM
KINGS COUNTY**

SHORT RANGE PROJECTS	STATE ROUTE	LOCATION	PROJECT DESCRIPTION	PROJECT COSTS (\$000)
1	41	0.8 mile north of Jersey Avenue to 0.3 mile north of Jackson Avenue	Construct left turn channelization	2,753
2	43	0.8 miles north of Elder Ave. to 0.8 miles south of Dover Ave	Lengthen left turn channelization and install traffic signals	3,090
3	198	14th Avenue Bridge #45-0078, Hanford-Armona Road Bridge #45-0079 and 11th Avenue Bridge #45-0038	Rehabilitate bridge decks	12,139
4	41	Utica Avenue to Quail Avenue	Rehabilitate roadway	31,617
5	41	Hanford/ Armona Road to Grangeville Boulevard	Rehabilitate roadway	28,932
			KINGS COUNTY TOTAL	\$78,531

Source: http://www.dot.ca.gov/hq/transprog/SHOPP/2010_SHOPP_02-24-10_FINAL.pdf, CTIPS

FIGURE 4-28



Source: KCAG, Caltrans

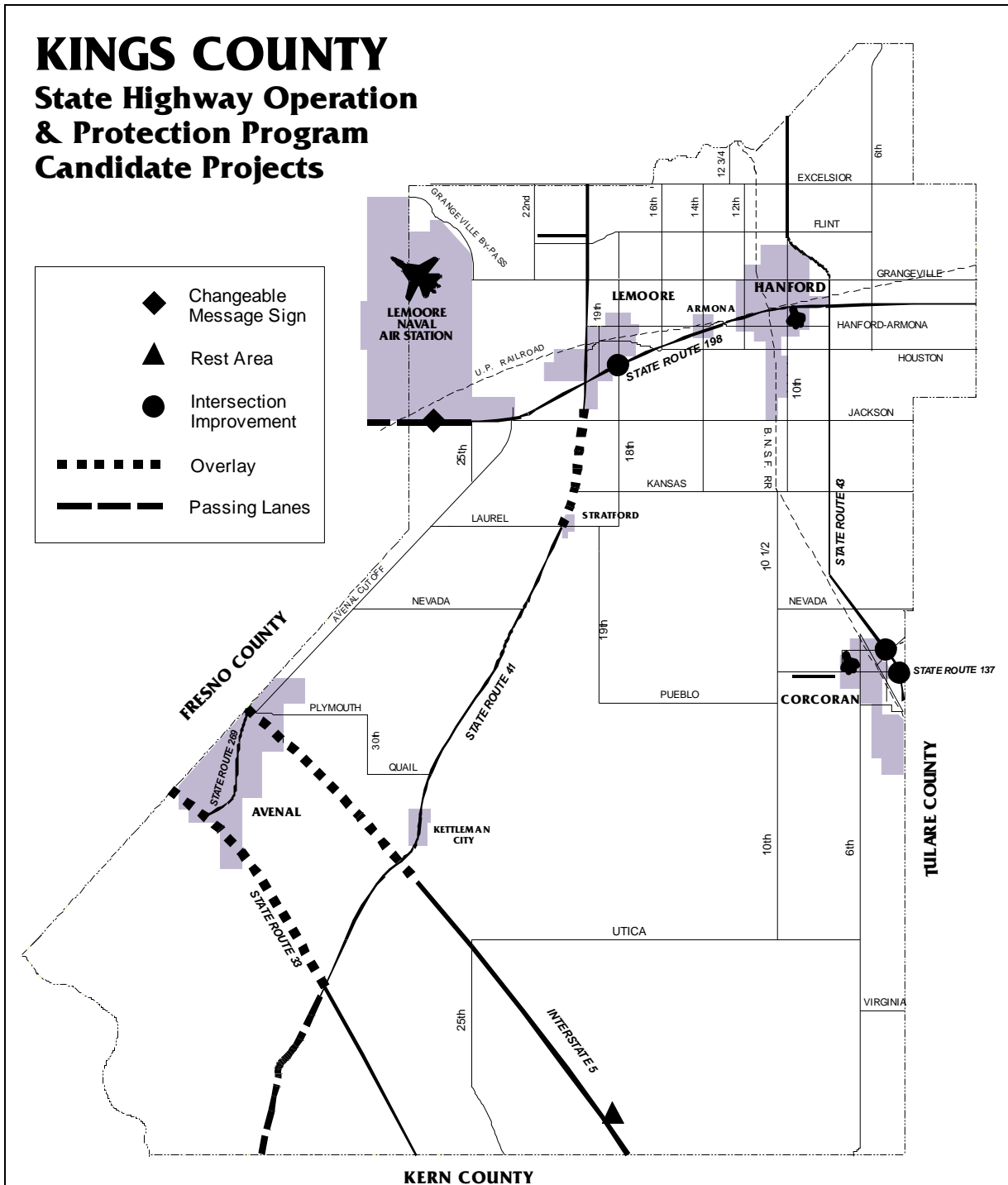
FIGURE 4-29

**CANDIDATE PROJECTS
STATE HIGHWAY OPERATIONS AND PROTECTION PROGRAM
KINGS COUNTY**

SHORT RANGE PRIORITY	STATE ROUTE	LOCATION	PROJECT DESCRIPTION
1	43	At SR 137 (Whitley Ave)	Construct Round-about or Traffic Signals
2	I-5	Near Fresno Co. Line	Install Changeable Message Signs
3	I-5	Near Kern Co. Line	Construct Safety Roadside Rest Area
4	41	At Various Locations From Kern Co. to Line SR 33	Construct Passing Lanes
5	198	At 18th Avenue	Modify Interchange
6	43	In Corcoran at 5 ½ Avenue	Relocate Intersection
7	43	Tulare Co. Line to SR 137	AC Overlay and Widen Shoulders
8	33	SR 41 to Fresno Co. Line	AC Overlay
9	198	Fresno Co. Line to LNAS	Construct Passing lanes
10	I-5	Near SR 41 to Fresno Co. Line	AC Overlay
11	198	Various Locations	Install Changeable Message Signs

Source: <http://www.dot.ca.gov/dist6/ppm/docs/sop/d6sop.pdf>

FIGURE 4-30



Source: KACG

5. Environmental Enhancement and Mitigation Program

Local, state, and federal agencies and non-profit agencies are eligible to apply for grants under the State Environmental Enhancement and Mitigation (EEM) program for projects that mitigate the environmental impacts of modified or new public transportation facilities. Typical projects that may be eligible for funding include highway landscaping, acquisition of resource lands to mitigate the loss of land for right-of-way purposes, and roadside recreational opportunities. The annual funding level is \$5 million.

6. Transportation Enhancement Program

The Transportation Enhancement (TE) program was created with the enactment of the federal Intermodal Surface Transportation Efficiency Act (ISTEA) of 1990 and continued in TEA-21 and is funded through a 10% set-aside of the total Surface Transportation Program (STP) funds available to the state. TE funds are to be used for transportation related projects that add community or environmental value to any active or completed transportation project that is over and above required mitigation efforts. Projects must have a direct relationship to the intermodal transportation system by either function, proximity or impact.

In 1998, the California Transportation Commission (CTC) modified the TE program design so that there are four different programs funded with federal TE dollars. The total amount of TE funds is divided 75% for regional shares and 25% for a state share. Regions can either program their regional share for eligible projects, or smaller regions can exchange funds for state transportation funds. The State's 25% is separated into a statewide share and a resources share. The resources share is further divided to a conservation lands program, a state environmental enhancement program and to local assistance and rural planning.

For the regional and Caltrans shares eligible project categories and typical activities encompassing the TE program include provisions of facilities for pedestrians and bicycles; acquisition of scenic easements and scenic or historic sites; scenic or historic highway programs; landscaping and other scenic beautification; historic preservation; rehabilitation and operation of historic transportation buildings, structures or facilities; preservation of abandoned railway corridors; control and removal of outdoor advertising; archaeological planning and research; and mitigation of water pollution due to highway runoff. Figure 4-31 is a list of proposed TE funded projects to be programmed in the Federal Transportation Improvement Program (FTIP).

The Conservation Lands program would provide funding to preserve large blocks of scenic lands along transportation corridors with high value for habitat conservation.

FIGURE 4-31

**TRANSPORTATION ENHANCEMENT ACTIVITIES
KINGS COUNTY**

SHORT RANGE PRIORITY	STATE ROUTE	LOCATION	PROJECT DESCRIPTION	PROJECT COSTS (\$000)
1	43	10th Avenue	Gateway	500
2	N/A	TE Reserves	To Be Determined	721

7. Traffic Congestion Relief Program

The Traffic Congestion Relief Program (TCRP) was established in 2000 with the enactment of SB 1662 and AB 2928. This program provides more than \$5.3 billion in State funds to Caltrans and certain regional and local transportation agencies for projects specifically identified in the legislation; and \$1.5 billion over a five year period to cities and counties for street and road maintenance, rehabilitation, and reconstruction.

Specific TCRP projects for Kings County included \$4 million for the Cross Valley Rail rehabilitation project, \$1.5 million for Jersey Ave. widening between 17th and 18th Avenues, \$14 million for the SR 198 expressway, \$25 million to the SJVAPCD for heavy-duty diesel emission reduction incentives, and \$10 million for improvements to the *San Joaquins* corridor. The Cross Valley Rail project, SJVAPCD project, and the *San Joaquins* project have all been completed. The construction of SR 198 is currently underway.

D. LOCAL ROAD IMPROVEMENT PLAN

Figures 4-32 through 4-36 list local roads improvement projects for which funding is reasonably expected to be available (constrained). The project costs are escalated to Year of Expenditure (YOE) dollars; calculated based on an estimated 3% increase per year. A list of projects from each city's capital improvement program have been included. Major projects to be considered include reconstruction, rehabilitation and resurfacing of major county and city roads. A list of Tier 2, or unconstrained is included in Appendix II.

FIGURE 4-32

**COUNTY OF KINGS REGIONAL ROUTE IMPROVEMENTS
2011/12- 2015/16
(Financially Constrained)**

ROAD	LOCATION	IMPROVEMENT	OPEN TO TRAFFIC	(\$000)*
12th Avenue	Liberty Dr. to Grangeville Blvd.	Plane and Overlay	2012	\$281
Hanford-Armona Road	Front Street to Lemoore Canal	Overlay	2012	\$650
14th Avenue	Lacey Blvd. to School Street	Overlay	2012	\$314
6th Avenue	SR 198 to Fargo Ave.	Reconstruct 0.5 mile	2012	\$523
Grangeville Boulevard	SR 41 to 18th Ave.	Overlay	2012	\$379
18th Avenue	At Jersey Ave.	Signals and approach work	2012	\$375
Houston Avenue	1st Ave. to SR 43	Some grind and patch	2013	\$1,307
9 ¼ Avenue	Grangeville Blvd. to Lacey Ave.	Overlay	2013	\$426
Hanford-Armona Road	Elks Meadow to SR 41	Overlay	2013	\$285
Lacey Boulevard	At 13th Ave.	Signals and bridge work	2013	\$500
10 ½ Avenue	Kansas Ave. to Nevada Ave.	Widen existing lanes to 28 feet	2014	\$1,308
Flint Avenue	SR 43 to 12th Ave.	Overlay	2014	\$425
11th Avenue	Houston Ave. to Idaho Ave.	Overlay	2014	\$392
Kansas Avenue	4th Ave. to SR 43	Overlay	2014	\$994
Kansas Avenue	14th Ave. to 16th Ave.	Overlay	2014	\$569
14th Avenue	School St. to Excelsior Ave.	Overlay	2015	\$948
10th Avenue	Idaho Ave. to Kansas Ave.	Overlay	2015	\$1,262
Houston Avenue	10th Ave. to 10 ½ Ave.	Reconstruction	2017	\$275
Grangeville Boulevard	12 ½ Ave. to 15th Ave.	Overlay	2017	\$536
18th Avenue	SR 198 to Iona Ave.	Overlay	2017	\$183
Jackson Avenue	SR 43 to 11th Ave.	Reconstruct 1.5 miles	2018	\$1,062
Jackson Avenue	11th Ave. to 14th Ave.	Reconstruct 1 mile	2018	\$948
Jackson Avenue	14th Ave. to 17th Ave (widen to 28 feet)	Overlay	2018	\$853
12th Avenue	Hume Ave. to Idaho Ave.	Overlay	2019	\$523
Excelsior Avenue	0.25 mile west of 12th Ave. to SR 43	Overlay	2019	\$451

* Year of Expenditure (YOE) Dollars

FIGURE 4-32
CONTINUED

COUNTY OF KINGS REGIONAL ROUTE IMPROVEMENTS
2018/19- 2025/26
(Financially Constrained)

ROAD	LOCATION	IMPROVEMENT	OPEN TO TRAFFIC	(\$000)*
Excelsior Avenue	14 ½ Ave. to Kings River	Overlay	2019	\$432
Ward & Hubert Drive, Bernard, Cyril Place	Fargo – 12th to 14th Ave.	Overlay	2019	\$327
Grangeville Boulevard	SR 41 to 22nd Ave.	Overlay	2020	\$569
Houston Avenue	SR 43 to 10th Ave.	Overlay	2020	\$303
Lacey Boulevard	18th Ave. to SR 41	Overlay	2020	\$345
6th Avenue	Utica Ave. to Racine Ave.	Reconstruct 1.5 miles	2020	\$1,438
Laurel Avenue	SR 41 to 18th Avenue	Overlay	2021	\$588
14th Avenue	Houston Ave. to Jersey Ave.	Overlay	2021	\$850
6th Avenue	Kern County Line to ½ mile north	Overlay	2022	\$286
Utica Avenue	20th Ave. to 25th Ave.	Reconstruct 1 mile	2022	\$1,197
18th Avenue	Iona Ave. to Jersey Ave.	Install left turn lane	2023	\$1,491
Front Street	Hanford Armona Rd. to 14th Ave.	Overlay	2023	\$157
6th Avenue	Fargo Ave. to Excelsior Ave.	Overlay	2023	\$634
Houston Avenue	13th Ave. to 14th Ave.	Overlay	2023	\$183
Grangeville Boulevard	SR 43 to 6th Ave.	Reconstruct	2024	\$435
Grangeville Boulevard	5th Ave. to 6th Ave	Overlay	2024	\$493
Grangeville Boulevard	1st Ave. to 2 ½ Ave.	Overlay	2024	\$319
Grangeville Boulevard	2 ½ Ave. to Highline Canal	Reconstruct	2024	\$493
Grangeville Boulevard	Highline Canal to 5th Ave.	Overlay	2025	\$319
18th Avenue	Laurel Ave. to Kansas Ave.	Overlay	2025	\$341
10th Avenue	Nevada Ave. to Pueblo Ave.	Overlay	2025	\$850
10th Avenue	Redding Ave. to Seattle Ave.	Overlay	2026	\$645
10th Avenue	Pueblo Ave. to Redding Ave.	Overlay	2026	\$850
10th Avenue	Seattle Ave. to Utica Ave.	CMAQ Seal Coat	2026	\$654
14th Avenue	Jersey Ave. to Kansas Ave.	Overlay	2026	\$445
Excelsior Avenue	SR 43 to 6th Ave.	Overlay	2027	\$1,268
Excelsior Avenue	SR 41 to 22nd Ave.	Overlay	2026	\$645

**FIGURE 4-32
CONTINUED**

**COUNTY OF KINGS REGIONAL ROUTE IMPROVEMENTS
2025/26- 2031/32
(Financially Constrained)**

ROAD	LOCATION	IMPROVEMENT	OPEN TO TRAFFIC	(\$000)*
Laurel Avenue	Avenal Cut-off Rd. to SR 41	Overlay	2027	\$1,177
Nevada Avenue	Avenal Cut-off Rd. to SR 41	Overlay	2029	\$1,360
Avenal Cut Off Road	SR 198 to 25th Ave.	Overlay	2029	\$588
9th Avenue	SR 198 to Houston Ave.	Overlay	2029	\$218
Utica Avenue	11th Ave. to 16th Ave.	Overlay	2030	\$902
6th Avenue	Utica Ave. to Virginia Ave.	Overlay	2030	\$569
6th Avenue	Virginia Ave. to Xavier Ave.	Overlay	2030	\$645
6th Avenue	Kern County Line to Xavier Ave.	Overlay	2031	\$739
Virginia Avenue	4th Ave. to 6th Ave.	Overlay	2031	\$850
Utica Avenue	16th Ave. to 20th Ave.	Overlay	2031	\$807
Utica Avenue	6th Ave. to 11th Ave.	Overlay	2032	\$1,125

Source: County of Kings

FIGURE 4-33

**CITY OF AVENAL REGIONAL ROUTE IMPROVEMENTS
2011/12 - 2015/16
(Financially Constrained)**

ROAD	LOCATION	IMPROVEMENT	OPEN TO TRAFFIC	(\$000)*
First Avenue	San Joaquin St. to SR 33	Overlay	2012	\$409
Third Avenue	San Joaquin St. to SR 33	Overlay	2013	\$495
Mariposa Street	First Ave. to Seventh Ave.	Overlay	2014	\$385

Source: City of Avenal

FIGURE 4-34

**CITY OF CORCORAN REGIONAL ROUTE IMPROVEMENTS
2011/12 - 2034/35
(Financially Constrained)**

ROAD	LOCATION	IMPROVEMENT	OPEN TO TRAFFIC	(\$000)*
Whitley Avenue	From Otis to Pickerell	Streetscape, traffic calming, and street improvements	2011	\$206
Various Roadways	Various	Pavement Maintenance Program	2013	\$215
Various Roadways	Various	Pavement Maintenance Program	2015	\$222
Various Roadways	Various	Pavement Maintenance Program	2017	\$229
Various Roadways	Various	Pavement Maintenance Program	2019	\$235
Various Roadways	Various	Pavement Maintenance Program	2021	\$241
Various Roadways	Various	Pavement Maintenance Program	2023	\$248
Various Roadways	Various	Pavement Maintenance Program	2025	\$254
Various Roadways	Various	Pavement Maintenance Program	2027	\$261
Various Roadways	Various	Pavement Maintenance Program	2029	\$267
Various Roadways	Various	Pavement Maintenance Program	2031	\$273
Various Roadways	Various	Pavement Maintenance Program	2033	\$280
Various Roadways	Various	Pavement Maintenance Program	2035	\$286

Source: City of Corcoran

FIGURE 4-35

**CITY OF HANFORD REGIONAL ROUTE IMPROVEMENTS
2011/12 - 2027/28
(Financially Constrained)**

ROAD	LOCATION	IMPROVEMENT	OPEN TO TRAFFIC	(\$000)*
10th Avenue	Hanford Armona Rd. to SR 198	Widen from 2 to 4 lanes w/ left turn lanes	2012	\$2,000
11th Avenue	Grangeville Blvd. to Fargo Ave.	Widen from 2 Lanes to 4 Lanes and Overlay	2012	\$600
12th Avenue	Hanford-Armona Rd. to Mall Dr.	Widen from 2 Lanes to 6 Lanes w/Median	2012	\$21,000
Greenfield Avenue	Lacey Blvd. to Della St.	Rehabilitate/Overlay	2012	\$650
11th Avenue	Fargo Ave. to Flint Ave.	Rehab/overlay	2013	\$500
Lacey Boulevard	10th Ave. to Hwy 43	Rehabilitate/Overlay	2013	\$1,100
Campus Drive	Lacey Blvd. to Glendale Ave.	Extend Roadway, Construct Left Turn Lanes	2014	\$750
11th Avenue	Ivy St. to Grangeville Blvd.	Rehabilitate/Overlay	2014	\$600
Grangeville Avenue	10th Ave. to 11th Ave.	Rehabilitate/Overlay	2014	\$700
12th Avenue	Mall Dr. to Lacey Blvd.	Widen from 4 to 6 lanes w/median	2015	\$800
Lacey Boulevard	12-1/2 Ave. to 13th Ave.	Widen from 2 Lanes to 4 Lanes w/Left Turn Lanes	2015	\$1,500
12th Avenue	Houston Ave. to Hanford-Armona Rd.	Widen from 2 Lanes to 4 Lanes w/Median	2016	\$3,000
Redington Street	Grangeville Blvd. to Lacey Blvd.	Rehabilitate/Overlay	2016	\$600
Fargo Avenue	11th Ave. to 12th Ave.	Widen from 2 Lanes to 4 Lanes w/Left Turn Lanes	2017	\$1,000
Grangeville Avenue	11th Ave. to 12th Ave.	Rehabilitate/Overlay	2017	\$700
12th Avenue	Fargo Ave. to Flint Ave.	Widen from 2 Lanes to 4 Lanes w/Median	2018	\$3,000
Hanford-Armona Road	10th Ave. to 11th Ave.	Rehabilitate/Overlay	2018	\$600
Fargo Avenue	10th Ave. to SR 43	Construct Left Turn Lanes	2019	\$500
Florinda Street	9-1/4 Ave. to 11th Ave.	Rehabilitate/Overlay	2019	\$1,000
Grangeville Boulevard	12th Ave to 13th Ave.	Widen from 2 Lanes to 4 Lanes w/Median	2020	\$3,000
Fargo Avenue	12th Ave. to 13th Ave.	Widen from 2 to 4 lanes w/ left turn lanes	2022	\$3,000
Hanford-Armona Road	12th Ave. to 13th Ave.	Widen from 2 Lanes to 4 Lanes w/Left Turn Lanes	2023	\$2,000
Houston Avenue	11th Ave. to 13th Ave.	Widen from 2 Lanes to 4 Lanes w/Median	2025	\$4,000
Houston Avenue	9th Ave. to 11th Ave.	Widen from 2 Lanes to 4 Lanes w/Median	2027	\$4,000

FIGURE 4-35
Continued
CITY OF HANFORD REGIONAL ROUTE IMPROVEMENTS
2028/29 - 2034/35
(Financially Constrained)

ROAD	LOCATION	IMPROVEMENT	OPEN TO TRAFFIC	(\$000)*
13th Avenue	Lacey Blvd. to Grangeville Blvd.	Widen from 2 Lanes to 4 Lanes w/Median	2028	\$2,000
13th Avenue	SR 198 to Lacey Blvd.	Widen from 2 Lanes to 4 Lanes w/Median	2029	\$3,000
10th Avenue	Hanford-Armona Rd. to Houston Ave.	Widen from 2 Lanes to 4 Lanes	2030	\$2,500
13th Avenue	Grangeville Blvd. to Fargo Ave.	Widen from 2 Lanes to 4 Lanes w/Median	2031	\$2,500
9-1/4 Avenue	Grangeville Blvd. to Lacey Blvd.	Construct Left Turn Lanes	2032	\$1,000
11th Avenue	Idaho Ave. to Houston Ave.	Widen from 2 Lanes to 4 Lanes	2033	\$3,500
Idaho Avenue	10th Ave. to 11th Ave.	Construct Left Turn Lanes	2034	\$2,000
Iona Avenue	10th Ave. to 11th Ave.	Construct Left Turn Lanes	2035	\$2,000

Source: City of Hanford

FIGURE 4-36
CITY OF LEMOORE REGIONAL ROUTE IMPROVEMENTS
2011/12 - 2034/35
(Financially Constrained)

ROAD	LOCATION	IMPROVEMENT	OPEN TO TRAFFIC	(\$000)*
Oleander Street	East of Smith St.	Overlay	2012	\$80
Olive Street	D St. to Bush St.	Overlay	2013	\$125
Smith Street	Magnolia St. to Oleander St.	Overlay	2014	\$125
19th Avenue	Bush St. to Cedar Ln.	Overlay	2018	\$100
Bush Street	19 ½ Ave. to 19th Ave.	Overlay	2019	\$125
C Street	Olive St. to Hill St.	Overlay	2020	\$56
Cedar Lane	19th Ave. to Mallard Dr.	Overlay	2020	\$75
Cinnamon Drive	Basil St. to Daphne Ln.	Overlay	2021	\$120
Vine Street	Bush St. to SR 198	Overlay	2022	\$106
Hickory Drive	Vine St. to Oakdale Ln.	Overlay	2022	\$25
Silverado Drive	19th Ave. to Marin Dr.	Overlay	2023	\$60
Olive Avenue	B St. to Redwood Ln.	Overlay	2023	\$65
Oakdale Lane	Vine St. to Lum Ave.	Overlay	2024	\$60
E Street	Fox St. to D St.	Overlay	2024	\$60
W. Deodar Lane	Spruce Ave. to Glendale Ave.	Overlay	2025	\$100
S Byron Avenue	Bush St. to south end	Overlay	2025	\$45
Cambridge Drive	Bush St. to Olive St.	Overlay	2026	\$75
E. D Street	Lemoore Ave. to Smith St.	Overlay	2026	\$50
W. Burlwood Lane	Lemoore Ave. to Juniper Ln.	Overlay	2027	\$90
Bush Street	Lemoore Ave. to D St.	Overlay	2028	\$165
W. D Street	Bush St. to Olive St.	Overlay	2029	\$200
Hanford Armona Road	Lemoore Ave. to Liberty Dr.	Overlay	2030	\$200
Hanford Armona Road	Liberty Dr. to 19th Ave.	Overlay	2031	\$175
Hanford Armona Road	19th Ave. to SR 41	Overlay	2032	\$200
Iona Avenue	Vine St. to 19th Ave.	Overlay	2033	\$200
Lemoore Avenue	SR 198 to Bush St.	Overlay	2034	\$200
Lemoore Avenue	UPRR to Cinnamon Dr.	Overlay	2035	\$200

Source: City of Lemoore

E. PERFORMANCE MEASUREMENT

The RTP Guidelines states that each RTPA should define a set of “program level” transportation system performance measures, which reflect the goals and objectives adopted in the RTP, to be used to evaluate and select plan alternatives. The Guidelines also identify the requirements for “performance-based” planning. KCAG staff reviewed the requirements and prepared an analysis of the following performance measures for capacity-increasing projects, and identified the criteria that should be applied to evaluate performance of the transportation system. The California Transportation Plan, Transportation System Performance Measures Report (August 1998) identifies the following, “desired outcomes” for the transportation system, which may be addressed in the RTP:

- Mobility/Accessibility
- Sustainability
- Safety and Security
- Reliability
- Economic Well Being
- Equity
- Cost-Effectiveness
- Environmental Quality
- Customer Satisfaction

KCAG has developed a system for ranking or prioritizing transportation projects. The system was prepared by staff for assigning priorities to state highway projects and other street and highway projects within the region. It attempts to quantify factors which ordinarily require subjective judgments and provides a checklist for use in reaching decisions on project priorities. The standards and methodology for applying standards to identify priorities for road construction projects in Kings County are described below. The prioritization system includes a comprehensive list of standards which can be applied to specific roadway projects in order to derive a priority for implementation. Specific standards are identified for each objective, a system of measurements discussed and alternatives proposed. Five objectives and their associated standards were established for the prioritization system.

- Create an Integrated and Balanced Road System Serving Community Needs
- Obtain Maximum Improvement in Traffic Flow and Safety
- Creates Minimum Adverse Environmental Effects
- Minimize the Disruptive Consequences of the Project
- Give a Desirable Benefit to Cost Ratio

A 5-point system was devised to measure the degree to which each standard has been attained. Experience in applying the system may indicate areas where adjustment is required or where precise measures are possible. Evaluation of noise levels by type of land use is to be related to the standards adopted in the Noise Element of the general plan for the local jurisdiction.

The performance evaluation process was applied to identify the appropriate candidate RTP projects for funding in the 2011 RTP. Almost all of the candidate projects have been identified for funding except where funding constraints exist. The list of recommended RTP capacity-increasing projects are included in Figure 4-38.

FIGURE 4-37

PRIORITIZATION SYSTEM FOR HIGHWAY TRANSPORTATION PROJECTS

OBJECTIVE	STANDARDS	POINT SYSTEM	
<p>Create an Integrated and Balanced Road System Serving Community Needs</p>	<p>Consistent with the RTP and transportation elements of the adopted General Plan.</p>	<p>4-5 Pts. – Included in RTP and/or local transportation elements of adopted General Plans. Extra priority given to projects with pedestrian/bicycle facilities. 2-3 Pts. – Not included in any adopted plan, but is on the local/minor street system or provides “spot” improvement. 1 Pt. – Not included in any adopted plan.</p>	
	<p>Supports or is consistent with the land use element of the adopted General Plans and the Blueprint Smart Growth Principles.</p>	<p>4-5 Pt.s – Provides needed service to areas designated for immediate development. 2-3 Pts. – Provides needed service to already developed areas. 1 Pt. – Not consistent with adopted General Plans.</p>	
	<p>Facilitates transit, truck, aviation, rail, bicycle and pedestrian modes of travel.</p>	<p>4-5 Pts. – Includes provisions for more than one alternative transportation mode. 2-3 Pts. – Includes provisions for one alternative transportation mode. 0 Pt. – No provisions for alternate transportation modes.</p>	
	<p>Obtain Maximum Improvement in Traffic Flow and Safety</p>	<p>Is constructed to standards commensurate with expected travel demands.</p>	<p>4-5 pts. – Increases level of service from projected levels D, E, and F. 2-3 Pts. – Increases level of service from projected levels B and C. 1 Pt. – Does not increase level of service.</p>
		<p>Accommodates the greatest number of vehicle trips for the money spent.</p>	<p>4-5 Pts. – Highest projected traffic volume per dollar cost of project. 2-3 Pts. – Next highest projected traffic volume per dollar cost of project. 1 Pt. – Lowest projected traffic volume per dollar cost of project.</p>
		<p>Provides greatest reduction in accident rates.</p>	<p>4-5 Pts. – Accident history greater than 2 times State average. 2-3 Pts. – Accident history one to two times State average. 1 Pt. – Accident history less than State average or no existing roadway.</p>
		<p>Eliminates potentially hazardous conditions such as inadequate roadway geometrics and poor structural conditions.</p>	<p>4-5 pts. – Existing roadway below minimum geometric and structural standards. 2-3 Pts. – Existing roadway below minimum geometric or structural standards. 1 Pt. – Existing roadway not below minimum standards.</p>
		<p>Provides relief for other portions of the road system or reduces traffic on residential or minor streets.</p>	<p>4-5 Pts. – Diverts traffic from other streets and highways thereby improving traffic conditions on alternate routes. 2-3 Pts. – Diverts traffic from other streets and highways without improving traffic conditions on alternate routes. 1 Pt. – Does not divert traffic.</p>

FIGURE 4-37
(Continued)

PRIORITIZATION SYSTEM FOR HIGHWAY TRANSPORTATION PROJECTS

OBJECTIVE	STANDARDS	POINT SYSTEM
Promotes Positive Overall Physical Environment.	Minimizes impact on trees, plants, and wildlife.	4-5 Pts. – Greater than 1,000 feet from areas containing rare/endangered plants or wildlife species.
		2-3 Pts. – Within 1,000-3,000 feet of areas containing rare/endangered plants or wildlife species.
		1 Pt. – Within 1,000 feet of areas containing rare/endangered plants or wildlife species.
	Minimizes impact on air pollution.	4-5 Pts. – Decreases concentrations of vehicle emissions.
		2-3 Pts. – No identifiable impact on vehicle emissions.
		1 Pt. – Increases concentrations of vehicle emissions.
	Minimizes impact of noise pollution.	4-5 Pts. – Produces acceptable noise levels.
		2-3 Pts. – Produces somewhat acceptable noise levels.
		1 Pt. – Produces unacceptable noise levels.
	Minimizes impact of water pollution.	4-5 Pts. – Decreases water pollution levels.
		2-3 Pts. – No identifiable impact on water pollution.
		1 Pt. – Increases water pollution levels.
	Minimizes disruption to natural beauty.	4-5 Pts. – Opens up new vistas or restores natural beauty.
		2-3 Pts. – No identifiable impact on natural beauty.
		1 Pt. – Destroys natural beauty.
Minimize the Disruptive Consequences of the Project	Minimize number of residential units disrupted.	5 Pts. – No residential dwelling units dislocated.
		2-4 Pts. – Dislocates between 1 and 10 residential dwelling units.
		1 Pt. – Dislocates greater than 10 residential dwelling units.
	Minimizes disruption of historical sites, cultural and social characteristics of the community.	4-5 pts. – Does not disrupt or have adverse impact on cultural, historic or social characteristics of special community value.
		2-3 pts. – Does not disrupt but has possible adverse impact on cultural, historic or social characteristics of special community value.
		1 Pt. – Disrupts cultural, historic or social characteristics of special community value.
	Creates minimum adverse economic effect on the community.	5 Pts. – Creates no adverse economic effect. No commercial/industrial buildings dislocated.
		2-4 Pts. – Some adverse economic effect. Dislocates between 1 and 10 commercial/industrial buildings.
		1 Pt. – Substantial adverse economic effect. Dislocates more than 10 commercial/industrial buildings.
	Give a Desirable Benefit to Cost Ratio	Give a benefit-cost ratio greater than 1.0.
2-4 Pts. – Benefit-Cost ratio between 1.0 and 2.0.		
1 Pt. – Benefit-Cost ratio less than 1.0.		

F. INTELLIGENT TRANSPORTATION SYSTEMS

Intelligent Transportation Systems (ITS) is the application of advanced information processing, communications, vehicle sensing, and traffic control technologies to the surface transportation system. The objective of ITS is to promote more efficient use of the existing highway and transportation network, increase safety and mobility, and decrease the environmental impacts of congestion.

Intelligent Transportation Systems represent a means of applying new technological breakthroughs in detection, communications, computing, and control technologies to improve the 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 Traveler Information Systems (ATIS), Advanced Public Transportation Systems (APTS), Advanced Vehicle Control Systems (AVCS) and Commercial Vehicle Operations (CVO).

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 transit fares and 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, as well as use onboard systems to detect and avoid collisions.

Specifically in Kings County, poor visibility due to fog, blowing dust and large percentages of truck traffic all contribute to the growing concerns about highway safety. Tule fog, a problem throughout the entire Central Valley region, has caused some of the worst accidents in the state involving dozens of vehicles. Accidents of this nature have closed Interstate 5 and State Route 99 for hours at a time. Blowing dust related directly to seasonal agriculture can cause similar difficulties for travelers.

Kings County has identified several opportunities for deployment of ITS technology including:

- Provide improved safety and mobility along east-west highways such as SR-198 using CMS and other ITS applications.
- Build on City of Hanford's traffic management capabilities, including coordination with Caltrans.
- Continue to add newly purchased vehicles to the AVL system for Kings Area Rural Transit (KART).
- Improve safety at rural railroad crossings using ITS applications.
- Provide commercial vehicles with improved information in the I-5 corridor related to routes, facilities and parking within the County.
- Enhance the safety and capacity of Highway 43 as an alternate route to SR-99/I-5 using ITS applications.

The 2011 RTP and the projects inclusive are consistent, as to the extent practicable, with the regional ITS architecture.

V. ENVIRONMENTAL JUSTICE

Environmental justice is a term used to help ensure equal protection under the country's laws. KCAG's goal is to ensure that all people, regardless of race, color, national origin or income, are protected from disproportionate negative or adverse impacts due to the program of projects listed in the 2011 Regional Transportation Plan.

KCAG transportation decision making process has an inclusive approach to consider the human environment and the adverse impacts transportation projects may have. This agency also looks at safety and mobility, which are key elements in achieving environmental justice. KCAG approaches and resolves transportation decision making by:

- Meeting the needs of all people.
- Planning transportation facilities that fit into communities.
- Increasing the involvement with the public.
- Analyzing potential impacts on minority and low-income populations by accessing, monitoring, and improving data collections.
- Connecting with other public and private programs to achieve common vision for communities.
- Preventing high and adverse impacts on minorities and low-income populations.
- Identifying and mitigating concerns that the public might have which benefit or affect communities and/or neighborhoods.

Due to the increasing population, the majority of Kings County residents use and/or commute on SR 198, making this a densely populated highway resulting in congestion and accidents. For commuters continuing to use SR 198, changes are needed to reduce the possibilities of congestion and traffic accidents. Three projects are listed in this RTP's short-range plan shown on Figure 4-25 and 4-26. The purpose for these projects is to alleviate future congestion and to improve safety and traffic operations of these facilities.

A. SR 198 Expressway

In November 2009, construction began on a project to improve SR 198 in Kings and Tulare counties by converting the existing two-lane conventional highway to a four-lane divided expressway for 10.1 miles from 0.5 miles east of SR 43 near Hanford to 0.37 miles west of SR 99 near Visalia. The intersection of Road 68 and Route 198 in Tulare County will be separated with an over crossing without ramps because the SR 198/SR 99 interchange is less than a half mile away.

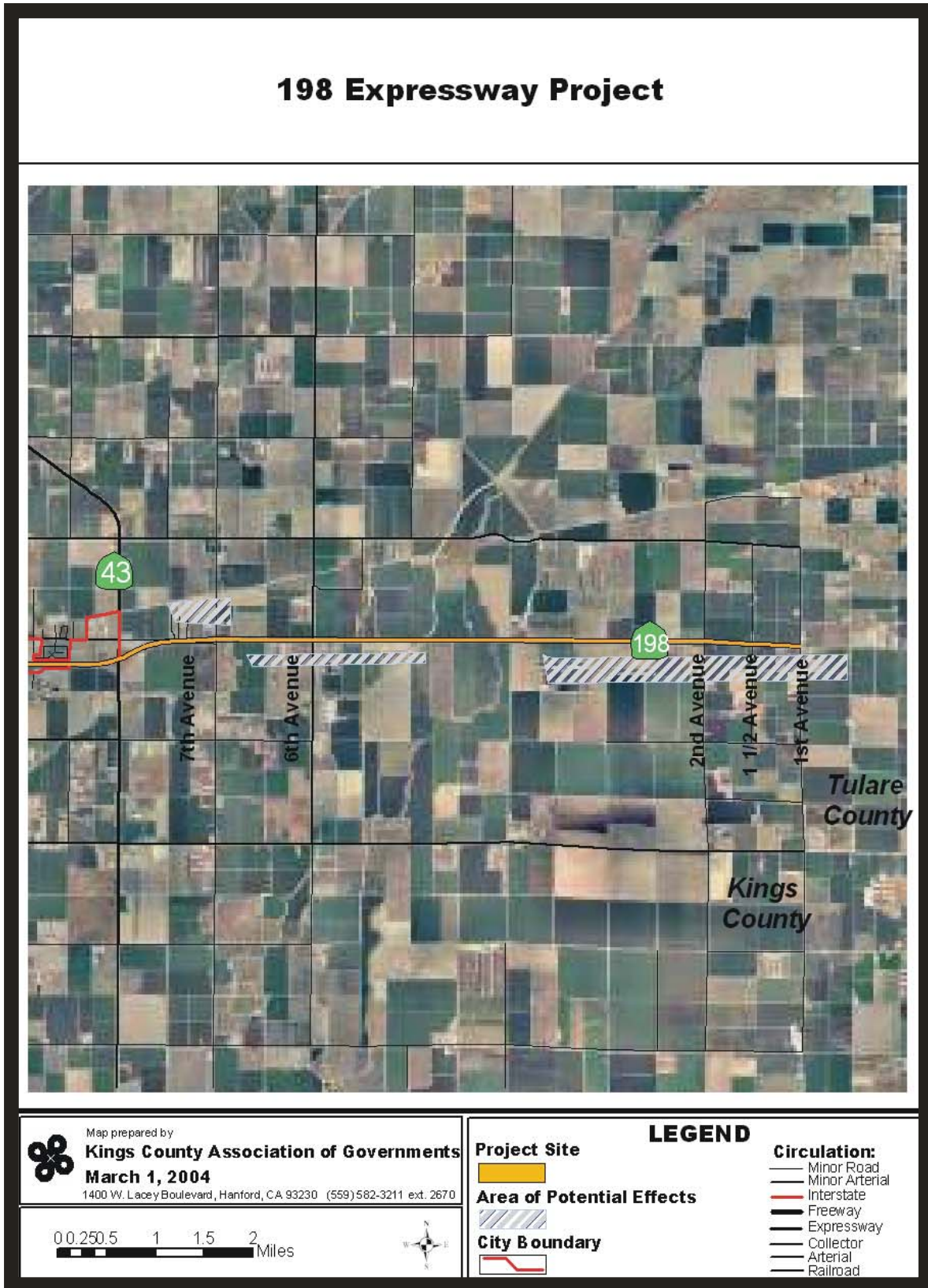
The four-lane expressway will improve safety on this segment by separating eastbound and westbound traffic and providing a standard clear recovery zone between the roadway and the trees next to both sides of the highway. On the existing roadway, this clear recovery zone varies in width along this portion of SR 198. Accidents have been recorded involving motorist colliding with trees. The accident data also indicates that fatal accident rates for the Tulare County segment are above the statewide average, as are total accident rates at three of the existing intersections.

Four build alternatives are proposed to meet the purpose of improving safety and providing route continuity. All four build alternatives would widen the roadway to the north, add a median, and widen shoulders. Project Alternative 4 has been selected by the Project Development Team as the preferred alternative because it is both less disruptive to the environment and is the least expensive.

Due to the rural nature of the project area, impacts to the dispersed local residents would be primarily positive. Safety will be improved by clear recovery zones and access control, which would make it both safer and more efficient to move people and goods. Fifteen residential owners and seven residential tenant families have been displaced by the project. Although several parcels will lose direct access to State Route 198, all alternatives propose to reroute access by the construction of frontage roads or driveways to the existing county roads.

Although a minority group resides within the project area, homes are so dispersed throughout the rural area that no coordinated community can be identified. As there is no community in the project area, community cohesion would not be affected. Also, no minority or low-income populations have been identified that would be adversely affected by the project as specifically required by Executive Order 12898 regarding environmental justice. The project would improve efficiency of transport, which in turn would provide area farmers and businesses with safer, faster route for the transportation of goods.

FIGURE 4-38



B. 19th Avenue Interchange

Caltrans, in cooperation with the City of Lemoore, proposes to construct an interchange on SR 198 at 19th Avenue. The interchange includes an overcrossing for 19th Avenue with on and off ramps in each direction for access between State Route 198 and 19th Avenue. In addition, on State Route 198, auxiliary lanes will be added east of State Route 41 to 18 ½ (Vine) Avenue and at-grade access at 18 ½ (Vine) Avenue will be eliminated and replaced with cul-de-sacs for turnarounds. Iona Ave., west of 19th Ave., will be modified for right of way access.

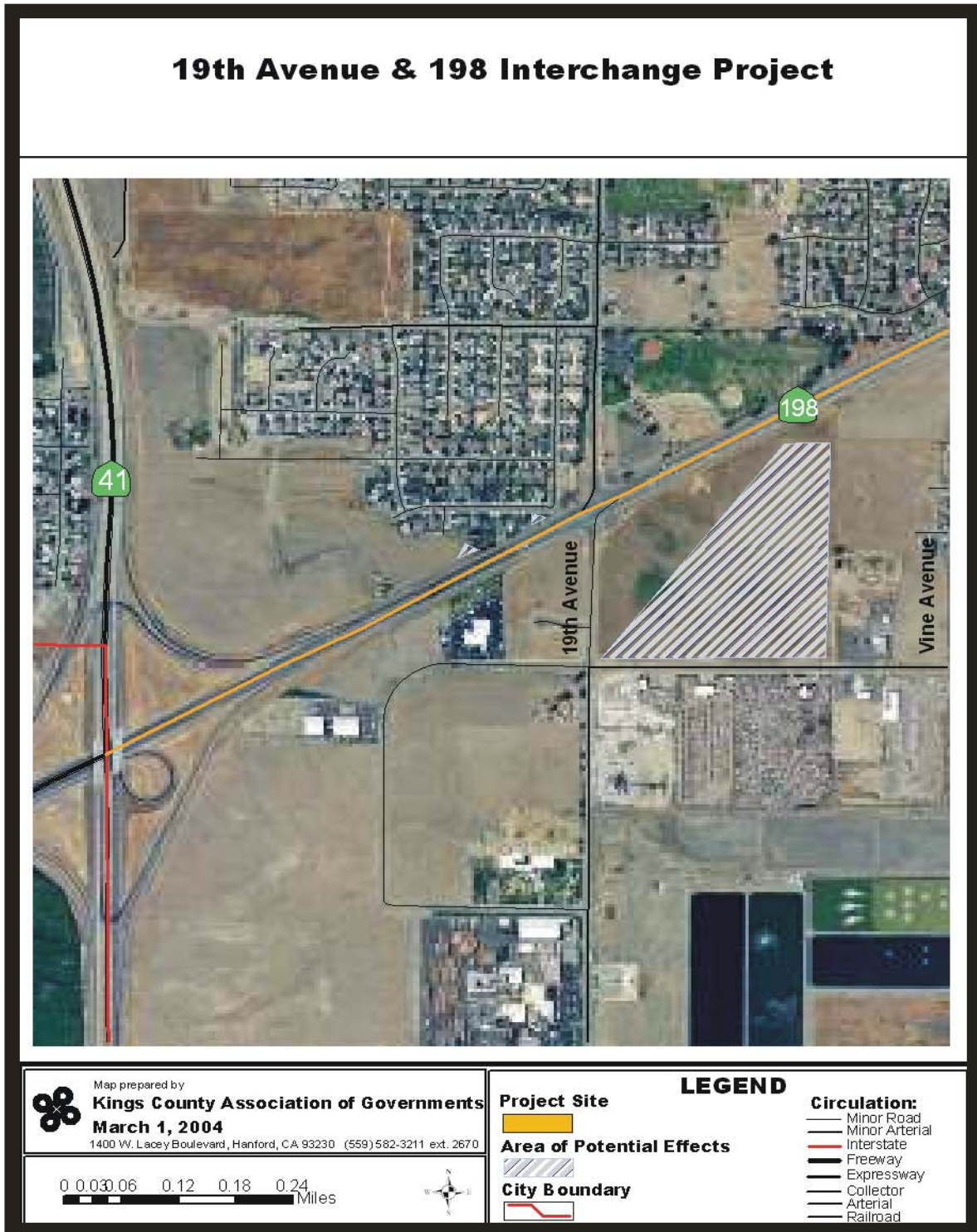
In order to comply with the Environmental Justice procedures, Caltrans researched the demographics of the project area to determine and compare those of minority or low-income populations. Caltrans discovered that in the Kings County Census Tracts of 4.02, 4.04, and 4.05 would be the Tracts affected by the by the 19th Avenue Interchange project.

No minority or low-income populations have been identified within the project limits, therefore, the project would have no adverse effect on minority or low-income populations. Spanish-speaking residents from a low-income housing development located just southeast of the project area on Iona Ave. and 18 ½ Avenue attended the March 2002 Open House/Information Meeting. Their comments expressed concerns for a safer pedestrian crossing over SR 198. As the project is currently designed, sidewalks would be constructed on the 19th Ave. overcrossing. Therefore, this identified minority and low-income population would benefit from the project's safer pedestrian and bicycle access across State Route 198.

Other permanent impacts that may be associated with the project include:

- The City of Lemoore relocating the BMX Park to the city limits which could be an inconvenience.
- The Alviaera Field parking lot, located on 19th Ave. would be reduced and modifications towards sports facility requiring re-alignment of the football/soccer field.
- An increase in traffic and noise stemming from the Alviaera Field may be expected although the pedestrians living south of SR 198 would be provided safe access on the 19th Ave. overcrossing bridge.
- Increased in truck traffic entering/exiting an industrial park to the south of SR 198 via the 19th Ave. interchange is expected.

FIGURE 4-39



C. 12th Avenue Interchange

12th Ave. is a north/south (four lanes north of SR 198 and two lanes south of SR 198) major collector street that serves the rapidly developing community of Hanford. The existing configuration of the 12th Ave. interchange is equipped with signalized intersections and is challenged by the cumulative residential and commercial growth. Land uses in the area include major retail centers, government offices, hospital, high school, and other office and commercial developments. The area is described as a link that ties together the central business district and commercial center with the regional commercial centers of 12th Ave. and Lacey Blvd. The existing 12th Ave. interchange was built in 1985 and traffic operations at the interchange are expected to deteriorate due to the current and planned development in the area.

Four build alternatives would provide two lanes in each direction with additional north bound and south bound right-turn lanes to the on-ramps. The west bound off-ramp would have three lanes: one left, one shared left/right, and one right and the east bound off-ramp would have three lanes: two left and one right. Two of the alternatives would provide a single east bound on-ramp loop in the southwest quadrant to accommodate the projected volume of traffic entering east bound SR 198.

The current escalated costs range from \$4-\$12 million depending on the four build alternatives chosen. The current design and alignment alternative is estimated at \$24 million. This project includes additional right-of-way, rail road involvement, post and pre-construction environmental mitigation, and utility relocation. The environmental document for the proposed project is a Negative Declaration/Finding of No Significant Impact (ND/FONSI).

FIGURE 4-40



VI. FINANCIAL ELEMENT

The purpose of this section is to discuss funding sources to implement the highway plans. This section will briefly sketch the financial outlook for transportation projects and develop revenue projections for a twenty-year period.

The financial estimates and projections are consistent with the estimates and projections of state and federal revenues as provided by Caltrans and the Federal Highways Administration.

A. FUNDING SOURCES FOR STREETS AND HIGHWAYS

1. Federal Funds

The Federal Intermodal Surface Transportation Efficiency Act of 1990 created several new programs for which federal funds are to be apportioned. TEA-21 continued these programs. These include the Regional Surface Transportation Program (STP), Congestion Mitigation and Air Quality (CMAQ), and Transportation Enhancement (TE) programs.

a. Regional Surface Transportation Program

The Regional Surface Transportation Program (RSTP) replaced the Federal-Aid Secondary and Federal-Aid Urban programs under the previous Federal Highway Act.

SB 1435 (Chapter 1177, Statutes of 1992) established statutory provisions necessary to pass-through STP funds to regional/local agencies as Regional STP funds by making changes in the Streets and Highways Code. Kings County's allocation of FY 2009-10 Regional STP funds was \$1,479,048. Section 182.6(g) of the Code allows certain regional transportation planning agencies (RTPA) the opportunity to exchange all of their Regional STP funds for State funds. Section 182.6(h)(1) allows the unincorporated county entities, represented by the RTPA, to exchange their suballocation for State funds in the event the RTPA does not elect to do so. Exchanged funds received may be used for any Article XIX purpose including maintenance, equipment purchases, administration and construction.

Projects to be funded from Section 182.6(d)(1) are to be nominated by cities, counties, transit operators and other transportation agencies through a process that directly involves local government representatives. Funds are to be apportioned on a fair and equitable basis based upon an annually updated five-year average of allocations.

All Regional STP allocations received have been exchanged for non-federal State funds and it is expected that the future allocations of STP funds will also be exchanged for State funds.

b. Congestion Mitigation and Air Quality

Congestion Mitigation and Air Quality (CMAQ) program funds are allocated to metropolitan planning organizations (MPO) in designated non-attainment areas such as the San Joaquin Valley Air Basin. These funds are to be directed toward transportation projects that will contribute to meeting air quality standards in non-attainment areas for ozone and carbon monoxide. Priority is to be given to implementing those projects that have documented emissions reductions associated with them and are included in the approved State Implementation Plan (SIP) for air quality as a transportation control measure (TCM).

Prior to KCAG becoming a metropolitan planning organization, it had an agreement with the Council of Fresno County Governments (COFCG), the neighboring Valley MPO, to receive CMAQ funds. Throughout the life of TEA-21 an apportionment of CMAQ funds is provided to the RTPA. Kings County's share of CMAQ funds was based on population. These funds were programmed by KCAG in the Federal Transportation Improvement Program (FTIP) for transit and street and road eligible projects such as traffic signals to reduce vehicle congestion and vehicle emissions, bicycle routes, surface treatments to roads for the reduction of PM-10 and the construction of CNG fueling facilities and conversion of public agency fleet vehicles to CNG.

c. Federal-Aid Highway Bridge Repair Program

The Highway Bridge Repair (HBP) program is an 80% matching program available to fund local bridge projects on a discretionary basis. Caltrans, through its biennial bridge inspection program, establishes a list for each county of the five worst bridges in need of replacement or rehabilitation. One bridge from this list is selected each year by the local agency to be funded with HBRR funds.

d. Barrier Rail Replacement Program

This program is provided through the HBP program for the purpose of upgrading or replacing obsolete barrier rail on bridges with long life expectancy. Local agencies prioritize projects based on a formula and submit applications for barrier rail replacement candidates through the local Caltrans District. Each local agency is entitled to two barrier rail replacement projects per year.

e. Section 130 Highway/Railroad Grade Crossing Improvement Program

The purpose of this program is to reduce the severity and number of accidents by eliminating hazards at existing railroad crossings. Each year the California Public Utilities Commission is required to furnish a list of railroad/highway projects most urgently in need of separation or alteration. Eligible projects are for the installation of signs and pavement markings, installation or upgrading of active warning devices, and crossing illumination.

The multi-year plan for the administration of the Section 130 Highway/Railroad Grade Crossing Improvement funds includes several projects for Kings County jurisdictions.

f. Transportation Enhancement Program

The Transportation Enhancement (TE) program provides funds for transportation related projects that add community or environmental value to any active or completed transportation project that is over and above required mitigation efforts. Projects must have a direct relationship to the intermodal transportation system by either function, proximity or impact. TE funds available to the state are divided into four separate programs. Kings County's regional share of TE funds in the 2010 STIP Fund Estimate are \$721,000.

2. State Funds

The three main sources of revenue for the State Highway Account, gasoline and diesel taxes, truck weight fees, and driver's license and vehicle registration fees.

a. Gas Tax

Revenues from the state excise tax on gasoline and diesel fuel used on public roads total about \$3.4 billion per year. The State Constitution of these revenues to specific transportation purposes. These include constructing, maintaining, and operating public streets and highways, acquiring right-of-way and constructing public transit systems. These revenues are also used for mitigating the environmental effects of these facilities.

The annual apportionments from the State Highway Account are codified in the Streets and Highways (S & H) Code, beginning at Section 2101. The main sections are:

- 2104: Annual apportionments among counties
- 2105: Apportionments to counties and cities
- 2106: Apportionments to counties and cities
- 2107: Apportionments to cities
- 2108: To the State Highway Account

The manner in which the gasoline and diesel fuel taxes are distributed is shown in Figure 4-40.

FIGURE 4-41

**CALIFORNIA VEHICLE FUEL TAX APPORTIONMENT
Cents Per Gallon**

STREET AND HIGHWAY CODES	AGENCY	GASOLINE ¢	DIESEL ¢
2104	Counties	2.035	1.80
2105	Counties/Cities	11.5% of tax over 9.0	11.5% of tax over 9.0
2106	Counties/Cities	1.040	-----
2107	Cities	1.315	2.59
2108	State	4.610	4.61
TOTAL		17.000	17.00

Section 2104 - An annual apportionment to counties:

- \$1,667 per month (\$20,004 per year) for engineering and administrative costs.

- Snow removal funds (Kings County not eligible).
- \$500,000 to be divided among counties that experience heavy rainfall and storm damage (Kings County not eligible).
- Seventy-five percent of funds apportioned to counties in proportion to the number of registered vehicles in the county versus the total number of registered vehicles in the state.
- Roadway mileage funds. Each county receives \$60 per maintained mile, the sum of which is deducted from the amount received under paragraph "d".
- Apportionment of remaining funds to each county in the same proportions as paragraph "d".

Section 2105 - Apportionment of additional revenues to cities and counties:

- a. 11.5% of the revenues derived from a per gallon tax over 9 cents per gallon allocated to cities and the same amount to counties based on each county's receipt of funds under Sections 2104 and 2106, based on each county's proportion of registered vehicles in the state, and each county's proportion of maintained road mileage in the state.
- b. 11.5% of the revenues derived from a per gallon tax over 9 cents per gallon apportioned to each city and county in proportion to the city's share of the population of all the cities in the state.

Section 2106 - Apportionment to cities and counties.

- a. \$400 per month to each city and \$800 per month to each county.
- b. For each calendar year specified, an amount is transferred to the Bicycle Transportation Account: CY 2004 and thereafter - \$5,000,000.
- c. The balance of the fund is apportioned between the county and cities according to various computations involving population, assessed valuation of tangible property, and apportionments for fee-paid and exempt vehicles.

Section 2107 - Apportionment to cities.

- a. Snow removal funds for eligible counties.
- b. The balance of the fund is allocated to each city in proportion to the city's share of the population of all the cities in California.

Section 2107.5 - Apportionment to cities.

- a. To be used for engineering and administrative expenses only. Annual allotments range from \$1,000 for a city of less than 5,000 persons to over \$20,000 for a city of over 500,000 persons.

Section 2108 - State Highway Account.

a. The balance of the money after making the apportionments or appropriations pursuant to Sections 2104 to 2107.7, is transferred to the State Highway Account for expenditure on state highways and for exclusive public mass transit guideway projects.

b. Sales Tax

The State's sales tax on gasoline and diesel fuel currently provide \$2 billion per year. In 2002, the voters of the State of California passed Proposition 42, a State Constitutional Amendment, which required the majority of this revenue to be spent for transportation uses. Specifically, Proposition 42 required money previously put into the State's General Fund for health, corrections, education, social services, to be transferred to the Transportation Investment Fund to provide for improvements in highways, streets and roads, and transit systems.

Twice since the passage of Proposition 42 in 2002, the State of California has suspended the transfer of funds to the Transportation Investment Fund due to the state's fiscal shortfalls. First, there was a partial suspension in 2003-04, followed by a suspension of the full amount in 2004-05. Proposition 42 allows such suspension when the state faces fiscal difficulties, yet, is silent as to whether suspended transfer amounts are to be repaid to the transportation fund.

c. Proposition 1A

In 2006, the voters of the State of California passed Proposition 1A. This proposition requires the state to treat the transfers of gasoline and diesel fuel sales tax revenues to the General Fund as loans. These loans must be repaid to the Transportation Investment Fund in full including interest within three years of the suspension.

In addition, the law also places restrictions on the number of times the state may "barrow" against these funds to twice in ten consecutive fiscal years. With the exception of 2007-08, no additional suspensions could occur until prior suspensions have been repaid in full.

d. Proposition 1B

In 2006, the voters of the State of California passed Proposition 1B: *The Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006*. This Proposition authorized the sale of approximately \$20 billion in general obligation bonds to fund transportation projects. These projects include congestion relief, goods movement improvement, air quality improvement, and the enhancement of safety and security of the transportation system. The following table summarizes the purposes for which the bond money will be used.

Figure 4-42

Proposition 1B Uses of Funds	(\$000)
Congestion Reduction, Highway and Local Road Improvements	11,250
Reduce congestion on state highways and major access routes	4,500
Increase highways, roads, and transit capacity	2,000
Improve local roads	2,000
Enhance State Route 99 capacity, safety, and operations	1,000
Provide grants for locally funded transportation projects	1,000
Rehabilitate and improve operation of state highways and local roads	750
Public Transportation	4,000
Improve local rail and transit services, including purchasing vehicles and right of way	3,600
Improve intercity rail, including purchasing railcars and locomotives	400
Goods Movement and Air Quality	3,200
Improve movement of goods on state highways and rail system, and in ports	2,000
Reduce emissions from goods movement activities	1,000
Retrofit and replace school buses	200
Safety and Security	1,475
Improve security and facilitate disaster response of transit systems	1,000
Provide grants to improve railroad crossing safety	250
Provide grants to seismically retrofit local bridges and overpasses	125
Provide grants to improve security and disaster planning in publicly owned ports, harbors, and ferry facilities	100
Total	19,925

3. Local Funds

a. Transportation Development Act (TDA)

The Transportation Development Act of 1971 instituted a regular funding source for various local transportation programs. Special emphasis is given to local transit systems. TDA funds are derived from the statewide sales tax. One-quarter of one cent of the 7 ¼ cent sales tax collected in Kings County is returned to KCAG for apportionment among eligible recipients through the Local Transportation Fund (LTF).

According to Section 99400 of the Public Utilities Code, LTF funds may be used for streets and roads only after: 1) RTPA planning and administration costs have been deducted; 2) the RTPA conducts public hearings to assess bicycle and pedestrian needs (§99234 P.U.C.); and 3) the TPC conducts public hearings to determine the extent to which LTF funds are needed to meet reasonable unmet public transit needs.

Approximately \$3,000,000 of LTF revenue becomes available each year in Kings County. Of this amount, about 40 percent is normally directed to support the Kings Area Rural Transit (KART) and Corcoran transit services. After deduction for administrative costs, the remaining available dollars are used for local street and road purposes. Apportionment is made according to the latest Department of Finance population estimates.

Remaining TDA funds are distributed back to counties through the State Transit Assistance (STA) Fund. These funds can only be used for transit purposes and are used to support KART and Corcoran Dial-a-Ride.

b. General Fund

Normally, a substantial portion of local street and road revenues are drawn from the jurisdiction's general fund. Typical sources are property taxes, fees, interest, and sales taxes. For counties this includes vehicle "in lieu" registration apportionments from the state, and federal revenue-sharing funds. Another source for both cities and counties are fines and bail forfeitures collected in municipal or justice courts.

Normally, these funds are not restricted in use and may be programmed at the discretion of the local legislative body. Because of competing public service demands, dollars budgeted for roads will vary from year to year.

Hazardous Waste Tax funds totaling about \$200,000 is allocated each year to the county's streets and roads budget from Chemical-Waste Management funds. It is anticipated that these funds, in lesser amounts, will continue to be available into the immediate future.

c. Street Assessment Levies

Pursuant to the Improvement Act of 1911 and similar legislation, local agencies are able to provide various public works through the creation of special assessment districts. If benefited residents are willing to attach the cost of improvements to their property taxes, this device can generate needed revenue for improvements. The fact that the landowners are billed exclusively for their improvements generally limits special levies to one-time projects rather than to roads which require continuing maintenance. In Kings County, these districts are normally used to supply water or sewer lines, curbs, gutters, sidewalks, and street lights.

d. Transportation Impact Fees

The City of Hanford passed an ordinance in 1990 that established a transportation development impact improvement fee for all new developments within the city's General Plan boundary area. This impact fee will help mitigate the transportation, traffic, and air quality impacts caused by new development by financing 70% of the cost of public transportation system facility improvements. The improvements may include right-of-way acquisition, roadway construction, traffic signalization, and street expansion improvements.

The fee was based on determining the cost of improvement projects needed to support the projected population growth and the projected number of new trips per day generated by the growth. The total cost per each new trip per day is applied to the number of trips generated per use, as determined in the Institute of Transportation Engineers (ITE) Trip Generation Manual.

Since 1992, the City of Lemoore has maintained Development Impact Fees for City traffic-related infrastructure needs directly attributable to new development. These fees have been indexed in time with the California Construction Cost Index, as costs for the identified project have increased over time. As part of a citywide study in 2005, it was determined that the separate fees should be determined for areas with significantly different existing infrastructure: the mostly-developed portion of the City east of 19 ½ Avenue, and the almost undeveloped western portion of the City. The Eastside Streets and Thoroughfares Fee was adopted in 2006; the Westside Streets and Thoroughfares Fee is currently the subject of a new study, and will likely be set in May 2010. In keeping with the Mitigation Fee Act, the collected fees are used exclusively for new infrastructure, and never used for maintenance of existing or upgrading of existing deficiencies in the infrastructure level.

e. Local Sales Tax Measure

Kings County could place a measure on a ballot to impose a local sales tax of up to 1% for not longer than 20 years, to fund projects in an approved expenditure plan for state highway projects, local streets and roads, transit and other transportation related projects. It is estimated that a ½ % local sales tax over a 20 year period could generate \$114 million to finance local transportation projects in Kings County. Proposed 1999 state legislation (SCA 3 and SB 1155) would have allowed for a 2000 ballot measure and expenditure plan. Recently, the state legislature has begun considering changing the 2/3 voter-approval requirement for local transportation taxes to a 55% majority vote. KCAG is considering developing an expenditure plan in the event that a similar funding measure is approved in the future.

f. Local Option Fuel Taxes

As authorized by state legislation, voters in each county have the option of approving a local tax on gasoline and diesel fuel, in one-cent increments per gallon. Such a tax could provide a significant source of revenue in Kings County.

Caltrans estimates that 66,100,000 gallons of motor fuel were consumed in Kings County in 2000. Calculating a two-cent tax per gallon yields about \$1,322,000 in revenue.

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CHAPTER 5
GOODS MOVEMENT

I. OVERVIEW

This chapter examines ways to ensure that freight and commodities are efficiently transported through Kings County and the region. The two modes of railroads and freight trucks are considered. Special attention is given to the needs of the agricultural industry in moving its products.

II. ASSUMPTIONS AND INVENTORIES

- A. Forecasted growth for California is expected to increase the volume of goods moved over the next 20 years by 46%, using trucks, air, rail, pipelines, and seaports. Air cargo is expected to be the fastest growing segment of freight transportation nationwide. Rail intermodal traffic is the second fastest growing segment and truck transport will also continue to grow, but at a slower rate than air cargo or rail intermodal.
- B. Kings County's agricultural economy will continue to generate a strong demand for adequate truck and rail facilities to move farm products to processing plants, markets, and ports.

FIGURE 5-1

**KINGS COUNTY FARM PRODUCT VALUE
2008**

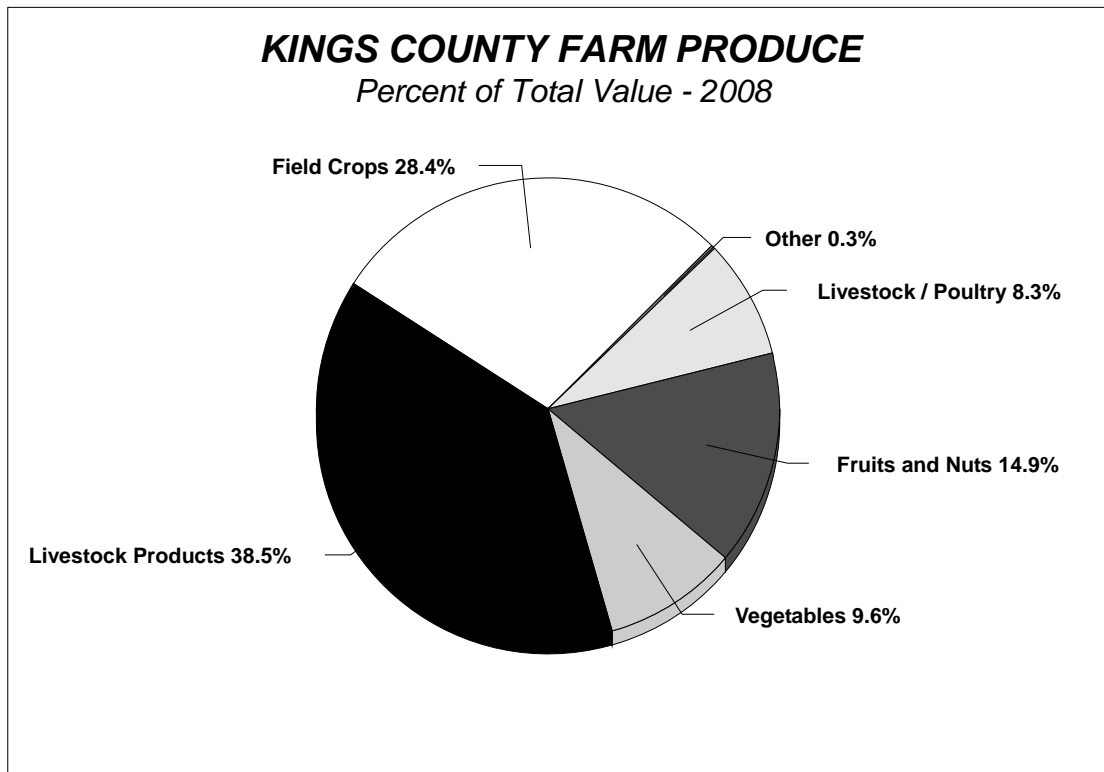
PRODUCT	VALUE IN \$ MILLIONS
Field Crops	\$499.4
Livestock Products	\$677.4
Vegetables	\$168.8
Fruit and Nuts	\$261.0
Livestock/Poultry	\$147.9
Other	\$5.5
TOTAL	\$1,760.0

Source: Agricultural Crop Report 2008

- C. Kings County will generate relatively little demand for air cargo transportation.
- D. The rail network in Kings County, shown in Figure 5-4, consists of approximately 67 miles of mainline and branchline railroad over which two railroad companies operate. The Burlington Northern Santa Fe (BNSF) mainline runs north-south through the county and the San Joaquin Valley Railroad running east-west on the leased Union Pacific Railroad (UP) Coalinga Branchline.

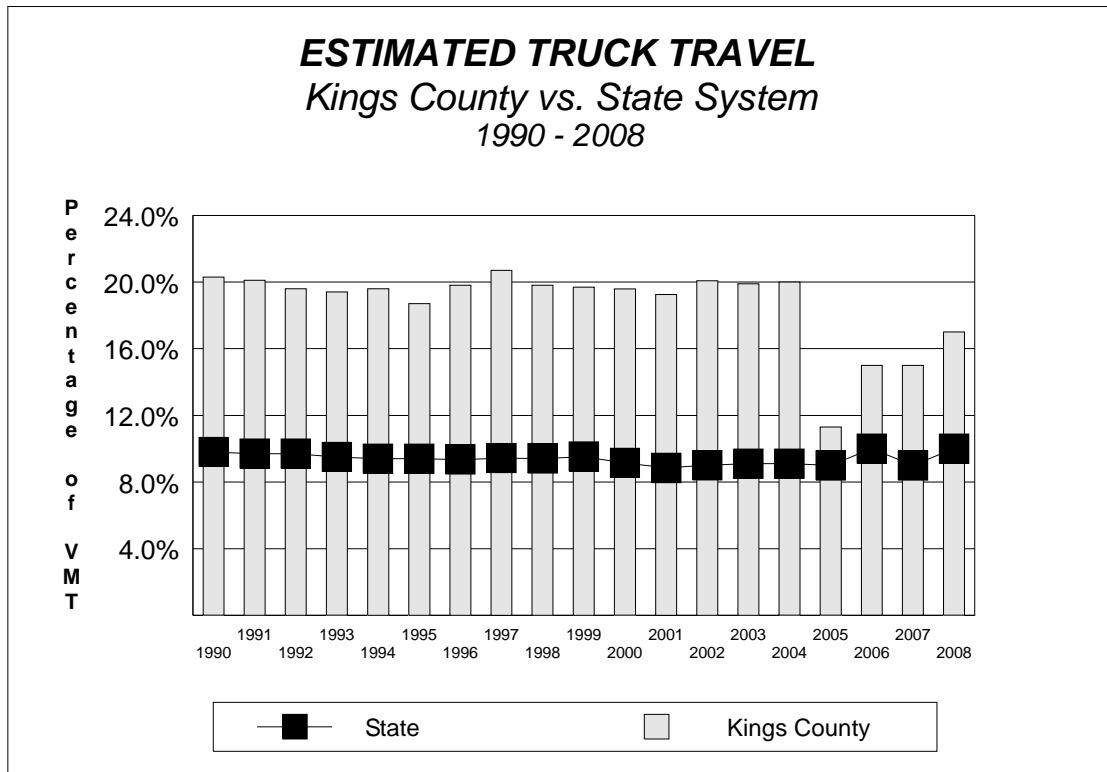
- E. Railroad companies will continue to seek abandonment of service on unprofitable rail lines. Once abandoned, railroad companies could salvage track, ties and other equipment, and dispose of the right-of-way. Freight previously shipped by rail would be shipped by trucks, increasing truck VMT and emissions.
- F. Kings County will have a much higher percentage of trucks on its highways than will most other counties. The majority of these vehicles will be moving agricultural products (see Figures 5-2 and 5-3).
- G. Each city has identified local truck routes as part of their road network and the State has identified oversize truck routes and terminals within Kings County. Figures 5-5 through 5-9 provide maps of local truck routes. Truck routes are specifically designated to carry heavy-weight commercial and industrial vehicles through and around the city with a minimum disruption to auto traffic and annoyance to residential areas. Truck routes are generally established on arterial and collector streets that provide direct access from regional routes to industrial areas within each community.

FIGURE 5-2



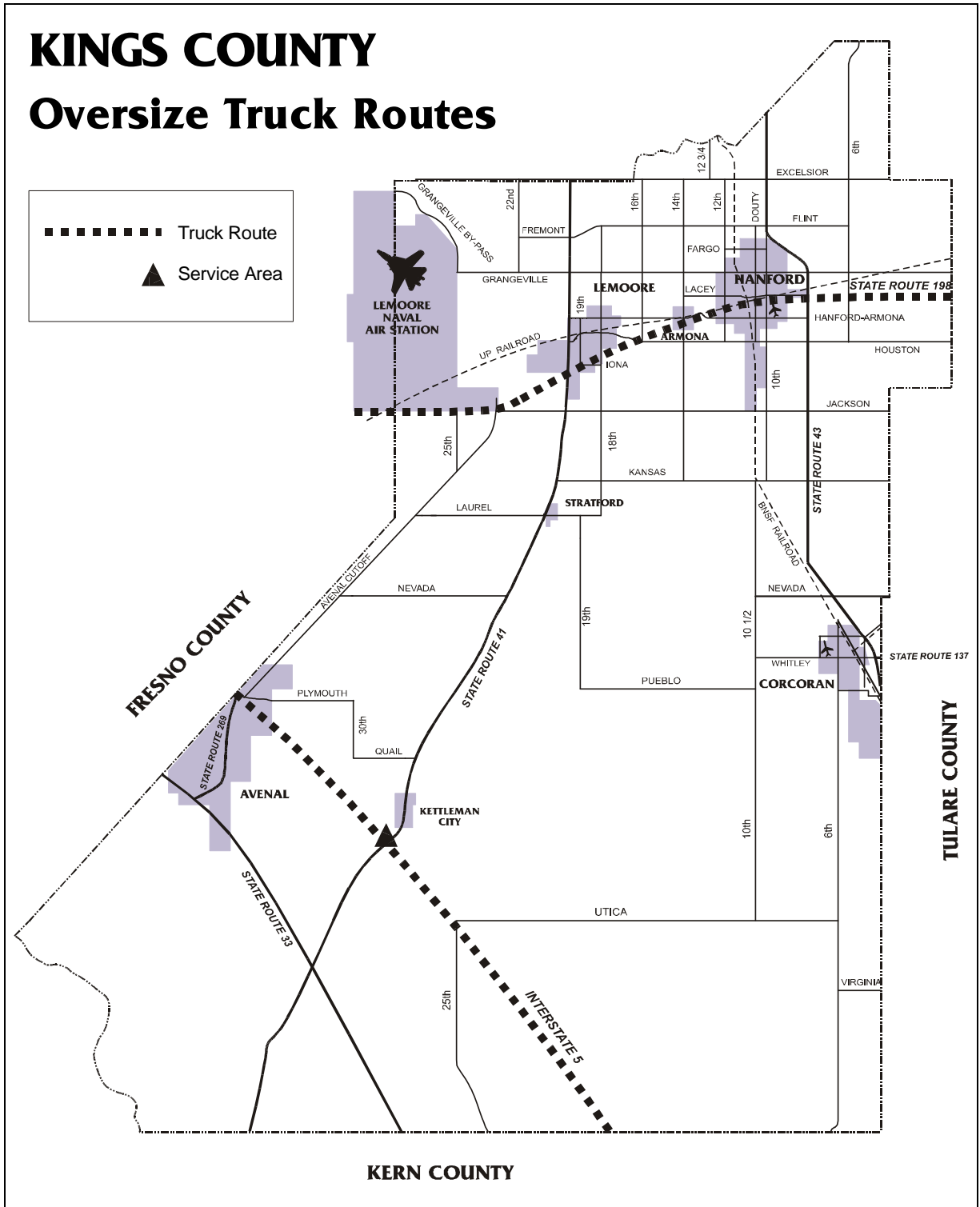
Source: Kings County Agricultural Commissioner

FIGURE 5-3



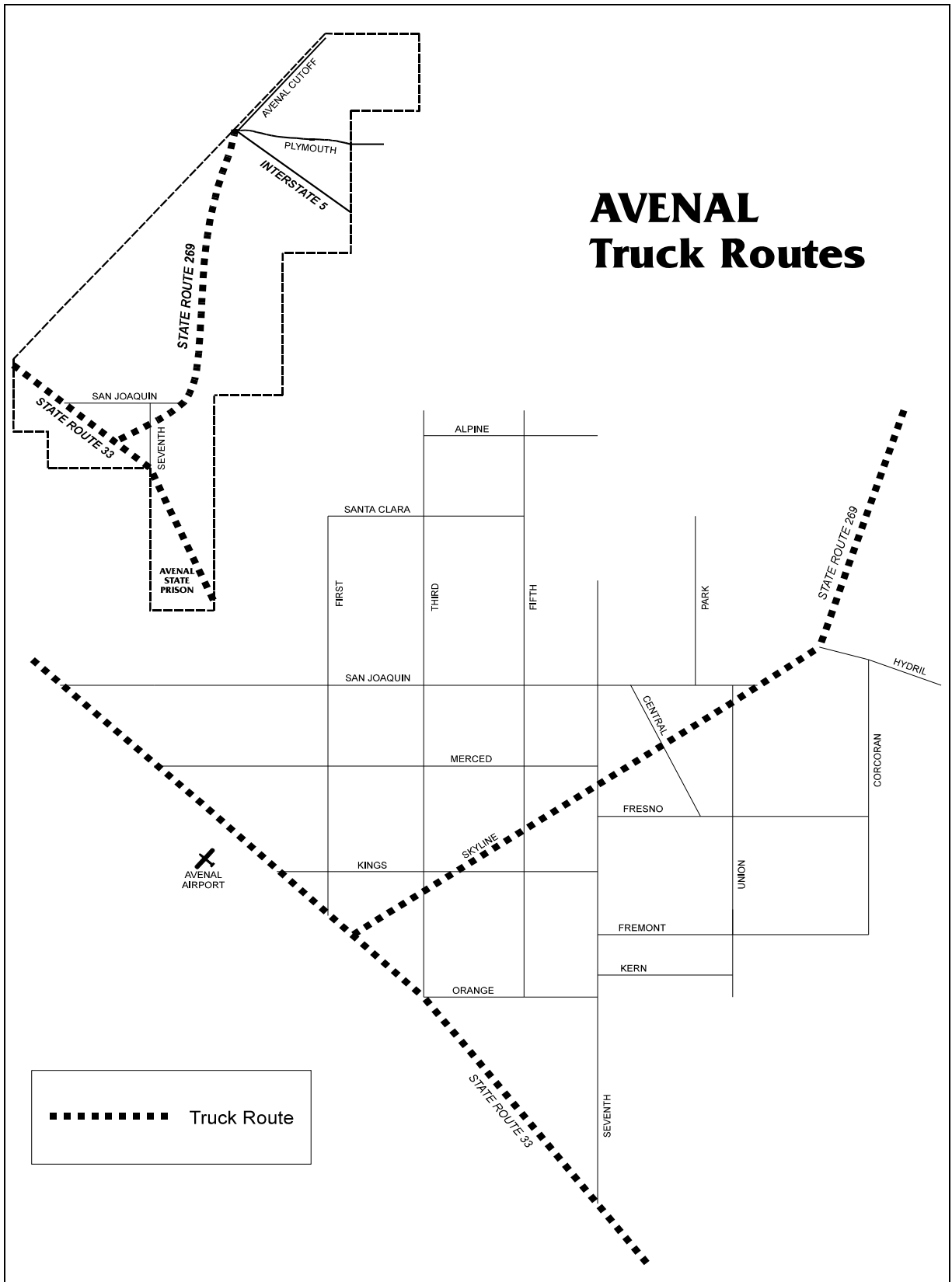
Source: Caltrans

FIGURE 5-5



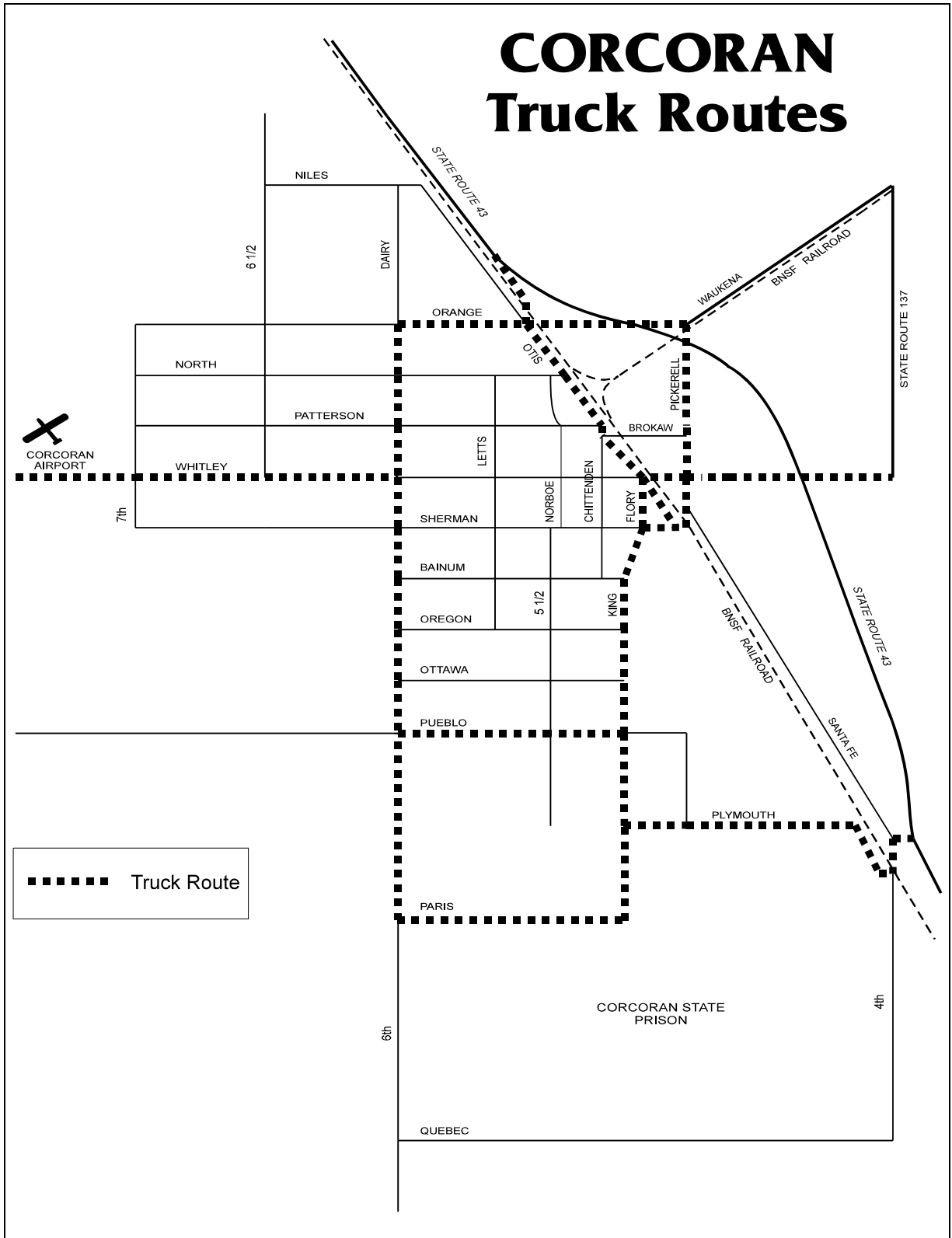
Source: KCAG

FIGURE 5-6



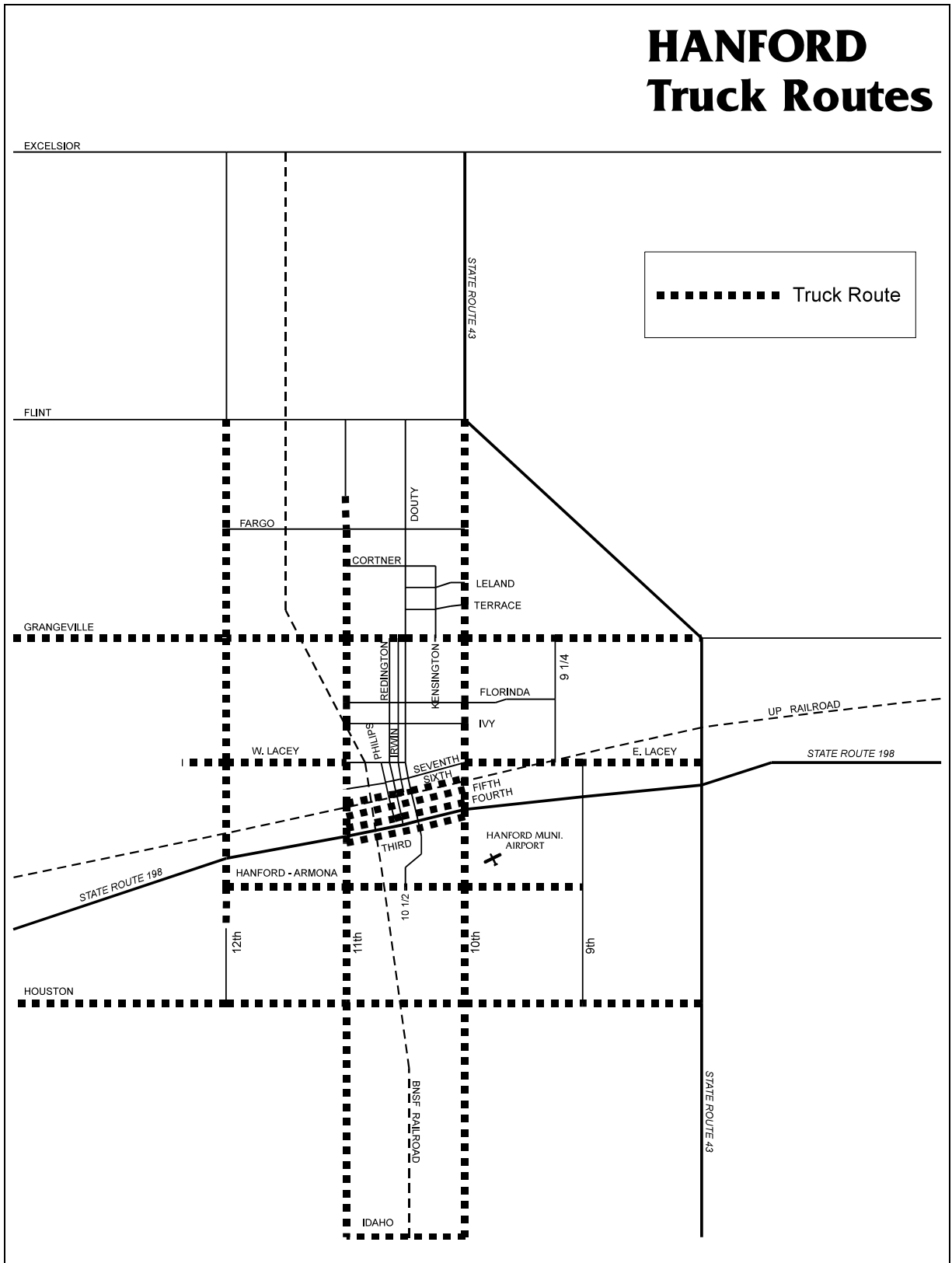
Source: City of Avenal

FIGURE 5-7



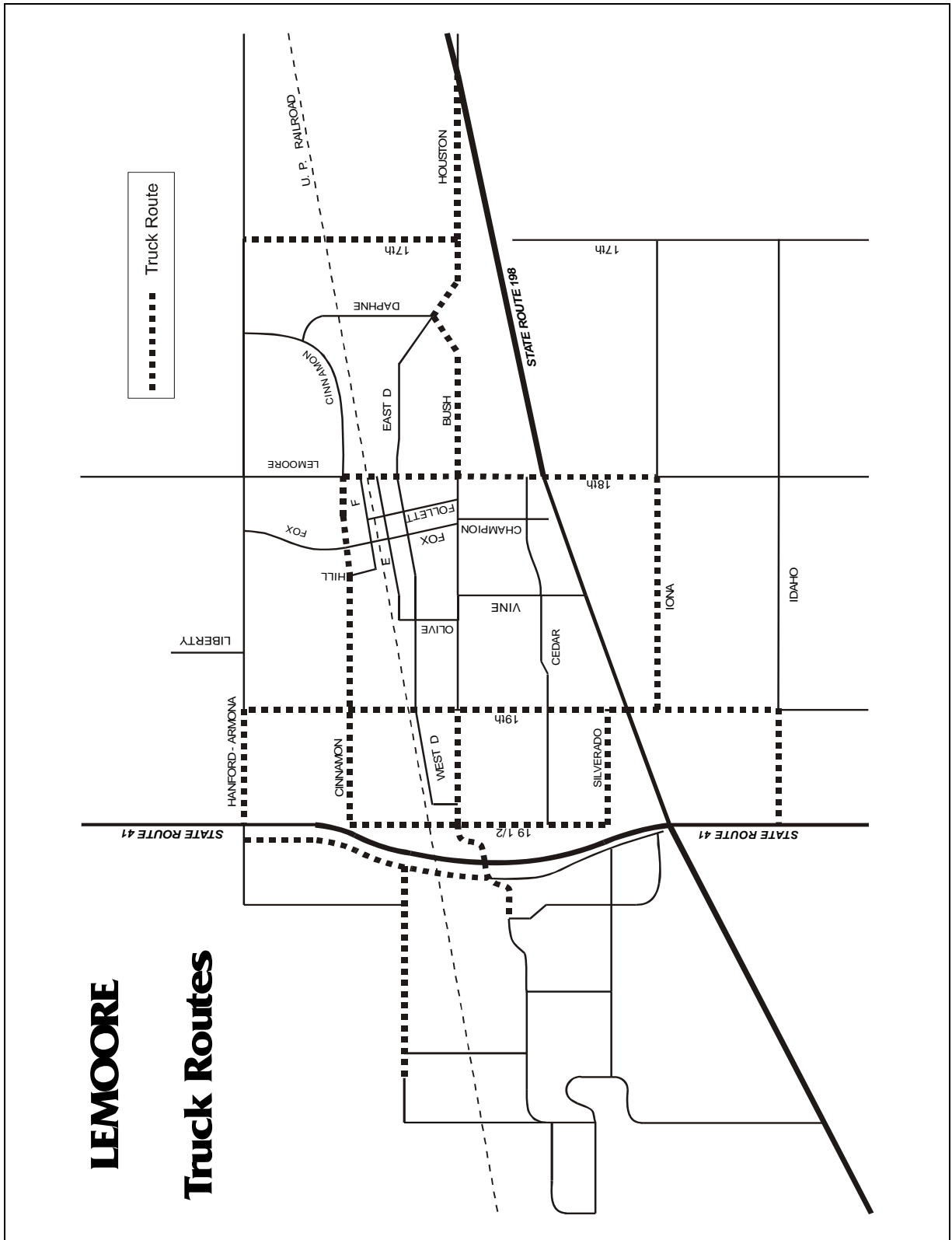
Source: City of Corcoran, County of Kings

FIGURE 5-8



Source: City of Hanford

FIGURE 5-9



LEMOORE
Truck Routes

Source: City of Lemoore

III. SUMMARY OF GOODS MOVEMENT ISSUES

A. DETERIORATION OF HIGHWAYS

Heavy trucks damage roads much faster than do automobiles. Because Kings County experiences such a high level of truck travel, its streets and highways are subject to rapid deterioration and failure. City, county, and state road crews are well aware of this fact; most of their work involves repairing fatigued pavements. Roughly 60 cents out of every local transportation dollar in Kings County goes to road maintenance. Special attention must be given to the regional routes to keep them in a serviceable condition and to avoid major reconstruction costs.

Existing overweight truck fines are not devoted to enforcement of truck weight regulations or the maintenance and rehabilitation of roads needed due to overweight truck damage. Legislation to increase truck weight penalties in order to provide added revenue for funding enforcement and road repair needs should be pursued. The amount of any penalty should relate to the damage done to the road and the cost of the repair.

B. OVERSIZE TRUCKS

The Surface Transportation Assistance Act of 1982 authorized the use of longer, wider trucks on designated highways. In Kings County I-5, SR 41, SR 137 and SR 198 are designated oversize truck routes. The act also allowed trucking companies to establish terminals of the designated routes. While the law did not change the present 80,000 lb. limit, overloading of the vehicles is expected. The trucks' wider turning radii can lead to congestion problems in urban areas. Local officials have expressed concern over the impact that the trucks will have on state and local roads in Kings County. Policies have been adopted to regulate local access points, routes, terminals, and infrastructure improvements.

C. TRAFFIC CONGESTION

By their very size, trucks lead to reduced capacity on rural highways, and to congestion on local streets. The need for rural route improvements has already been addressed in Chapter 4: "The Regional Highway System". Each local agency has designated important collectors and arterials as "truck routes." Local street systems, however, are highly stressed by trucks because of their thinner pavements and base. Congestion results when large trucks try to maneuver on narrow urban streets with cramped intersections and on-street parking.

Cooperative efforts are needed between the trucking industry, the driving public, and local officials to assess the impacts that trucks have on local streets, and to create regulatory guidelines for trucks in urban areas. Most of the cities will be phasing out truck routes through residential neighborhoods as the area population increases.

D. HAZARDOUS SPILLS

The Class I waste facility located in Kings County's Kettleman Hills draws trucks carrying hazardous materials from all western states. The presence of these trucks increases the probability of dangerous spills. Emergency services personnel are sometimes unable to quickly dispose of spilled substances because truckers are not required to carry such instructions with their cargo manifests.

E. PORT ACCESS

Because many of Kings County's agricultural products are destined for world markets, efficient freight access at California's export points must be ensured. Private and state officials need to find ways to reduce rail and truck congestion at the ports.

F. RAIL CROSSINGS

Rail grade crossings produce several undesirable consequences: lengthy delays of local traffic at certain times; safety problems where automatic grade protection devices have not been installed; and unnecessary roughness which slows traffic and causes congestion. Ways to correct these problems should be identified, discussed, and solved by the local jurisdiction and the railroad company.

Improving rail crossings has only been addressed for passenger rail grade crossings. The California Transportation Commission adopted guidelines for the development of a statewide inventory and methodologies for prioritizing grade crossing improvements that would enhance public safety. Criteria used to prioritize improvements include such factors as train speed and frequencies, traffic volumes, and accident history. These guidelines would only affect the BNSF rail lines and are currently being implemented.

G. TRANSPORTATION OF HAZARDOUS WASTE

Hazardous waste can be transported by rail, small or large trucks and possibly by air and pipelines. At present, and for the foreseeable future, the largest volume of hazardous waste is transported by large trucks. Many of the counties within California import hazardous waste to Kings County for treatment, storage, and disposal at the Chemical Waste Management-Kettleman Hills facility. Approximately 624,000 tons of hazardous waste was transported to the Kettleman Hills facility each year.

Potential adverse affects associated with the transportation of hazardous waste can be partially mitigated by restricting roads available for hazardous waste trucking. The Kings County Hazardous Waste Management Plan includes a hazardous waste transportation plan that established policies that define preferred major and minor routes which connect to regional, state and interstate highways and railroad systems.

The transportation of hazardous waste within Kings County is guided by a three-tiered road classification system. Within the first tier are minor roads. The second tier includes selected roads of either arterial or collector class and the third tier are the state and interstate routes. Any routing plan for the transportation of hazardous waste should encourage upward movement through the tiers with a minimum amount of time spent on road segments in the lower tier.

Caltrans recommends that specific hazardous waste sites should be located a minimum of one-half mile away from any state highway and that any access to a facility by county, city, or private road should be improved to provide a left turn lane and any other improvement to reduce the possibility of an accident. Access to the Kettleman Hills facility is provided with an interchange at Interstate 5/State Route 41 and with turn lanes into the facility from State Route 41. Truck climbing and passing lanes are proposed for future improvements on SR 41.

H. RAILROAD ABANDONMENTS

Railroad companies have ceased operating freight on several railroad corridors throughout the San Joaquin Valley due to low freight volumes and unprofitable lines.

KCAG prepared a "Rail Right-of-Way Inventory Report" in 1990 for Kings County as part of the statewide Commuter and Intercity Rail Right-of-Way Inventory. The inventory report consisted of a description of each rail line within the county and a listing of which lines may have the potential for future passenger rail or recreational use. The following table lists the rail lines within Kings County and their status.

FIGURE 5-10

RAIL RIGHT-OF-WAY INVENTORY

Railroad	Status	Potential Transportation Use
UP - Coalinga Branchline	Active - Portions abandoned or previously proposed for abandonment	Yes
UP - Stratford Spurline	Abandoned (1996)	Yes
BNSF - Mainline	Active	Yes
BNSF - Visalia Branchline	Abandoned (1994)	Yes
BNSF - Laton Branchline	Abandoned	No

Source: KCAG

In 1996, the San Joaquin Valley Railroad petitioned the Surface Transportation Board (STB) for an abandonment exemption of an 18.1 mile segment of the Coalinga Branchline between Huron and Rossi. Protests were filed by the California Public Utilities Commission (CPUC) and several shippers, citing rail shipping needs and rail freight potential. Subsequently, the STB denied the abandonment exemption on March 5, 1999. The area shippers continued to negotiate with SJVR to consider increasing freight traffic. The continuation and extension of freight rail on this segment will reduce truck travel and emissions.

IV. ACTION ELEMENT

- A. To ensure that regional system operational and maintenance costs are held to a minimum and that safety requirements are met, seek to implement the following:
 - 1. Enforce federal and state truck weight and size regulations.
 - 2. Enforce California Vehicle Code maximum load size and weight regulations.
- B. The county and each city should adopt consistent Oversize Truck Ordinances to identify acceptable oversize truck routes, terminals, and servicing areas, and to set fees for infrastructure improvements.

- C. To facilitate more efficient movement of goods through California's ports, encourage Caltrans and private entities to carry out the following:
 - 1. Reduce congestion on port access roads.
 - 2. Reduce conflicts between port rail traffic and non-port transportation.
 - 3. Encourage the development and improvement of intermodal freight transfer facilities at ports.
- D. Implement the goals and objectives identified in the 2007 Goods Movement Action Plan (GMAP) to maintain and improve the goods movement transportation system.
- E. Any conditional use permit for a hazardous waste facility should include a description of routes to be used and route restrictions to be adopted. Facilities should be located so as to minimize distances to major transportation routes and designed to accommodate heavy trucks.
- F. Review and comment on proposed notices of abandonment exemptions filed before the Surface Transportation Board by railroad companies for railroad abandonments to determine if the corridor could be used for other transportation purposes.
- G. Support the continuation of freight rail on existing rail lines to preserve rail corridors and to reduce truck travel by encouraging the shipment of goods by rail.
- H. Implement various planning strategies to preserve the rail corridors for future transportation uses by developing general plan and zoning ordinance text.
- I. Continue participating in the regional Freight Advisory Committee, including Kings, Fresno, Tulare and Madera counties and industry representatives to address inter- and intra-regional goods movement issues.
- J. Support the findings of the Valley Goods Movement Study conducted in FY 2003-2004 in cooperation with Caltrans Districts 6 and 10 and thirteen San Joaquin Valley RTPAs to develop information to better understand the movement of goods within and through the Valley, assess the efficiency of the transportation network in handling goods movement and to recommend improvements.
- K. Support the programming of capacity, operational, safety and network improvements on the Interregional Road System (IRRS), as recommended in Caltrans' 1998 Interregional Transportation Strategic Plan and program improvements on the local transportation system in the Transportation Improvement Programs that facilitate interregional movement of people and goods.
- L. Participate in the development of High Speed Rail that will include the ability to accommodate both passenger and high-value, time-sensitive freight movement.

M. RECENT PROJECTS

1. San Joaquin Valley Goods Movement Study

The San Joaquin Valley is in a strategic geographic location for the flow of statewide, nationwide and international commodities. The eight RTPAs within the central San Joaquin Valley in conjunction with Caltrans and the SJVAPCD have undertaken a study to improve the understanding of truck transportation of commodities within and through the Valley. The first phase of the study, completed in 2000, focused on documenting the freight transportation system and identifying existing issues and problems of regional goods movement planning within the Valley. Farm products account for almost 30% of the tonnage of all commodities shipped from the Valley. About 46% of the farm product tonnage is sent directly out of the Valley. Almost 87% of the total tonnage is moved out of the Valley by truck, while rail accounts for 11%. Between 1993 and 1997, there was an increase in the tonnage of goods moved by trucks and a decrease by rail. Shipments of higher value products have shifted from rail to trucks.

Freight transportation problems identified by generators within Kings County included a safety issue at the SR 41 and SR 198 interchange, lack of adequate off-street parking and restricted on-street parking, poor connections from loading areas to state highways, and long delays at grade rail crossings.

The second phase of the Study concluded in 2004, described the development of a model tool to forecast truck movement within and through the San Joaquin Valley. The truck model is intended to forecast truck trips and vehicle miles traveled, analyze air quality and emissions from heavy-duty trucks, impacts of congestion on major truck routes, and safety and road maintenance issues associated with truck activity. The third phase of the Study initiated in 2006, provided improvements to the San Joaquin Valley truck model and integration with local models. This model will provide an analytical basis for evaluating the benefits of transportation investments that impact the movement of goods in the San Joaquin Valley.

In response to the State's Goods Movement Action Plan (GMAP), the San Joaquin Valley RTPAs prepared a Regional Goods Movement Action Plan as a way to leverage the Valley's abilities and opportunities to improve the goods movement system in the Valley. This Plan identified the regions goods movement system, analyzed the flow of commodities within the system, identified the impacts on air quality, and developed a list of regional projects that strive to relieve the overburdened goods movement infrastructure.

2. Cross Valley Rail Upgrade

As discussed in "Chapter 6-Public Transportation", the second phase of the Cross Valley Rail Feasibility study recommended that the UP Coalinga branchline be preserved for future use. In an effort to preserve the rail corridor that was threatened with abandonment, funding for the rehabilitation of the UP Coalinga branchline across the San Joaquin Valley between Huron and Visalia has been obtained from various sources. Rehabilitation of the tracks will improve freight service operated by the San Joaquin Valley Railroad and reduce the amount of truck traffic on regional county roads and highways. Funding for the \$15 million project was provided in the state Traffic Congestion Relief Program, federal Economic Development Initiative grant, Congestion Mitigation and Air Quality funds from Fresno, Kings and Tulare Counties, the cities of Huron, Lemoore and Visalia, private agencies and the SJVRR. Rehabilitation work began in late 2001 and was completed in 2004.

CHAPTER 6

PUBLIC TRANSPORTATION

I. OVERVIEW

Public transit is arguably one of the most important services any municipality can offer its residents. In an increasingly mobile society, the need for all residents to have access to employment, schools, medical services and recreational activities is necessary to maintain equitable opportunities for all persons.

Rural public transit plays a vital role in providing mobility for those with limited or fixed incomes. Typically, rural areas contain a higher percentage of lower income persons (per capita) living in smaller cities that are separated by long distances. While urban public transit systems, by and large, enjoy a wide cross section of riders, rural transit patrons have predominantly been the elderly and the physically and developmentally disabled who, in most instances, have no other choice of transportation services other than those offered by the local public transit operator. In recent years, these particular transit groups have been a smaller percentage of the total ridership since public transportation has continued to see increasing growth in services and ridership from the general public.

In Kings County, there are many private and public agencies providing transportation services. Among those providers considered in this chapter, the focus will be on the Kings Area Rural Transit (KART) system, the primary public transit operator in Kings County, Corcoran Area Transit, Amtrak *San Joaquins*, high speed rail and commuter rail service. In addition, a section is devoted to ridesharing and to programs designed to reduce single-occupant vehicle commuting within Kings County and the central San Joaquin Valley region.

II. ASSUMPTIONS AND INVENTORIES

A. TRANSIT DEMANDS

1. Although most county residents can rely upon their own means for transportation, transportation needs will continue to exist, especially among elderly, disabled, and low-income groups who are unable to afford or to operate motor vehicles. Many households with only one available vehicle also have transportation needs.
2. As a result of transit's growing public familiarity, KART and Corcoran Area Transit ridership will continue to increase. This will result in a higher farebox return, which can help decrease local public costs to operate the system.
3. The population growth of Kings County, combined with the growth in employment opportunities over the next twenty years will increase ridership and transit demands for services in areas beyond the reach of existing KART routes. KART must remain flexible and responsive to the increasing demands.
4. A significant demand for intercity bus and rail services for the San Joaquin Valley will continue.
5. The Hanford Intermodal Station will continue being a major stop on the *San Joaquins* line by drawing riders from Kings and Tulare counties. A much higher percentage of Kings County residents will ride the train than will residents of any other Valley county.

6. Because many Kings County residents commute long distances to work, ridesharing should remain as a viable alternative to single-occupant vehicle commuting.
7. Public transit should be used as a transportation control measure (TCM) for air quality improvement to attain state and federal air quality standards.

FIGURE 6-1

**AVAILABLE VEHICLES BY HOUSING UNITS IN KINGS COUNTY
2000**

NO. OF VEHICLES	HOUSING UNITS	
	Number	%
0	3,200	9.3%
1	12,009	34.9%
2	12,882	37.4%
3+	6,327	18.4%
	34,418	100.0%

Source: 2000 U.S. Census

FIGURE 6-2

**PERSONS WITH A DISABILITY IN KINGS COUNTY*
2000**

JURISDICTION	AGE GROUPS			TOTAL	% POPULATION
	5-20	21-64	65+		
Avenal	185	993	193	1,371	25.3%
Corcoran	188	1,335	376	1,899	29.4%
Hanford	1,146	4,445	1,865	7,456	23.6%
Lemoore	473	1,950	518	2,941	21.5%
Unincorporated	312	1,085	330	1,727	23.8%
Total County	2,304	9,808	3,282	15,394	23.9%

Source: 2000 U.S. Census

* Defined as persons having a long lasting condition that substantially limits one or more basic physical activities.

FIGURE 6-3**TRIP-TO-WORK PRIVATE VEHICLE OCCUPANCY
FOR KINGS COUNTY
2000**

OCCUPANCY	AVENAL		CORCORAN		HANFORD		LEMOORE		KINGS COUNTY	
	No.	%	No.	%	No.	%	No.	%	No.	%
Drive Alone	1,294	55.3%	2,220	86.1%	12,595	84.1%	6,330	83.5%	30,817	81.2%
Carpools:	1,046	44.7%	359	13.9%	2,375	15.9%	1,252	16.5%	7,117	18.8%
2 Persons	363	34.7%	191	53.2%	1,702	71.7%	949	75.8%	4,561	64.1%
3 Persons	144	13.8%	83	23.1%	336	14.1%	118	9.4%	990	13.9%
4-6 Persons	222	21.2%	62	17.3%	273	11.5%	161	12.9%	1,024	14.4%
7 or more Persons	317	30.3%	23	6.4%	64	2.7%	24	1.9%	542	7.6%
TOTAL	2,340		2,579		14,970		7,582		37,934	

Source: 2000 U.S. Census

B. TRANSIT PROVIDERS

Kings County area transportation providers belong to one of four classes: 1) Public Operators Providing Public Transit; 2) Public Operators Providing Passenger Rail Service; 3) Private Operators Providing Public Transit for Profit; and 4) Nonprofit Operators Providing Special-Use Transit. Kings County prepares an update to its inventory of transportation providers every four years. The "Social Services Transportation Inventory" includes a detailed summary of each agency's services. The various transportation providers are arranged in these four groups in Figure 6-4. Excluded from consideration are public school bus systems, ambulances, and private or nonprofit providers such as churches, private schools, and clubs. Many of the nonprofit, special use providers prefer to maintain their transportation services as they exist now, but are willing to coordinate with other public and private providers as the needs arise.

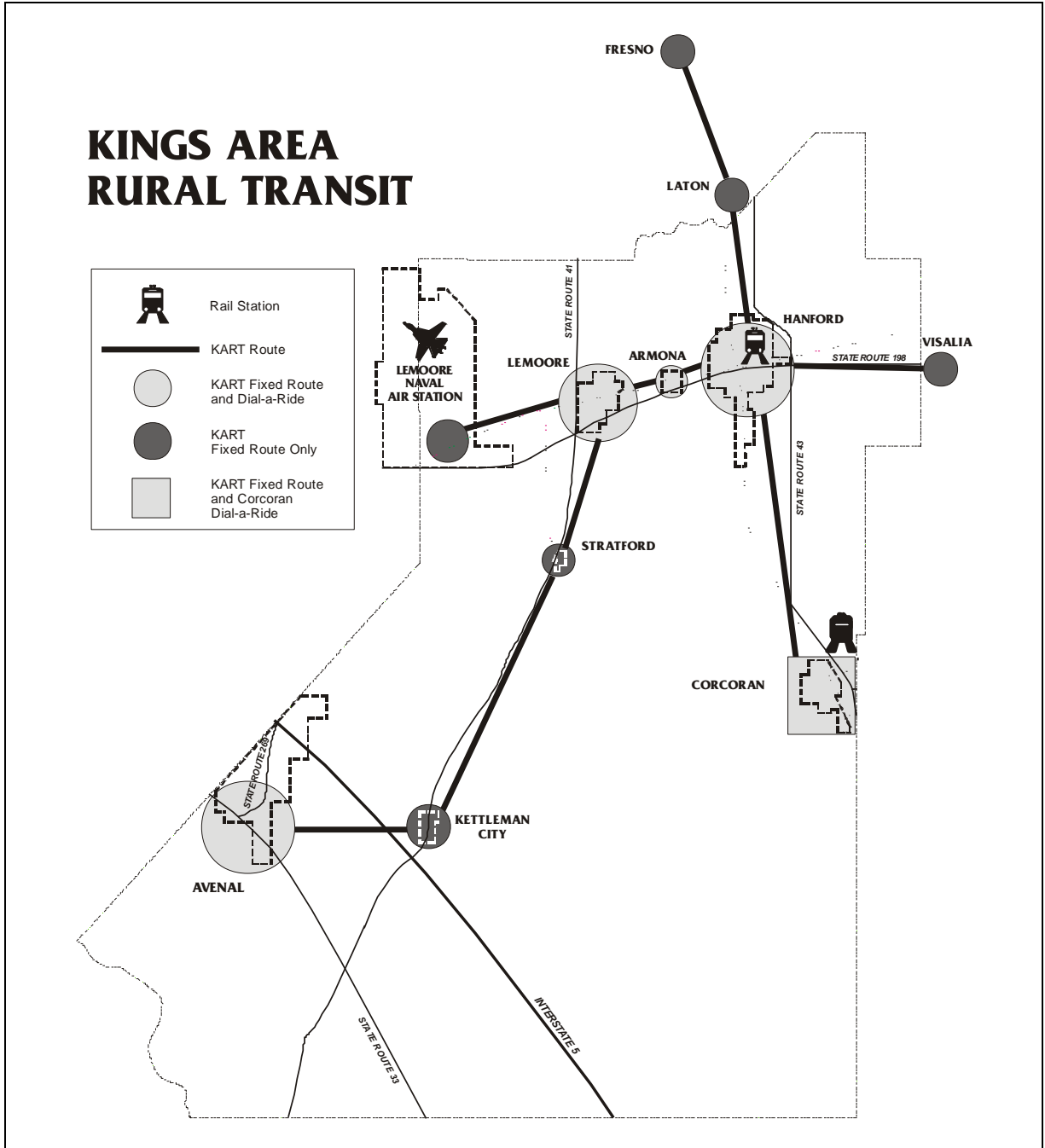
FIGURE 6-4

TRANSPORTATION PROVIDERS IN KINGS COUNTY

PUBLIC OPERATOR: PUBLIC TRANSIT
Kings Area Rural Transit Corcoran Area Transit
PUBLIC OPERATOR: PASSENGER RAIL
AMTRAK San Joaquins
PRIVATE OPERATOR: FOR PROFIT
Lemoore Taxi Cab Lemoore Kings Cab Hanford Cab Company Orange Belt Stages D & S Taxi Classic Charters Marathon Cab Central Valley Cab Kings Medical Transport Employ America Tri-County Medical Transport Community Home Care Kings Convalescent Center Kings Manor
NONPROFIT: SPECIAL USE
Kings Rehabilitation Center Kings View Mental Health Corcoran Family YMCA Kings County YMCA Kings Community Action Org. - Head Start Kings Community Action Org. - Respite Care Kings Community Action Org. - Teen Pregnancy Kings Community Action Org. - Emergency Services Valley Christian Home American Cancer Society American Red Cross Armona Senior Center Best Care Home Health Central Valley Regional Center Kings County Human Services Agency Kings County Job Training Office Kings County Mental Health Kings County Public Health Kings/Tulare Area Agency on Aging Cornerstone Recovery Santa Rosa Rancheria Lemoore Naval Air Station Salvation Army Corcoran State Prison - Bien Venidos Visitor Shuttle Kings County Probation - Victim Witness Program

Source: KCAG

FIGURE 6-5



Source: KCAPTA, KCAAG

III. PUBLIC TRANSIT SERVICES

The services of the two local public transit operators in Kings County are detailed in the “2008 Kings County Transit Development Plan” and will be summarized in this section. The intercity rail and bus services will also be highlighted in this section.

A. KINGS AREA RURAL TRANSIT

The largest single provider of public transportation within Kings County is operated under the auspices of the Kings County Area Public Transit Agency (KCAPTA), a joint powers agency comprised of the County and the cities of Hanford, Lemoore, and Avenal. The City of Corcoran does not participate in the KART system. KCAPTA oversees the operation of the Kings Area Rural Transit (KART) system. This organization is shown in Figure 6-6.

KCAPTA establishes the operating policies and defines the services to be provided by KART including service hours and days, fares, and routes, etc. The day-to-day management and actual operation of the system are carried out under contract with a private firm, MV Transit. All KART operating personnel (manager, dispatcher, mechanics, and drivers) are employees of MV Transportation, Inc.

KCAPTA staff monitors and interfaces with MV Transportation on a daily basis. Specifically, the KCAPTA staff designs and organizes marketing programs, counts and deposits the farebox receipts, reviews invoices and service reports, and prepares reports for the KCAPTA Board meetings.

KART began operations in June of 1980 and has seen a steady increase in the number of riders and new services over the past 24 years. Since 2000, KART ridership has increased dramatically as new services have been provided to meet transit needs of the public.

KART presently uses a fleet of vehicles ranging in size from a 9-passenger van to a 33-passenger bus to provide transit services. All public transit vehicles in the KART fleet are equipped with wheelchair lifts.

Two levels of service are offered: fixed-route and demand response (Dial-a-Ride) service. Demand/response service is available daily in Hanford, Lemoore, Avenal, and Armona. There is daily Hanford-Lemoore, Hanford-Avenal, Hanford-Corcoran, Hanford-Visalia, and Hanford-Laton fixed-route service. There is also a Hanford-Fresno fixed route that runs every Monday, Wednesday and Friday.

KART offers reasonable fares for all fixed route and demand-response services. In addition to regular fares and monthly passes. The KART system has been, and will continue to be, responsive to its customers needs as stated in its service goal:

“It is the goal of this agency to provide reliable Public Transportation service that is clean and convenient; focused on that portion of the public which is transit dependent; in a proactive manner, resulting in continued improvements and cost effectiveness.”

FIGURE 6-6
Kings County Area Public Transit Agency
Organizational Chart

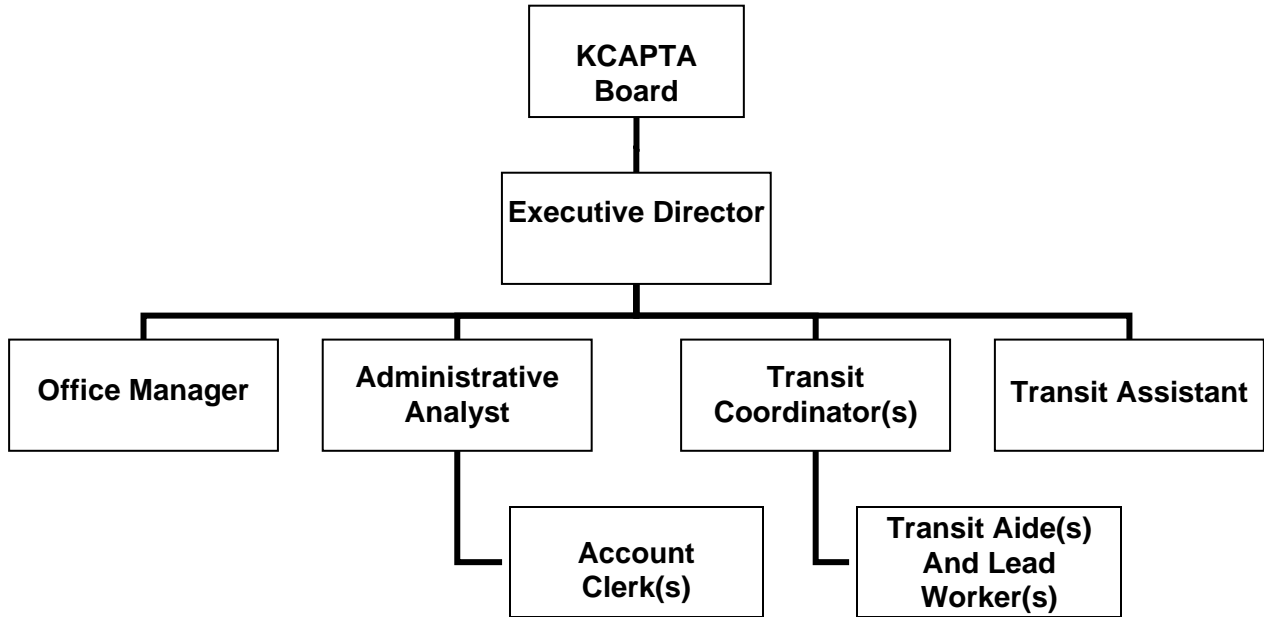
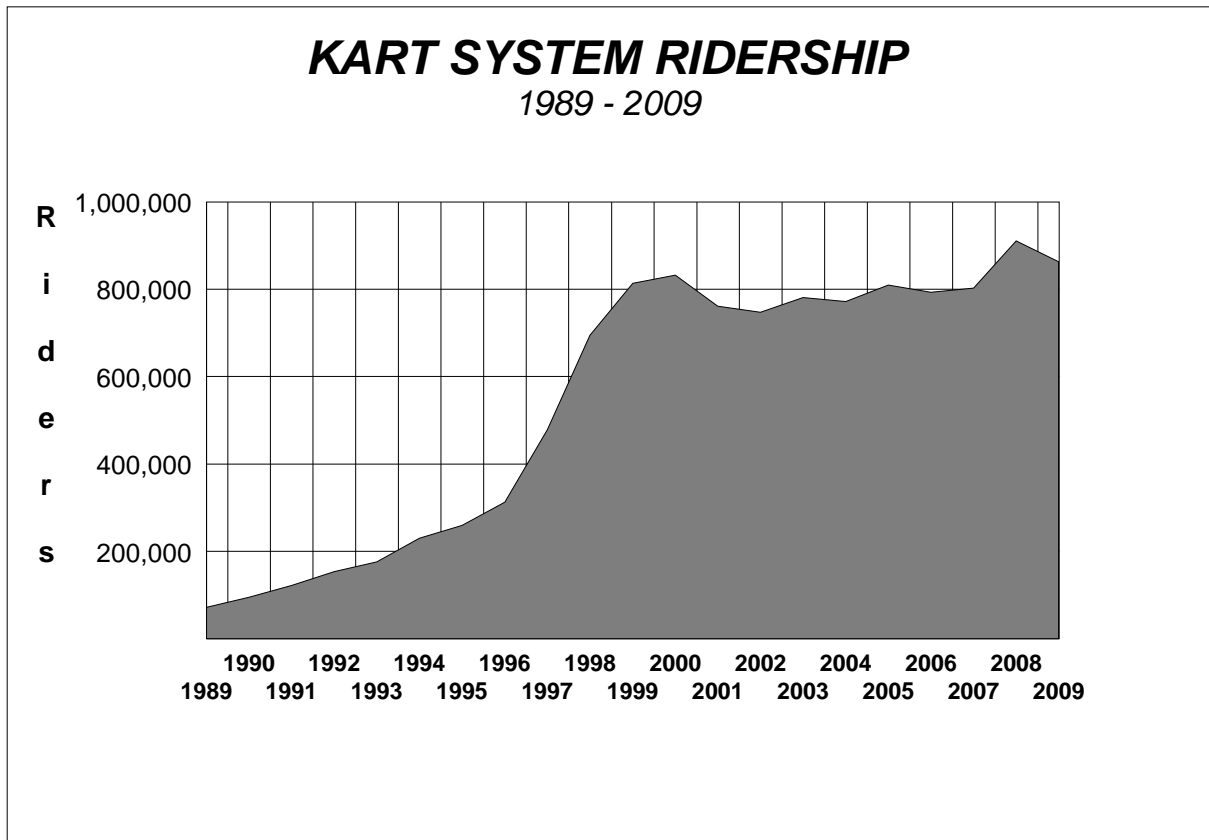


FIGURE 6-7



Source: KCAPTA

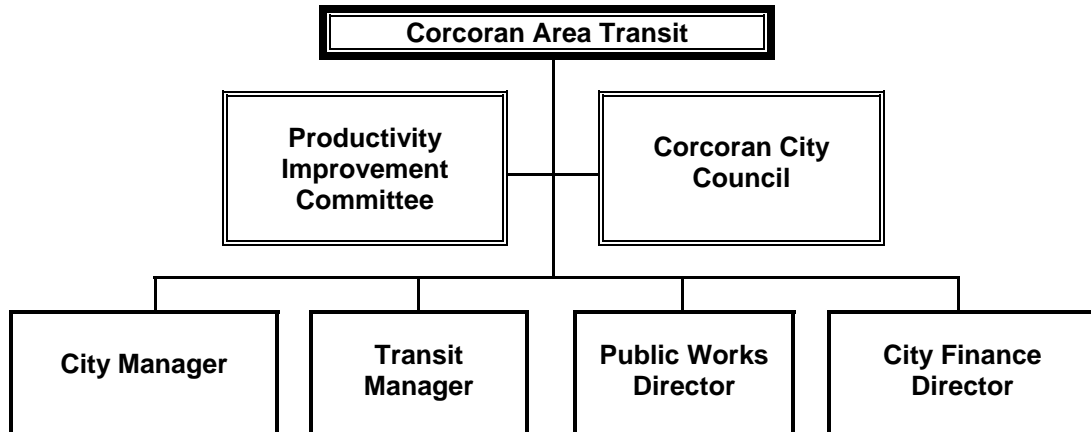
B. CORCORAN AREA TRANSIT

The City of Corcoran has provided its own transit service since 1975 for Corcoran residents and for those living in the rural “fringe” area surrounding Corcoran. Initially, the service was only for senior citizens, but in 1989 the service was expanded to include the general public. In addition to Dial-a-Ride, the City of Corcoran made available to low income residents, discounted one-way and round trip Amtrak tickets for intercity travel between Corcoran and Hanford for access to County services.

Corcoran Area Transit is operated by the City of Corcoran. The City Manager acts as the Transit Manager and is responsible for the daily operations and management of the system. A Productivity Improvement Committee is responsible for uncovering and addressing needs of the community which is acted upon by the Corcoran Area Transit administrator and staff. City staff is used as dispatchers since requests for bus service are handled through the new multimodal center and discount AMTRAK tickets can be obtained at the train station as well.

FIGURE 6-8

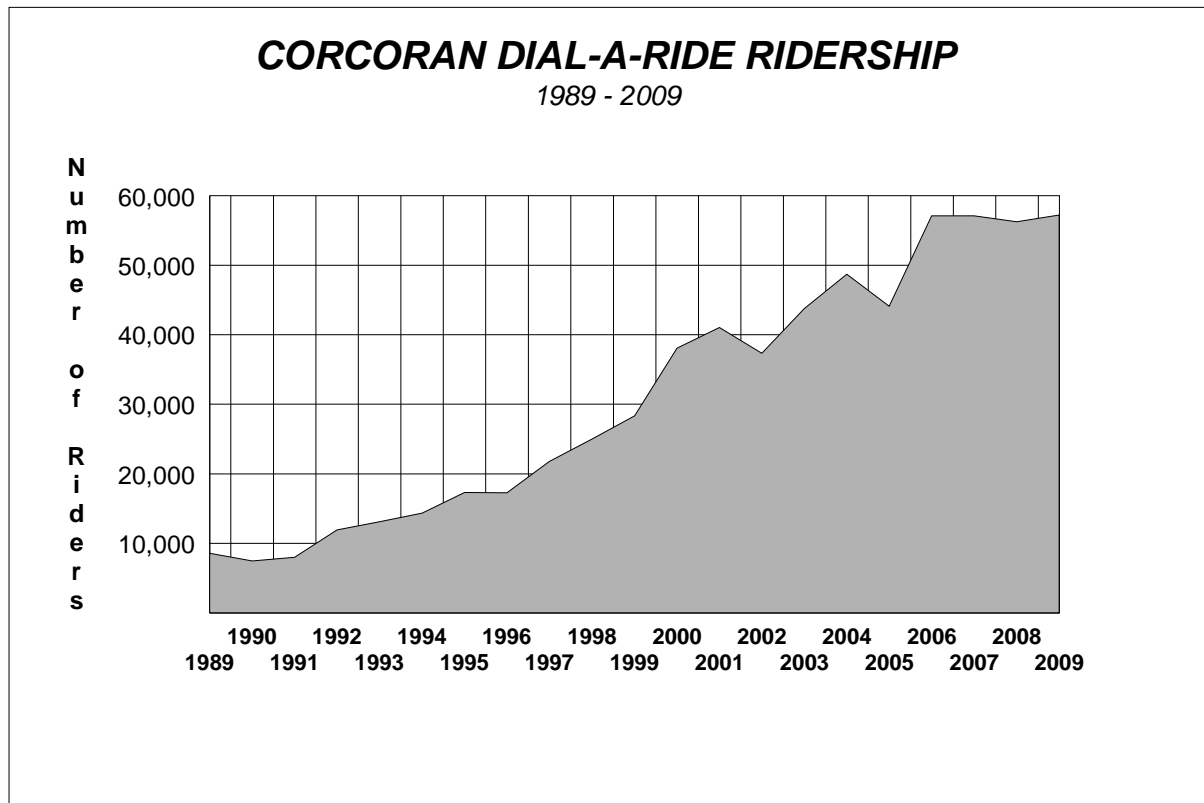
**Corcoran Area Transit
Organizational Chart**



The Corcoran Area Transit provides dial-a-ride service. Corcoran Dial-a-Ride service is provided using five buses equipped with a wheelchair lift. The majority of the ridership on Corcoran Dial-a-Ride consists of senior citizens, disabled, and children six and under who can ride at a reduce rate, with most trips being to the Senior Nutrition Program.

Corcoran Dial-a-Ride has steadily improved its ridership over the years. Because of the high senior citizen ridership who are eligible to ride at a reduced rate, the farebox return ratio had been below the State's required 10%. However, when combined with the fares from the AMTRAK ticket program, the citywide transit service has always met the minimum required farebox ratio.

FIGURE 6-9



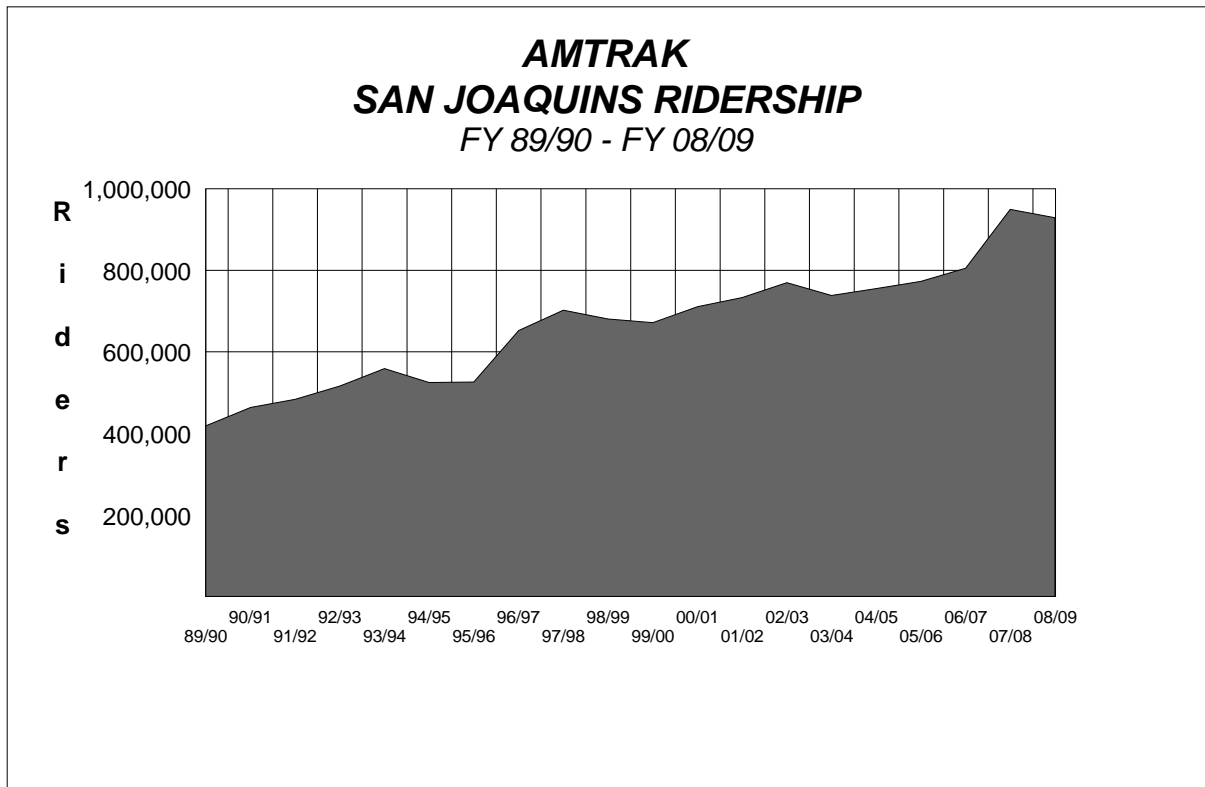
Source: City of Corcoran, KCAG

C. AMTRAK

The Amtrak *San Joaquins* provide regularly scheduled intercity passenger rail service to Kings County. Stops are made daily at the Hanford and Corcoran stations for each northbound and southbound train. Stops along the *San Joaquins* line include Bakersfield, Wasco, Fresno, Madera, Merced, Turlock, Modesto, Stockton, Antioch, Martinez, Richmond, Emeryville and Oakland with connecting bus service to Los Angeles, Sacramento, San Francisco, and many other points in Northern and Southern California. The trains are accessible to the disabled and provide on-board bicycle racks, checked baggage and food services.

Because Amtrak is a national enterprise, coordination with connecting transit service at the Amtrak stations must be done by the local transit operators. Kings Area Rural Transit (KART), Corcoran City Transit, and Orange Belt Stages all coordinate their bus service with the *San Joaquins* train schedules. Amtrak passengers can board feeder bus service provided by Orange Belt Stages as a part of their regular route at Hanford for Santa Maria and other central coast destinations. Hanford averaged 514 passengers per day, while Corcoran had 71 passengers per day in FFY 2008-09. Hanford has always been one of the most important stops on the *San Joaquins* route, consistently ranking among the top four or five stations in ridership. Station rankings shown in Figure 6-11 includes ridership for *San Joaquins* service only.

FIGURE 6-10



Caltrans, San Joaquins Route FFY 2008-09 Business Plan

FIGURE 6-11**SAN JOAQUINS RIDERSHIP BY STATION
FFY 2008-09**

Rank	Station	Total Boardings And Alightings
1	Bakersfield	415,989
2	Fresno	344,084
3	Stockton	262,990
4	Hanford	187,750
5	Sacramento	117,093
6	Merced	98,442
7	Emeryville	96,863
8	Modesto	94,844
9	Martinez	88,175
10	Oakland	54,502
11	Richmond	40,251
12	Antioch/Pittsburgh	28,615
13	Corcoran	25,952
14	Turlock/Denair	19,234
15	Wasco	17,596
16	Madera	17,269
	TOTAL	1,917,892
Total Ridership		958,946

Source: Caltrans, Division of Rail

* Since each trip contains two endpoints, total ridership is equal to half of total boardings and alightings.

D. ORANGE BELT STAGE LINES

Orange Belt Stages is the only transportation provider that fills the gap between Kings County and connections to Tulare County and the Central Coast via Paso Robles. This nationwide charter service, which has been in business since 1916, has regional fixed routes in Kings County that stop in Hanford, Lemoore, Stratford and Kettleman City on its western route to Santa Maria. Service is also provided to Visalia. Orange Belt also connects with Greyhound bus service provided in the San Joaquin Valley.

Increasing operations costs and low ridership figures are problems which Orange Belt must contend with. Efforts to coordinate services with other providers in the future are favorable, and the City of Corcoran is interested in obtaining intercity bus service at the new Corcoran Intermodal Facility. Currently, Orange Belt coordinates with Amtrak for bus connections out of the Hanford Intermodal Station.

IV. ISSUES

A. PUBLIC TRANSIT

1. Kings Area Rural Transit

- a. Both KCAG and the Kings County Area Public Transit Agency (KCAPTA) must continue to seek out and define transportation needs. It is vital that the KART system remain proactive to transit patrons' needs, allowing both input and feedback for future transit route adjustments. KART management and the KCAPTA Board must remain accessible to those who need transit service in the community. They must ask themselves and the community: Who in Kings County needs transit services? Where are the needs located? What level of service will reasonably meet those needs? The annual "unmet transit needs" public hearing process conducted by the KCAG Transportation Policy Committee to allocate Local Transportation Fund (LTF) revenues to support KART will assist in determining these questions. Fortunately, there have been sufficient LTF revenues in the past to fund any transit needs identified through this process. However, decreases in other funding sources have occurred.
- b. KART's cost-sharing formula is based on 50% service hours and 50% population of each member. KCAPTA will continue to review the formula to provide an equitable apportioning of transit costs among the member agencies.
- c. Due to Kings County's rural nature, County residents have to rely more on their own means for transportation than those living in the more densely populated areas of the state. Public transit services are well patronized by a small segment of the population--primarily by low income residents without access to a car and the elderly--yet public transit is generally considered a low-priority public expenditure.

Although KART's ridership and fare revenues have increased, it still requires the public to subsidize about 85 percent of its costs. While the intent of the Transportation Development Act is to ensure that all persons have access to transportation for both drivers and non-drivers, some may view the expense to increase limited transit ridership as an inefficient use of public funds.

- d. Over the years, the KART system has improved its farebox return ratio. However, as a result of added cost to implement state and federal requirements such as the Americans with Disabilities Act (ADA) and Welfare-to-Work, the farebox ratio has not been able to increase as steadily as it had in the past. KCAPTA will need to continue working to increase community ridership and adjusting routes to better serve the greatest numbers of people. Care should be taken to ensure that such adjustments while appearing to be more economical, don't reduce service to the low-mobility groups KART is designed to serve.
- e. Due to budget cuts, some social service agencies are requesting KART to supplement their clients' transportation needs. Because transit needs of the elderly and disabled are high priorities of KART, it will require additional services at an increased cost. The coordination of transportation services among KART and social service providers should be implemented where feasible.

- f. An inter-county transit needs study conducted by the Tulare County Association of Governments (TCAG) found that enough demand for service existed to justify operating a fixed route service between Hanford and Visalia. KCAPTA began providing service to Visalia for educational and employment needs, but Tulare County has not proposed providing complimentary service to Hanford. KCAPTA will need to work together with TCAG to develop, fund and operate a commuter service that will meet service needs and performance criteria.
- g. Federal welfare reform law requires local transit providers to consider giving priority to enhancing services for welfare-to-work purposes. KCAPTA must work with public and private agencies to develop and equitably fund new routes and services that offer welfare recipients the ability to obtain employment and training opportunities.
- h. KART's bus fleet has grown significantly enough to warrant changes to the current transfer station located at the Hanford Amtrak station. KCAPTA and the City of Hanford worked together to locate and develop a convenient site to allow for continued coordination of transit services. During fiscal year 2008/09, KART completed construction of a permanent transfer site structure located at 504 W. 7th Street in Hanford near the Amtrak station.
- i. Projected ridership will necessitate the addition of buses and frequency of routes. Currently used funding programs available to operators in rural counties are insufficient to meet these needs. KCAPTA will need to investigate all new resources of funding and submit grant applications to obtain the required funds.

2. Corcoran Area Transit

- a. Corcoran's Dial-a-Ride service has provided residents with a stable and efficient transit system. The new prison and related facilities in Corcoran, along with the development of the new Corcoran Intermodal Facility will, without question, increase transit demand. The ability of Corcoran City Transit to meet this demand will require changes in transit routes, equipment, and the need for additional funding.
- b. The operation of the Corcoran Intermodal Facility by the city and the addition of a new fixed route bus has created the need for funding that exceeds what is available to the City of Corcoran from traditional transit funding sources. Corcoran will need to seek new funding sources to meet its total transit budget, including a review of the fare system.

3. AMTRAK

Kings County is fortunate in that it is linked with other areas of the state by Amtrak *San Joaquins* trains. Ensuring the continuation of this service is a matter of considerable regional significance.

- a. State costs to support intercity rail operations have increased significantly due to reductions in Amtrak's federal funding. SB 457 allows for the transfer of responsibility for intercity rail service in a particular corridor to a joint powers agency (JPA) in an effort to reduce the state's administrative and operating costs. To date, no JPA has been established for the *San Joaquins* corridor. It is unknown what potential financial and other liabilities would be associated with the JPA that the local agencies would have to assume. SB 1118 authorized the former "Steering Committee of the Caltrans Rail Task Force" to continue working with Caltrans to assist in the management and promotion of the service. This committee was renamed the San Joaquin Valley Rail Committee which represents the counties along the route.
- b. Like virtually all Amtrak trains, the *San Joaquins* operate at a loss. With operating expenses exceeding ticket sales, a deficit remains to be shared by Amtrak and Caltrans under the 403(b) agreement begun in 1979. Continued state support was on the condition that a farebox ratio of 55% would be maintained. This requirement could be waived for three years. However, as additional services were provided and changes were made in Amtrak's cost allocation formula, the previously attained high farebox ratios around 80% were no longer able to be achieved. As a requirement of SB 457, the state has recently developed uniform performance standards for the state-supported rail corridors to control costs and improve efficiency. The performance standards take into account total route ridership, cost efficiency and quality of service and are no longer based only on farebox ratios. The FFY 2006-07 farebox ratio attained by the *San Joaquins* was 43.9%.
- c. Feeder buses connecting the Hanford station with the major cities in Tulare County is available as part of the regular route structure of Orange Belt Stages. An opportunity also exists to provide coordinated feeder bus service by the KART and Corcoran Dial-a-Ride systems. The feeder bus network is a very important element of the *San Joaquins* since more than 60% of all passengers use a feeder bus during their trip.
- d. In November of 1988 the Kings County electorate approved a ballot measure which made the county eligible under Article XIX, Section 4 of the California Constitution, for transit guideway funds for capital improvements to the Amtrak San Joaquins line. Each of the counties eligible for Article XIX funds was to receive a county minimum share of budgeted funds based on a percentage of each county's 1990 Census population to the total eligible county population. The amount of funding available to Kings County's through the Transit Capital Improvement (TCI) Program ranged between \$88,100 and \$225,600. Funds were used for projects to construct the Hanford and Corcoran intermodal facilities and the Cross Valley Rail Feasibility Study.

With the enactment of SB 45 and the elimination of the TCI Program, a minimum of funds is no longer available to Kings County. Intercity rail projects are now programmed through the Interregional Improvement Program (IIP) on a statewide competitive basis. The policy of the CTC for the 1998 IIP was to fund only major rail projects. This policy left Kings County with only the option to acquire scarce local funding sources for these project types, while urbanized areas with more funding opportunities continued to receive State funding.

- e. If high speed rail between Los Angeles and the Bay Area is implemented, there would be a limited number of stations within the San Joaquin Valley. The continuation of the *San Joaquins* must be retained to continue to provide intercity rail service to the Kings County area.

B. HIGH SPEED RAIL

The California High Speed Rail Authority is in the process of preparing a plan for the construction and operation of a high-speed rail network serving Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, and San Diego. Regional agencies within the San Joaquin Valley have considered the issues regarding high-speed rail and agree that the alignment must be within the SR 99 corridor through the San Joaquin Valley and that high-speed rail must connect the major population centers within the San Joaquin Valley with the Los Angeles Basin and San Francisco Bay Area. In addition to these points, there are other potential impacts associated with a high-speed rail system through the San Joaquin Valley.

1. Alignment

For each specific alignment option along the SR 99 corridor, there are low and high cost variations which generally reflect the difference between serving outlying suburban stations versus existing downtown locations. Each option has varying environmental and cost considerations. The California High Speed Rail Authority has recommended an alignment to the Bay Area via Altamont Pass. Other alternative alignments considered were via Pacheco Pass and Panoche Pass. Alignments to the Los Angeles area include crossing the Tehachapi Mountains to serve the growing Antelope Valley area.

2. Station Locations

The key issue is the choice between stations located within the existing downtowns and stations located within suburban or newly developing areas. Most of the local governments support service to existing downtowns. Outlying suburban stations may require substantial local costs to provide connecting transit service to key activity centers downtown and may encourage premature development. While currently a station is planned for Fresno, local officials are lobbying for an additional stop in Hanford to better service Kings and Tulare Counties.

3. Financing

In November of 2008, Proposition 1A, a High Speed Rail bond, was passed by California voters. In 2009, the U.S. Department of Transportation (USDOT) through the American Recovery and Reinvestment Act (ARRA) program, announced the allocation of \$8 Billion to highspeed rail projects throughout the US. Of that amount, \$2.25 Billion was allocated to California High Speed Rail.

4. Freight Capability

If high speed rail were capable of carrying freight, it could provide an additional source of revenues for operating expenses. The ability to carry freight could also reduce truck traffic on highways and have additional air quality benefits. High speed rail freight capability should be focused on high-value, time sensitive products, and package or express mail services that is compatible with high speed rail equipment. Rail car weights would need to be limited and freight should be carried during off-peak passenger travel times.

5. Farmland Impacts

High speed rail has the potential to accelerate the conversion of farmland to urban uses and to inhibit efficient farming practices adjacent to its alignment due to the restriction of cross movement of farm equipment, goods, and people. Additional residential construction could be induced, particularly within the Antelope Valley and San Joaquin and Stanislaus Counties, because people will be able to live farther away from their places of employment in Los Angeles and the Bay Area and commute by high speed rail. Improved local government land use policies and planning will be needed to mitigate these impacts.

6. Growth and Economics

High speed rail in the Valley must be designed and operated so that it benefits the Valley economy. Benefits could include jobs generated, enhanced competitiveness and quality of life, improved access to services available in major urban centers, and greater economic output. A station downtown could be used as a catalyst to stimulate a comprehensive urban area revitalization program. The economic benefits must outweigh the impacts of increased population growth.

7. Level of Service

High speed trains which do not stop in the Valley have no benefit to us. The conceptual operating plan for high speed rail proposes different levels of service which include express, suburban express, semi-express, and local. These service levels only provide for half of the trains stopping in two major Valley cities of Fresno and Bakersfield. Even though there is a trade-off between the number of station stops and travel time, attempts should be made to secure the greatest number of trains possible that stop at major Valley cities.

8. Public Outreach

The extent to which the public and local governments in the Valley can agree on different aspects of high speed rail, the more influence we will have on the design of the system. A public participation program was designed to insure that private citizens and local government are included in the high speed rail planning process. The level of detail in the public outreach should include specific details such as station location, alignments, and levels of service that voters want to see. The public outreach program is essential because the more the public is involved in the planning process, the more detail they will learn.

C. INTERCITY BUS ISSUES

Orange Belt Stages is the intercity long-haul bus operator that serves Kings County. Deregulation of the bus industry could lead to a situation where Hanford, Lemoore, and other communities of the San Joaquin Valley are left without intercity bus service. In Kings County, direct service to coastal areas and Tulare County could be lost, as would connections to major long-haul bus routes.

D. ELDERLY AND DISABLED TRANSPORTATION ISSUES

1. In 1986-87, KCAG prepared the "Elderly and Disabled Transportation Needs Study," which assessed the transportation needs of these two transit-dependent groups. The study determined that the types of trips most needed by these two transit-dependent groups are those related to medical, shopping, social, and personal business purposes. Access to jobs, health programs, and recreational activities are considered to be the largest transportation needs for these groups. Work related trips are needed by disabled clients of several social service organizations. Trip requests from elderly and disabled persons in Corcoran are almost exclusively for medical and personal business purposes to Hanford.
2. As required by Section 99238 of the Public Utilities Code, the TPC appointed representatives of social service providers and transit users to serve as the Social Services Transportation Advisory Council (SSTAC). The SSTAC's primary role is to advise the RTPA and to provide input in the identification of transit needs of the elderly, disabled, and low income citizens. Members of the SSTAC are also used to evaluate and recommend approval of applications for federal transit grants benefiting elderly and disabled transit users and to provide input in the development of transit plans.
3. As shown in the inventory of transportation providers in Kings County, many agencies provide transportation services for the elderly and disabled and are primarily funded with federal and state funds. The Lanterman Developmental Services Act requires agencies to make full use of existing services, such as public transit, whenever possible to meet client needs. Due to federal and state budget cutbacks, many of these agencies are having to reduce or discontinue service and are asking public transit agencies to supplement their clients' transportation needs. To meet the transportation needs of the elderly and disabled which are of high priority, KART will have to add services at an increased cost.
4. Senior ridership represents approximately 3% of the total KART ridership. In the past, the Kings/Tulare Area Agency on Aging (K/T AAA) has provided KART with subsidies for the senior fares to reduce the revenue loss. This program of subsidizing senior passengers has been eliminated.
5. Funding for elderly and disabled transit capital projects is available through the Federal Transit Act (FTA) Section 5310 grant program on a statewide competitive basis. Small agencies that are in need of a bus are not able to compete effectively for funds based on the statewide criteria that are used to score projects. Funds should be allocated on a more equitable funding basis, such as a formula apportionment to each regional transportation planning agency for allocation to area transit providers.

E. RIDESHARING ISSUES

By far, the majority of unused transportation capacity in Kings County is in private automobiles. By doubling up on the number of persons in a car or van, many public benefits result. As is shown by Figure 6-3, many Kings County residents already carpool. According to the 2000 Census, about 70 percent of the workforce in Kings County chose to drive alone to work and more people have participated in carpools since 1980. From a consumer's perspective, ridesharing gives a higher level of convenience for daily commuters, saves money otherwise spent on gas, and reduces wear on owners' cars.

From a transportation planning perspective, ridesharing should be promoted as a demand-regulating practice to reduce automobile congestion, fuel consumption, air pollution, and the need for additional road and parking capacity. Few would argue the value of these effects, though some point out that lower gas sales means less tax money to fix deteriorated roads. Lowering the demand for new facilities, however, will mean that more can be spent on upgrading the existing roads and parking areas. The following programs have been implemented in Kings County to promote ridesharing.

1. Vanpool Program

Vanpooling is somewhat different than carpooling, though it is based upon the same principle: reducing single occupant commuting. Vanpooling is defined as 7 to 15 persons who commute together in a van-type vehicle and who share the operating expenses. The riders typically share in the operations cost of the van, however there are variations of cost and ownership by either the riders or a sponsoring employer. Essentially, vanpooling serves the long distance commute market of over 20 miles to an employer site.

KART established a vanpool program for riders to the Corcoran and Avenal State Prisons in 2001 and has purchased additional vans to implement new vanpools. The program has become very successful with 180 vans in service in 2009 and extends in the areas of Tulare, Kings, Kern, Madera, Ventura, Monterey, and Fresno counties.

The vanpool program is not only to provide safe travel to work but to provide alternative transportation options which would ultimately reduce the amount of vehicles on the road. The cost for a vanpool is estimated by the number of days the vehicle is used, the amount of miles per day, maintenance, fuel, and insurance. The amount of participants per van determines the cost per person.

2. Valley Rides Program

One of the rideshare programs within the Central San Joaquin Valley region is provided by Valley Rides, a coordinated effort between Council of Fresno County Governments (COFCG) and California State University Fresno. A rideshare coordinator is responsible for developing and implementing the rideshare program which includes services to individuals and employers, public awareness activities, and special studies. These services include the Kings County area and a toll free telephone number to receive rideshare matching services has been implemented. Signs posting the toll free number have been placed along major highway corridors in Kings County. There is also South Valley Rideshare operated by the Kings Area Rural Transit (KART) that provides a free service that matches commuters who live and work near each other so they can form carpools and vanpools. Commuters are able to register online. In addition to these two services, Enterprise Rent-a-Car provides vanpool services.

3. Emergency Ride Home Program

In 1994, KCAG staff developed and the Kings County Board of Supervisors adopted an "Emergency Ride Home Program" as a trip reduction measure to encourage employees to rideshare. Many people are unwilling to try ridesharing because they do not want to be "stranded" at their place of work. This program provides transportation to all Kings County employees who regularly rideshare for a return home in case of certain unexpected emergencies. For those employees who are registered for the program, they have the opportunity to receive an emergency ride home by contacting the Program Coordinator and either having the Program Coordinator call another registered employee for a shared ride, obtain a rental car, schedule transit service, or call a taxi. The service chosen is generally dependent upon the distance to be traveled.

4. Park and Ride Lots

Park and Ride lots provide a meeting place where drivers can safely park and join carpools or vanpools or utilize existing public transit. Park and Ride lots are generally located near community entrances near major highways or local arterials where conveniently scheduled transit service is provided. Lots are designed exclusively for commuters or they can consist of an area of parking spaces in complementary land uses such as shopping centers and churches.

Kings County has two official Park and Ride facilities. One is located at the northeastern entrance of the City of Hanford at 10th Avenue and Highway 43. This location of the lot is ideal for those commuters who meet up with those traveling north and south along Highway 43. Unfortunately the lot is not used as much as it could be due to vandalism. The Lemoore High School parking lot is the second location. KCAPTA and the City of Lemoore have entered into an agreement for commuter parking at the site at 18th Street and SR 198 for an annual fee of \$16,000.

There are a number of informal Park and Ride lots located in various communities served by KCAPTA vanpools. One of the largest is the old Wal-Mart building located on the northwest corner of 12th Ave. and Lacey Ave. in Hanford. Approximately 30 vanpools use this site resulting in up to 250 vehicles being parked per day.

5. Employer Trip Reduction Programs

The SJVAPCD adopted Rule 9410 - Employer Based Trip Reduction in December of 2009 as a requirement for certain employers to develop an Employer Trip Reduction Implementation Plan and create incentives for their employees to reduce single-occupant vehicle trips to work. Employers could choose from some of the options and programs noted above, and any others to meet specific point targets specified in the rule.

V. ACTION ELEMENT

A. RECOMMENDATIONS TO IMPROVE PUBLIC TRANSIT RIDERSHIP AND SERVICE

1. Social Service Transportation Advisory Council (SSTAC)

As required by the Transportation Development Act (TDA), members of the SSTAC consist of representatives of transit dependent groups in Kings County including seniors, the developmentally disabled, low income persons, and representatives of agencies that serve these groups. The SSTAC acts as the advisory body through which transit needs are assessed and brought forward to KCAG, KCAPTA, and the City of Corcoran.

To evaluate the system, the SSTAC uses the following guidelines adopted by KCAG to help identify areas for improvement. These guidelines are also used to evaluate applications for federal grant funds from all eligible transit operators.

- Dependability - The transit operator must demonstrate that its service is reliable and it regularly meets its schedule. A dependable backup system must be available so that in normal circumstances only minor delays in the operating schedule will occur and service will not be unreasonably disrupted.
- Accessibility - The transit operator must demonstrate that the system is accessible to the elderly and disabled. Each vehicle does not have to be fully accessible, but provisions must be made within the system to provide reasonable service to persons with special needs.
- Affordability - The transit operator must demonstrate that the fare structure of the system provides for ridership by persons of limited income. This does not mean a fare cannot be charged, but that the fare may not be excessive in a manner which restricts the access of the poor.
- Adequacy - The transit operator must demonstrate that it provides a reasonable level of service with sufficient range and capacity to allow any person who cannot provide their own transportation to have access to opportunities which will support an adequate standard of living. The minimum service should provide travel to medical appointments, shopping areas, social service agencies, and home again.
- Economy - The transit operator must demonstrate that it has attempted to provide the most efficient and effective service possible and identify criteria used to establish a service cost limit. When suggested by the Productivity Improvement Committee, the operator should present feasible alternative transit programs with projected costs vs. service levels.
- Convenience - The transit operator must demonstrate that the service proposed will be such that it does not discourage use of the service. While service is not expected to be instantaneous or as convenient as travel by private automobile, reasonable headway time should be incorporated into scheduling and capacity considerations.
- Coordination - The transit operator must demonstrate how its system is coordinated with other systems and travel modes to enhance, rather than detract from the effectiveness of each system.

- Monitoring - The transit operator must have a plan for monitoring its service. Data required from the operator is listed with information on the performance audit.
- Flexibility - The transit operator must demonstrate how the system can adjust its schedule and route to accommodate changes in community needs. When the operator has made an adjustment in its service, it will document the basis for the change and improved service which resulted from the change.
- Responsiveness - The transit operator must implement a Productivity Improvement Program designed to ensure that the system can anticipate demands for new service, expand service, and operate at the most efficient cost.

Requests for adjustments in local transit routes and service levels continue to be made by the SSTAC. The KCAG Technical Advisory Committee also expresses its view on transit service. However, it is the Social Service Transportation Advisory Council (SSTAC) which has the opportunity to become the "voice" of transit dependent groups in the county. The SSTAC, by virtue of its membership who represent the actual transit user, is in the unique position of more accurately accessing transit service and uncovering any unmet transit needs. Both KCAG and transit operators will continue to solicit input from the SSTAC for service adjustments based upon the needs of particular ridership groups. In addition, phone calls and petitions are regularly received by KCAPTA from private individuals and groups such as the American Association of Retired Persons. All previous SSTAC recommendations for KART and Corcoran Area Transit service changes have been implemented.

2. Triennial Performance Audits

A performance audit to evaluate the efficiency, effectiveness, and economy of transit operators is required to be completed every three years. Performance audits of KART and Corcoran Area Transit services covering the period of FY 2006-07 through 2008-2009 are to be completed in May of 2010. The audits provide constructive and practical recommendations for transit service improvements. The performance audit will provide new recommendations and evaluate the effectiveness and progress of the previous audits recommendations.

3. Transit Development Plans

The "Kings County Transit Development Plan" prepared by KCAG in 2008 provides a comprehensive view of public transit operations in Kings County and is considered the "blueprint" for transit planning for the two public transit providers in Kings County through the year 2013. The intent of the Plan is to identify the present transit operations in Kings County, provided by both Kings Area Rural Transit and Corcoran Area Transit, and to review the performance of the operators. This review was used to outline the service changes needed to meet identified transit demand and the finances needed to carry them out. The next update will occur in 2013.

4. KART Marketing Plan

In 1992, a marketing plan was developed for KART in order to improve public transit awareness and encourage the use of KART in Kings County. Surveys and marketing analyses were accomplished which identified primary KART patrons and targeted those groups which are underrepresented in ridership figures. The Plan also identified marketing strategies which included improved graphic and layout design for KART brochures and suggestions for improved media promotions. The largest benefit resulting from the Marketing Plan appeared to be the redesign of KART's published bus schedule. Ridership increased as the schedules were easier to read and provided valuable information concerning KART and connections to other transportation providers.

In 2006, advertising wraps were developed for the side of the buses. Advertisers include local business as well as promoting new services being provided by KART and the South Valley Rideshare Program. Advertising provides revenues around \$70,000 per year.

Other promotions which target specific rider groups, such as youth groups, have been implemented by KART management through the on-site promotions of KART service at both businesses and schools, and by KART's participation in civic events which include free bus rides. In addition, ridership surveys are done annually by KART which include suggestions from riders for improving service and which provide KART a mechanism to develop future marketing and advertising programs.

5. Coordination of Transit Systems

As part of the "Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users" (SAFETEA-LU) federal transportation act, RTPAs are now required to further assess the transportation coordination efforts in Kings County. In working with local social service providers and the Social Services Transportation Advisory Council, KCAG has developed a plan to the address where and how service can be improved and identify any possible areas for coordination. KCAG prepared the "2007 Kings County Human Services Transportation Coordination Plan" to be in compliance with SAFETEA-LU regulations.

While service overlaps are rare among the local area transit providers, KART and Corcoran Area Transit could be capable of accommodating those transportation needs which are not fully met. KCAG recommends that any provider that would like to explore full or partial consolidation, should contact the appropriate transit operator. A feasibility study can be undertaken and service contracts negotiated. To prevent duplications, KCAG should closely monitor proposals for new transit system funding through its Areawide Clearinghouse review process. The Social Service Transportation Advisory Council is also responsible for advising KCAG on the coordination and consolidation of specialized transportation services. The biennial update of the Action Plan for the coordination of social service transportation prepared by KCAG also reviews services to identify any coordination opportunities.

6. Corcoran Intermodal Facility

The City of Corcoran has experienced an increase in population growth due the opening of a second prison within the city in late 1997. The new prison added 7,000 new inmates and 2,000 new employees. The increase in Corcoran's workforce and the subsequent housing demand, along with the increase in prison visitors, has resulted in an increase in both Amtrak and Corcoran Area Transit ridership.

The new intermodal facility has provided a more convenient and attractive transportation hub for transit patrons and providers. The facility is being used as a transfer point for KART buses, Corcoran Area Transit and the Prison shuttle bus. Construction of the Corcoran Intermodal Facility was completed in 2000. The station is owned and maintained by the City of Corcoran. The station was designed similar to the old Santa Fe station, and includes passenger waiting areas and lobby, restrooms, vending machines for Amtrak tickets, and offices for Corcoran Area Transit. It is hoped that another transit provider such as Orange Belt Stages will lease space at the facility and extend service to Corcoran, providing connecting passenger service from Tulare County. The Corcoran Chamber of Commerce also occupies office space within the intermodal facility.

The Corcoran Intermodal Facility allows the City of Corcoran to operate their services more efficiently from a separate office, have full-time and part-time staff persons at the facility, and dispatching services conducted at the facility. The improved dispatching services allows callers to dial directly to the Corcoran Area Transit office, rather than City Hall where the calls could be handled by any number of persons and could result in slow response times.

7. Corcoran Fixed Route

The City of Corcoran has discontinued the fixed route service due to its low productivity and cost.

8. Fleet Expansion

The expected increase in ridership for Corcoran Area Transit will necessitate the purchase of a replacement bus in the near future and require improved coordination of transit service within the community. Future capital needs through the year 2009 included the purchase of a fourth bus in its fleet, if ridership increases continue beyond capacity.

9. Capital Needs Program

The short term capital program for KART and Corcoran Area Transit is designed to provide adequate equipment to meet the projected service demands. Figure 6-12 shows the capital program for the next eight years.

10. Agricultural Industry Transportation Services

KCAPTA is the lead agency in the Agricultural Industry Transportation Services (AITS) project. This multi county partnership has grown to include 7 counties, while assisting four other counties in getting their similar projects operational. The project is managed out of the Hanford office with satellite offices in Ventura and Monterey. The program provides between 120 to 180 vanpools to farm workers traveling one of the many agricultural worksites. A new office building is being established in the Sacramento area to provide farm workers in the Yuba, Sutter and Sacramento areas with the ability to participate in the program.

Figure 6-12

**Capital Needs Program
(2009/10 through 2016/17)**

Corcoran Area Transit	
2010/11	Replacement Bus/Service Expansion
2010/11	Passenger Shelters
2011/12	Replacement Bus
2012/13	Install Surveillance Cameras
2014/15	Upgrade and Modernize Equipment
Kings Area rural Transit	
2009/10	Bus Facility Improvements
2009/10	Modernization of Bus Shelters and Signs
2009/10	Auto Bus Washer System
2010/11	Bus Facility Improvements
2010/11	Modernization of Bus Shelters and Signs
2011/12	Bus Facility Improvements
2011/12	Auto Annunciator System
2011/12	Modernization of Bus Shelters and Signs
2012/13	Purchase Vehicles
2012/13	Modernization of Bus Shelters and Signs
2012/13	GIF System
2014/15	Purchase Vehicles
2015/16	Purchase Vehicles
2016/17	Purchase Vehicles

C. SUGGESTED ACTIONS TO IMPROVE SAN JOAQUINS RIDERSHIP

1. San Joaquin Valley Rail Committee

Amtrak ridership levels have increased over the years since several improvements were made on the *San Joaquins* that were recommended by the Steering Committee of the Caltrans Rail Task Force, now known as the San Joaquin Valley Rail Committee. These improvements include schedule changes for more convenient departures and arrivals in the San Francisco Bay Area and Bakersfield and additional feeder buses between Bakersfield and Los Angeles; additional feeder bus stops, food and beverage services with dining cars; and checked baggage were implemented. The most recent achievement recommended by this Committee was the addition of a fifth round trip train and a direct rail connection to Sacramento for one of the roundtrip trains.

This Committee continues to meet on a bimonthly basis and serves as an advisory body to Caltrans and Amtrak on issues pertaining to the service of the *San Joaquins*.

2. San Joaquin Corridor Business Plan

Caltrans' Rail Program developed a Business Plan for each intercity rail corridor, including the *San Joaquins*, as a requirement of SB 457. The document identifies specific short term actions designed to increase ridership and improve the financial performance of the San Joaquin Corridor. The following is a table outlining the actions proposed in the FY 2008-2009 Business Plan.

FIGURE 6-13

**SAN JOAQUINS
2008-2009 BUSINESS PLAN ACTIONS**

Operating Elements
Promote expansion of the Transit Transfer Pass with local agencies; investigate further options for direct connectivity with other rail systems.
Evaluate the bus program for opportunities for cost effective expansions or to restructure or discontinue bus routes that are not cost effective.
Continue new service between Bakersfield and Los Angeles International Airport via west Los Angeles.
Pursue mobile food service cart implementation.
Implement mid-route cleaning of restrooms.
Evaluate and test potential on-board wireless service
Implement on board, automated ticket sales and validation, if pilot program on the Capitol Corridor is successful.
Capital Elements
Construct siding track and signals at Emeryville.
Construct track and signal improvements at the Kings Park in Kings County.
Complete Merced Crossover Project.
Complete construction of new Madera station and associated track work.
Construct bus terminal and parking structure in Emeryville.
Complete Fresno station shelters, parking lot and traffic circulation project.
Continue rebuilding of 66 rail cars.
Utilize Homeland Security funding for the development of security projects in the corridor.

Source: Caltrans, San Joaquins Route FFY 2008-09 Business Plan

3. California State Rail Plan

The State of California Department of Transportation Rail Program issued its "California State Rail Plan 2007-08 – 2017-18". This Plan is to develop and implement a statewide rail blueprint that will guide future planning and investment decisions in the near and long term. Some highlights of the plan for the San Joaquins Route include:

- Seventh Bakersfield – Stockton round-trip, with a third daily round-trip from Stockton to Sacramento.
- Eighth Bakersfield – Oakland round-trip, with a fifth daily round-trip from Stockton to Oakland.
- Streamline operations and improve passenger amenities.
- Improve multimodal connectivity.
- Pursue options to originate some trains in Fresno.
- Study options to extend rail service from Bakersfield to Los Angeles.

4. Los Angeles - Fresno - Bay Area/Sacramento High Speed Rail Corridor

AB 971 (Chapter 197, Statutes of 1988) created the Los Angeles - Fresno - Bay Area/Sacramento High-Speed Rail Corridor Study Group. The study group identified and evaluated what improvements are necessary to allow rail service between parts of northern and southern California to travel at speeds of 125 MPH or more. It specifically included improvements needed for *San Joaquins* service to operate on Southern Pacific tracks between Fresno and Stockton, to provide direct rail service between Stockton and Sacramento, and to identify an alignment for passenger rail service between Bakersfield and Los Angeles.

5. AMTRAK San Joaquins User Survey

A comprehensive survey of users was conducted on the *San Joaquins* in 1997 to obtain information for use in planning marketing efforts. Results of the survey found that the trip purpose for over half of the passengers was to visit family or friends. Unlike other intercity trains like the *Capitols* and the *San Diegans*, only 8% were traveling strictly for business purposes. A large percentage of trips were one-way trips, probably due to Amtrak's one-way fare program. Over half of all *San Joaquins* passengers were traveling alone.

While it has generally been believed that uniqueness of the train experience is a major factor in deciding to travel by train rather than use alternative modes, it appears that cleanliness, comfort, friendly personnel, and price are more important. Through service to Sacramento and Los Angeles were the most requested improvements, and secondly guaranteed seating. Based on some of the findings, targeted improvements will include improved cleanliness, transportation to and from the station, improved food and beverage service, and safer conditions at station parking facilities. To improve the overall rating, items that were rated high will be maintained and items that were rated low will be improved.

6. Passenger Rail Corridor Upgrade Programs

Through the use of state and federal funds, there are a number of programs which have the intent of upgrading rail facilities in order to increase operational speeds and therefore improve the attractiveness of passenger rail service to potential riders. Ultimately, programs to improve or eliminate grade crossings will improve both ridership figures and safety. Track and signal projects, station projects, maintenance facility projects and rolling stock projects for this corridor are proposed for programming in the State Transportation Improvement Program (STIP).

In 2006-07, a major accomplishment was the completion of the Shirley-Hanford double track project which allows increased on-time performance and reliability.

a. ISTEA Section 1010

Under Section 1010 of the Intermodal Surface Transportation Efficiency Act of 1991, the rail corridors linking San Diego-Los Angeles-San Francisco Bay Area-Sacramento have been designated as a high-speed rail corridors, with operational upgrading required to achieve passenger rail speeds of 90 to 110 miles per hour. At present, maximum speed on the Amtrak *San Joaquins* line is 79 miles per hour. There are 20 private and 94 public at-grade crossings along this segment. According to Caltrans, 96 of the 110 miles of track have potential to be upgraded to provide higher speed service.

The focus of the 1996 Section 1010 Program was the closing of private crossings through the Central Valley. There are 95 public and private grade crossings between Bakersfield and Fresno, many of these have no active warning device in place and most are related to agriculture activities. Caltrans had listed 14 projects in this rail segment for grade crossing redesign and the replacement of old gate closing equipment.

b. Section 130 Federal Crossing Improvement Program

This federal program currently provides \$10 million per year in federal highway funds for operational improvements at eligible grade crossings. The program funds 90 percent of the cost of upgrading with either the city or county matching 10 percent. These improvements include the reconfiguration of roads at grade crossings and installation of grade crossing equipment such as flashers and gates. Many projects eligible for Section 130 funding are also eligible for Section 1010 funding under ISTEA.

c. Section 190 State Grade Separation Program

The Section 190 Program provides \$15 million annually in state funds. Approved projects come from the priority list that the California Transportation Commission produces annually. Each project can be no more than \$5 million and the state will contribute 80 percent of the funding with 20 percent contributions by others for those projects which will eliminate grade crossing and redesign existing ones. Projects involving the proposed grade separations will be funded at a 50 percent state/local match arrangement.

D. FUTURE PASSENGER RAIL SERVICES

1. Cross Valley Passenger Rail Feasibility Study

KCAG prepared a multi-phased Cross Valley Passenger Rail Feasibility Study, which as its name implies, estimated the feasibility of developing passenger rail service between Huron in western Fresno County, across Kings County, through Visalia in Tulare County, to a southernmost terminus in Porterville. Passenger rail service could connect the most densely populated cities and major employment centers in Kings County including the Lemoore Naval Air Station (LNAS), and the cities of Lemoore, Hanford, Visalia, and Porterville.

Phase I of the study concluded that passenger rail service, given future estimates of potential ridership, was feasible. However, the costs involved with upgrading the existing Coalinga and Exeter Branch lines for passenger service would be cost prohibitive at this time due to the lack of funding available.

Phase II of the feasibility study identified rail corridor protection strategies that could be implemented by local jurisdictions and businesses to preserve the rail corridor for future public transportation use. About \$14 million was spent on improvements completed in 2004 to upgrade the railroad to increase speeds and increase freight use. The Cross Valley Rail Corridor Joint Powers Authority, created to manage the project, hired a consulting firm to complete a new feasibility study of passenger rail service on the corridor now that the rail improvements have been made. The study was completed in 2004. Grants funds were issued, but the project came to an impasse. Alternative options are currently being considered, focusing on right of way issues and possible improvements to existing systems.

2. High Speed Rail

In 1997, the Intercity High Speed Rail Commission completed a study to analyze the feasibility of high-speed rail service which would run through the Central Valley, connecting the San Francisco Bay Area with Los Angeles and San Diego. The Commission determined that the Highway 99 rail corridor alignment will be the focus for more in-depth analysis due to its greater revenue generating potential, passing through or near the largest urban areas of the San Joaquin Valley. The recommended alignment linking the Central Valley and the Bay Area included a route through the Altamont Pass.

With the completion of the Commission's work, the California High Speed Rail Authority was created to direct the development and implementation of intercity high-speed rail service that is consistent with the work of the Commission. Among its tasks, the Authority is required to develop a detailed financing plan that would include any necessary taxes, fees, or bonds to pay for the construction of a high-speed rail network.

Although no stations have been decided upon at this time, the location of station stops is vital to the ridership figures the high-speed rail system could generate. At present, the potential station locations in proximity to Kings County would most likely be located in the Fresno metropolitan area, Bakersfield, and possibly on the outskirts of the City of Hanford, near SR 43.

Counties in the San Joaquin Valley, including Kings, will also benefit from a high speed rail system between Los Angeles and the San Francisco Bay Area. Presently, the primary commercial passenger airport in the San Joaquin Valley is the Fresno-Yosemite International (FYI) airport. This airport has limited nonstop air passenger service to cities in the immediate Western regions in the U.S., with most nonstop air passenger service originating at the larger urban airports at San Francisco and Los Angeles. Valley residents must drive to either urban location which increases the Valley's air pollution problem, and creates increased traffic congestion on the regional roadway system. By utilizing high-speed rail for use in connecting with these distant airports, not to mention the use of high-speed rail for high speed intra-Valley travel, Valley residents would improve regional air quality and increase ridership and revenues for the high-speed system. Ultimately, Kings County could be served by three passenger rail systems (Amtrak, Cross Valley, and High-Speed Rail) which would service both intra- and inter-regional passenger rail demand into the 21st century.

E. RECOMMENDATIONS FOR PROMOTING RIDESHARING

1. Work with KCAPTA and area Councils of Government to enter into a joint powers agreement to establish the California Vanpool Authority (CalVANS).
2. Continue working with the KCAPTA and regional rideshare agencies, or CalVANS to maintain rideshare activities in Kings County.
3. Encourage local agencies to participate in the "Rideshare Week" program each year. This annual program provides an opportunity to promote the benefits of ridesharing to employers and their employees.

4. KCAG will continue to develop strategies which further the goals of reduced traffic congestion through development of alternative transportation modes including vanpooling, carpooling, bicycling, and walking, among others.
5. Continue working with CalVANS, or other rideshare agencies to obtain Outreach Assistance to contact Kings County area employers on a regular basis. Outreach efforts in Kings County have been a minimal effort due to the lack of staff to serve as outreach assistance. A larger number of employers in Kings County could be contacted and encouraged to assist their employees in participating in rideshare opportunities.
6. Provide assistance through KCAPTA, or CalVANS, to employers to help develop employee ridesharing and vanpool participation. Also encourage and support the establishment of additional secure Park and Ride lots in Kings County. Each year federal legislation is introduced which would reinstate tax-free treatment of employer-provided vanpool transportation.
7. The lack of formal Park and Ride lots needs to be addressed if more riders are going to be encouraged to join vanpools.
8. Publicizing the benefits of carpooling and vanpooling could promote ridesharing. Caltrans has installed signs bearing the toll free ridesharing number along state routes in Kings County.

KCAG has been involved with, and will continue to support, all ridesharing programs put forth by either South Valley Rideshare, Valley Rides, the Commute Options Advisory Committee, or the San Joaquin Valley Air Pollution Control District (SJVAPCD).

VI. FINANCIAL ELEMENT

A. PUBLIC TRANSIT

1. Transportation Development Act

A primary source of revenue for KART and Corcoran Area Transit services originates from the Transportation Development Act (TDA) and is allocated annually by KCAG. TDA funds are generated from California sales tax revenues and are available to KCAPTA and the City of Corcoran under two categories of funding:

a. Local Transportation Fund

The Local Transportation Fund (LTF) is primarily for public transit and secondarily for streets and roads, provided that public transit needs have been met. KCAPTA annually receives LTF money from each member agency. Each member agency's LTF contribution is their individual share of KART's annual budget, based on the formula of 1/2 number of service hours provided to that agency and 1/2 population. The City of Corcoran is allocated an amount needed to meet the city's transit operations and services. LTF provides over half of the transit systems' revenues.

KCAG, as the designated Regional Transportation Planning Agency, monitors the LTF, determines the annual apportionments, notifies the claimants, and approves the apportionments, allocations, and uses of the Fund. This means that KCAG reviews LTF claims by KCAPTA and the City of Corcoran. As required by the Transportation Development Act, KCAG conducts public hearings each spring to hear testimony considering transit needs before determining LTF allocations.

According to the TDA, public transit providers have claim to the LTF. However, that amount of the fund not required for public transit may be used for streets and roads. To do so, the TPC must find that there are:

" . . . no unmet public transportation needs within the jurisdiction of the claimant which can reasonably be met through expansion of existing transportation systems, by establishing new systems, or by contracting for services. . . ." (Emphasis Added).

Section 99401.5(c) of the Public Utilities Code requires that KCAG determine its definitions of two important terms of this Act: ***Unmet transit needs*** and ***Reasonable to meet***.

KCAG has defined these terms in the 2008 Kings County Transit Development Plan and are outlined as follows:

- "Unmet transit need", at a minimum, exists where local residents do not have access to private vehicles or other forms of transportation due to age, income, or handicap, for the purpose of traveling to medical care, shopping, social/ recreational activities, education/training, and employment.

- It is "reasonable to meet" the above needs if the proposed or planned service can be operated while maintaining, on a system wide basis, the adopted service goals for that type of system and meet the following criteria:
 - ✓ New, expanded, or revised transit service, if implemented or funded, would not cause the operator to incur expenditures in excess of the maximum amount of Transportation Development Act funds available to Kings County.
 - ✓ The proposed transit service does not duplicate transit services currently provided by either public or private operators.
 - ✓ The proposed transit service has community support from the general public, community groups, and community leaders.
 - ✓ The new, expanded, or revised transit service, if implemented or funded, would allow the responsible operator to meet the TDA required rural area farebox and revenue ratio of 10% for the overall system.
 - ✓ There is supporting data to indicate sufficient ridership potential for the new, expanded, or revised transit service.
 - ✓ Implementation of the new, expanded, or revised transit service should achieve or be moving toward the goals outlined in the Kings County Transit Development Plan for a comparable type of service. Services not meeting the goals should be evaluated on a yearly basis to determine if modifications or cancellation of service should be implemented.
 - ✓ The proposed transit service shall have a reasonable expectation of future demand and available funding on a long term basis to maintain the service.
 - ✓ Is needed by and would benefit either the general public or the elderly and disabled population as a whole.

FIGURE 6-14**PERCENT OF TOTAL COUNTY LTF SUPPORTING PUBLIC TRANSIT**

YEAR	COUNTYWIDE LTF \$	AMOUNT DEVOTED TO TRANSIT \$	PERCENT DEVOTED TO TRANSIT %
1980-81	968,902	50,911	5.25
1981-82	1,034,769	116,661	11.27
1982-83	982,748	151,003	15.36
1983-84	1,059,422	36,049	3.40
1998-85	1,148,453	58,517	5.10
1985-86	1,127,357	86,636	7.68
1986-87	1,156,787	173,708	15.02
1987-88	1,309,059	156,993	11.99
1988-89	1,345,763	230,117	17.10
1989-90	1,444,125	330,567	22.89
1990-91	1,493,327	320,178	21.44
1991-92	1,500,811	424,892	28.31
1992-93	1,574,502	616,166	39.13
1993-94	1,618,531	722,421	44.63
1994-95	1,746,628	856,135	49.02
1995-96	1,837,163	800,631	43.58
1996-97	1,944,528	964,253	49.59
1997-98	1,873,620	1,105,908	59.03
1998-99	1,814,927	1,007,538	55.51
1999-00	2,068,931	1,075,572	51.99
2000-01	2,341,143	1,604,380	68.53
2001-02	2,384,664	1,981,376	83.09
2002-03	2,615,126	2,002,179	76.56
2003-04	2,508,782	977,935	38.98
2004-05	2,533,340	1,517,653	59.91
2005-06	3,063,297	2,254,436	73.60
2006-07	3,179,325	2,455,474	77.23
2007-08	3,368,582	2,993,159	88.86
2008-09	3,379,228	2,559,651	75.75
2009-10	2,887,737	2,629,911	91.07
2010-11	3,000,000	2,582,673	86.09

Source: KCAG , Kings County Auditor

b. State Transit Assistance

Funds for the State Transit Assistance (STA) program are derived from the statewide sales tax on gasoline and diesel fuel. The funds are apportioned to each regional transportation planning agency by a formula based on population and operator revenues, which then reallocates the funds to transit operators on the same basis. STA funds estimated to be apportioned to Kings County are allocated to KCAPTA and the City of Corcoran for transit operating costs. Originally, due to State budget issues, STA funds were not available for apportionment in FY 2009-10. However, a budget change for an excise tax on fuel restored apportionments to the STA fund.

FIGURE 6-15

STA APPORTIONMENTS FOR PUBLIC TRANSIT

YEAR	KCAPTA	CORCORAN
1981-82	\$101,588	\$0
1982-83	\$154,032	\$0
1983-84	\$193,256	\$0
1998-85	\$175,855	\$0
1985-86	\$157,735	\$0
1986-87	\$21,550	\$1,088
1987-88	\$3,819	\$346
1988-89	\$16,352	\$1,477
1989-90	\$8,411	\$1,077
1990-91	\$66,380	\$10,524
1991-92	\$86,928	\$14,311
1992-93	\$84,169	\$13,095
1993-94	\$85,306	\$12,851
1994-95	\$98,915	\$14,695
1995-96	\$115,513	\$17,017
1996-97	\$127,670	\$17,606
1997-98	\$140,176	\$19,072
1998-99	\$202,441	\$31,664
1999-00	\$168,215	\$32,000
2000-01	\$169,732	\$32,460
2001-02	\$318,105	\$60,836
2002-03	\$270,357	\$49,367
2003-04	\$177,605	\$32,255
2004-05	\$203,880	\$36,948
2005-06	\$348,284	\$63,338
2006-07	\$301,783	\$203,976
2007-08	\$634,552	\$144,203
2008-09	\$621,572	\$125,177
2009-10	\$775,678	\$141,307

Source: KCAG, Kings County Auditor

Note: Prior to 1991, STA funds could be used for street and road purposes.

2. Federal Grants

a. Federal Transit Act - Technical Planning Assistance Program

Caltrans administers the Federal Transit Administration's (FTA) Technical Planning Assistance Program which funds projects focusing on public and intermodal transportation planning in nonurbanized areas. KCAG has utilized this program to fund on-board surveys of public and social service transit users, a marketing plan for KART, the Kings County Transit Development Plans, and the Inventory of Social Service Transportation Providers.

b. Federal Transit Act - Section 5311

Section 5311 of the Federal Transit Act provides for federal assistance to rural public transportation providers. Grants are awarded for capital, operating, and administrative purposes to eligible providers. The Section 5311 program is designed to help enhance the access of persons in non-urbanized areas to health care, shopping, education, recreational, public services, and employment. This program provides funds for annual apportionments to counties, state funds programmed on a discretionary basis, and intercity bus projects. Private, non profit agencies can only apply through a sponsoring public agency.

Kings County's FTA Section 5311 apportionments have been awarded by KCAG to the City of Corcoran and to KCAPTA for operating assistance based on a population formula. Since Kings County became an urbanized area with the 2000 Census, the calculation for the annual apportionment only includes the non-urban population. KCAG's formula for allocating the apportionment was revised to include only the non-urban population.

In order to comply with federal guidelines which strongly suggest that Section 5311 funds be distributed to eligible providers in an equitable manner, the TPC has adopted 10 criteria to evaluate Section 5311 fund requests. These are:

- The proposed project is consistent with the adopted Regional Transportation Plan.
- The proposed project involves no duplication of existing services. The funds requested will be used to cover a new transit service or the extension of an existing transit service.
- The proposed project can be expected to exhibit a desirable cost-benefit ratio.
- The project will improve traffic flow and safety. It will accommodate the greatest number of passenger trips for the money spent; it will provide the greatest reduction in accident rates.
- The project will cause minimal disruptive environmental effects. It will decrease concentrations of vehicle emissions; it will produce acceptable noise levels.
- The agency's transit system -- not necessarily a particular vehicle for which funding is being requested -- is accessible to the elderly and to the disabled.
- The agency's transit system is satisfying special transit needs of the elderly, disabled, poor, or minorities.
- The fare structure of the agency's transit system permits ridership by persons of limited income.
- The transit service offered by the operator is reliable and regularly meets its schedule.
- Funds available to the agency are being used for the entire area population on a fair and equitable basis.

FIGURE 6-16

FTA SECTION 5311 APPORTIONMENTS

FY	KART	Corcoran Area Transit
1981-82	\$32,400	\$0
1982-83	\$46,721	\$0
1983-84	\$35,128	\$0
1984-85	\$36,596	\$0
1985-86	\$31,386	\$0
1986-87	\$38,230	\$0
1987-88	\$32,658	\$0
1988-89	\$33,409	\$0
1989-90	\$33,400	\$0
1990-91	\$34,573	\$0
1991-92	\$33,400	\$60,000
1992-93	\$147,149*	\$5,004
1993-94	\$78,415	\$14,349
1994-95	\$79,764	\$14,276
1995-96	\$66,447	\$11,774
1996-97	\$70,191	\$11,774
1997-98	\$81,938	\$13,598
1998-99	\$106,210	\$20,412
1999-00	\$112,328	\$24,992
2000-01	\$119,981	\$26,856
2001-02	\$130,059	\$27,214
2002-03	\$95,845	\$38,971
2003-04	\$72,480	\$30,841
2004-05	\$68,295	\$34,667
2005-06	\$175,624	\$89,475
2006-07	\$153,904	\$80,930
2007-08	\$161,898	\$92,246
2008-09	\$178,957	\$89,778
2009-10	\$163,721	\$82,564

Source: KCAG, Caltrans

Note: *Includes discretionary grant of \$72,000

c. Federal Transit Act - Section 5311(f)

Each year the state sets aside at least 15 percent of the state apportionment of FTA Section 5311 funds for projects that develop and support connectivity of intercity bus transportation between non-urbanized areas and urbanized areas. Grants are available to public and private transportation operators for planning, capital, and operating assistance.

d. Federal Transit Act - Section 5310

Section 5310 of the Federal Transit Act provides for capital grants for the purpose of helping public and private nonprofit corporations that provide transportation for elderly and disabled persons for whom mass transportation services are generally unavailable, insufficient, or inappropriate. Section 5310 grants are made for up to 80 percent of the cost of vehicles and related equipment. For FFY 2009, \$12.6 million was made available to eligible agencies that compete statewide for the funds.

To evaluate project applications for the Section 5310 program, KCAG is required to score projects based on state and regional evaluation criteria. The criteria considers project need, project effectiveness, ability of the applicant to operationally and financially manage the project, and the extent of the applicants participation in the coordination of transportation services with other agencies.

e. Federal Transit Act - Section 5307

This program provides operating assistance and capital funds to operators of small urban-area public transportation services. Funds are apportioned to urbanized areas with a population over 50,000 based on a formula of population and population density. KCAPTA is now eligible to receive an apportionment of these funds since Kings County became an urbanized area after the 2000 Census. Kings County's FFY 08-09 apportionment of FTA Section 5307 funds was \$1,468,346.

f. Congestion Mitigation and Air Quality

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 created the Congestion Mitigation and Air Quality (CMAQ) program to provide funding for areas designated as nonattainment of air quality standards. The Safe, Accountable, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) continued and expanded this program. The funds are to be used to implement projects or programs that will have air quality benefits. These would include programs for expansion of public transit services, park and ride lots, trip reduction programs, and vanpools. Kings County receives an apportionment that is programmed by KCAG in the Federal Transportation Improvement Program (FTIP).

g. Federal Transit Act- Section 5316

SAFETEA-LU, previously under TEA-21, also created Job Access & Reverse Commute (JARC) discretionary grant program. The program is aimed at developing services to transport former welfare recipients and low-income people to and from jobs. Local governments and nonprofit organizations may apply for funding and requires a local match from other than mass transportation funds, necessitating that project sponsors coordinate with nontransportation partners. Funds are allocated on a competitive basis with race neutral requirements. The amount of funds available in FFY 2009 for small-urbanized projects was \$3 million and \$1.4 million for rural projects.

h. Federal Transit Act- Section 5317

New Freedom, also covered under the SAFETEA-LU program along with JARC, was designed to address the transportation needs beyond the requirements of the Americans with Disabilities Act. Funds are allocated based on the population of persons with a disability, with 20% going to non-urbanized areas. The amount of funds available in FFY 2009 for small-urbanized projects was \$1.6 million and \$700,000 for rural projects.

3. Fares

Fares represent about 15 percent of KART's and 17 percent of Corcoran Dial-a-Ride's total revenues. With increasing public familiarity and improved services, ridership increases are expected to boost fare revenues for each of these transit systems. However, due to recent State budget cuts for transit, transit operators are having to reduce services, which could thereby reduce fare revenues.

4. REMOVE II Grants

The San Joaquin Valley Air Pollution Control District (SJVAPCD) provides annual grants through its REMOVE II program to fund projects that reduce motor vehicle emissions. KCAG has received past grants to develop the "Cross Valley Passenger Rail Feasibility Study" and the "Kings County Short Range Transit Development Plan". Other projects approved for other counties have included transit subsidies, transit bus retrofits, carpool incentives, and park and ride lots. Funds are derived from a \$4 vehicle registration fee and projects are selected for funding on a competitive basis.

5. Bicycle Transportation Account

California's Bicycle Transportation Account (BTA) provides local agencies a funding source for projects that improve safety and convenience for bicycle commuters. Cities and counties are eligible to apply for funding for projects that are included in a current bicycle plan. The amount of funding made available statewide each year is \$5 million. The new funding level has made this source a viable funding option for more projects. The BTA grant fund covers 90 percent of the project's cost, with a 10 percent local match requirement.

In most instances, the BTA funds are used for the development of bicycle lanes or bicycle paths. For transit operators, BTA funds can be used for the purchase of bicycle racks which can be placed either on the inside or outside of transit vehicles. Promoting bicycle usage in the County is an established goal in the Kings County Regional Transportation Plan and the adopted Kings County Regional Bicycle Plan.

6. Regional Transportation Improvement Program

With the enactment of Senate Bill 45 (Chapter 622, Statutes of 1997), projects that have been funded through previous programs, like the Transit Capital Improvement (TCI) program, are now included in the State Transportation Improvement Program (STIP). Eligible projects under the old TCI program that could be programmed through the STIP process include the rehabilitation of transit buses, the development of intermodal facilities, and feasibility studies. Projects are proposed for the STIP through the Regional Transportation Improvement Program (RTIP). The 1998 RTIP for Kings County included funding to complete the Corcoran Intermodal Facility, which is now being used as the base for Corcoran City Transit dispatching services. The 2004 RTIP programmed \$400,000 to construct improvements at the KART transfer station. The project was completed in Spring of 2008. No transit projects were proposed for the 2010 RTIP.

7. Regional Surface Transportation Program

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 established the Surface Transportation Program (STP) and provided funds for capital costs of mass transportation projects, roads, and other projects. SAFETEA-LU continued this program. Annual allocations are made to each county and the funds are programmed by KCAG through the Federal Transportation Improvement Program (FTIP). Nonurbanized counties may exchange these federal funds with State funds for use on eligible projects. Kings County has elected to exchange each of its annual apportionments, but has not used the funds for transit purposes.

B. AMTRAK

1. AB 973 (Chapter 108, Statutes of 1989) authorized the submittal of three \$1 billion bond measures to the voters. The first bond measure, Proposition 108, passed in 1990 provided \$1 billion in general obligation bonds for capital expenditures for intercity rail, commuter rail, and other rail transit programs. The second and third bond measures in 1992 and 1994 failed to pass and all funding from the first bond measure has been programmed.

An initiative also passed on the June 1990 ballot was Proposition 116, the Clean Air and Transportation Improvement Act of 1990, provided an additional \$1.99 billion for intercity and commuter rail services, and other rail transit programs. Included was an allocation of \$100 million to design and acquire new "California Cars" and locomotives which are now in use by the AMTRAK *San Joaquins*. All Proposition 116 funds have been programmed.

2. The Regional Transportation Improvement Program (RTIP) may propose projects eligible under the discontinued Transit Capital Improvement (TCI) program. Eligible projects for rail include exclusive public mass transit guideway construction and acquisition of rolling stock, intermodal transfer stations, acquisition of abandoned railroad rights-of-way, shortline railroad rehabilitation, grade separations, and bus rehabilitation. Kings County entities applied for and received several grants from the TCI program to fund rail and transit projects. Regional Improvement Program funds were used to finance the parking lot for the new Corcoran Intermodal Facility.
3. Twenty-five percent of the STIP funds available for new programming is allocated to the Interregional Improvement Program (IIP) for which projects are nominated by Caltrans. A minimum of 2.25% of these funds must be programmed for intercity rail.
4. The Public Transportation Account is a trust fund intended for transportation planning and mass transportation projects. Revenues are provided from sales tax on gasoline and diesel fuel, with 50% appropriated to the state for planning purposes and 50% to Caltrans for transportation purposes, including bus and passenger rail services.

C. RIDESHARING

Proposed state and federal legislative bills seek to institute a number of tax incentives for employer-sponsored ridesharing and vanpool programs. With the adoption of the San Joaquin Valley Unified Air Pollution Control District's Rule 9410 - Employer Based Trip Reduction in December of 2009 as a requirement for certain employers to develop an Employer Trip Reduction Implementation Plan and create incentives for their employees to reduce single-occupant vehicle trips to work, employers could choose ridesharing as an option to meet specific point targets specified in the rule.

KCAG will continue to work cooperatively with CalVANS, or other rideshare agencies, and the San Joaquin Valley Unified Air Pollution Control District in developing strategies for the reduction of single-occupant commuting and the benefit of improving the region's air quality.

Funding from programs such as the Regional Improvement Program (RIP) and Congestion Mitigation and Air Quality (CMAQ) can be programmed by KCAG for transportation demand management activities.

CHAPTER 7

AVIATION

I. OVERVIEW

All public-use and private airports in Kings County are used for General Aviation (i.e. smaller, recreational or business) aircraft. There is no commercial air passenger service within Kings County. Much of the flight activity in Kings County centers on the County's dominant farming economy where chemical application aircraft (crop dusters) make up a sizable portion of all business aircraft. The majority of aircraft are based at the two largest Kings County airports, Hanford Municipal Airport and Corcoran, and at a number of privately owned airstrips.

The past trends in aviation activity in Kings County reflect the changes within General Aviation as a whole over the past number of years. After the recreational flying "boom" in the 1960's and 70's, General Aviation activity decreased significantly during the 1980's and has maintained operations at reduced levels since. The Federal Aviation Administration (FAA) reported growth of 3.8 % in General Aviation hours flown nationwide since 2004.

Changes in population demographics regarding the number of people in younger age groups who might become involved in recreational flying, the need for commercial pilots in upcoming years, and the economics of small plane manufacturers will all figure in the amount of future General Aviation activity.

According to Kings County assessor's records for February 2010, there were 119 General Aviation aircraft based in Kings County. Accommodating these aircraft are approximately 40 Basic Utility Airports and landing strips. Except for the Lemoore Naval Air Station (LNAS), these facilities generally belong to one of three classes: 1) publicly-owned airports, open for public use; 2) privately-owned airports, open for public use; and 3) privately-owned airports for private use only. This chapter examines the role of airports in each category, giving special attention to the role of public airports and how they fit into the larger picture of regional and community development.

II. ASSUMPTIONS AND INVENTORIES

A. ASSUMPTIONS

1. The Hanford Municipal Airport will continue to satisfy the largest single portion of General Aviation demand in Kings County. Private airports and airstrips are necessary to serve the remaining agri-business and recreational aviation demand. (See Figure 7-1 and 7-2).
2. Most commercial air passenger demand by Kings County residents will be satisfied by the Fresno Yosemite International (FYI) airport that is served by eight airlines with destinations to ten cities, as of February 2010. The remaining need will be satisfied by the Visalia Airport, which provides daily service to Ontario International Airport, as well as charter flights to various destinations. The level and dependability of air passenger service from these airports have fluctuated as regional airlines end or begin service based on economic changes in the passenger airline industry. Many people are forced to drive to either Los Angeles or San Francisco to obtain direct air service to major cities. (See Figure 7-4 and 7-5)

3. The future of General Aviation activity in Kings County will be intricately linked to the expansion of the Hanford Municipal Airport.
4. The Lemoore Naval Air Station (LNAS) will continue to play an important role in national defense. LNAS will continue to expand and remain the prominent military air base for the training of light attack aircraft and bomber pilots in the Western United States.

B. AIRPORT INVENTORY

1. Public Airports: Public Use

a. Hanford Municipal Airport

Serving the majority of aviation demand is the Hanford Municipal Airport. Hanford Municipal Airport is the only city-owned air facility in the County and will remain the most active public use, public airport for the foreseeable future. There is one air charter service available and approximately 70 aircraft are based at the airport. Several crop dusters are also based at the airport though these planes cannot land at the airport while carrying chemicals used for agricultural spraying due to environmental restrictions regarding chemical dumping.

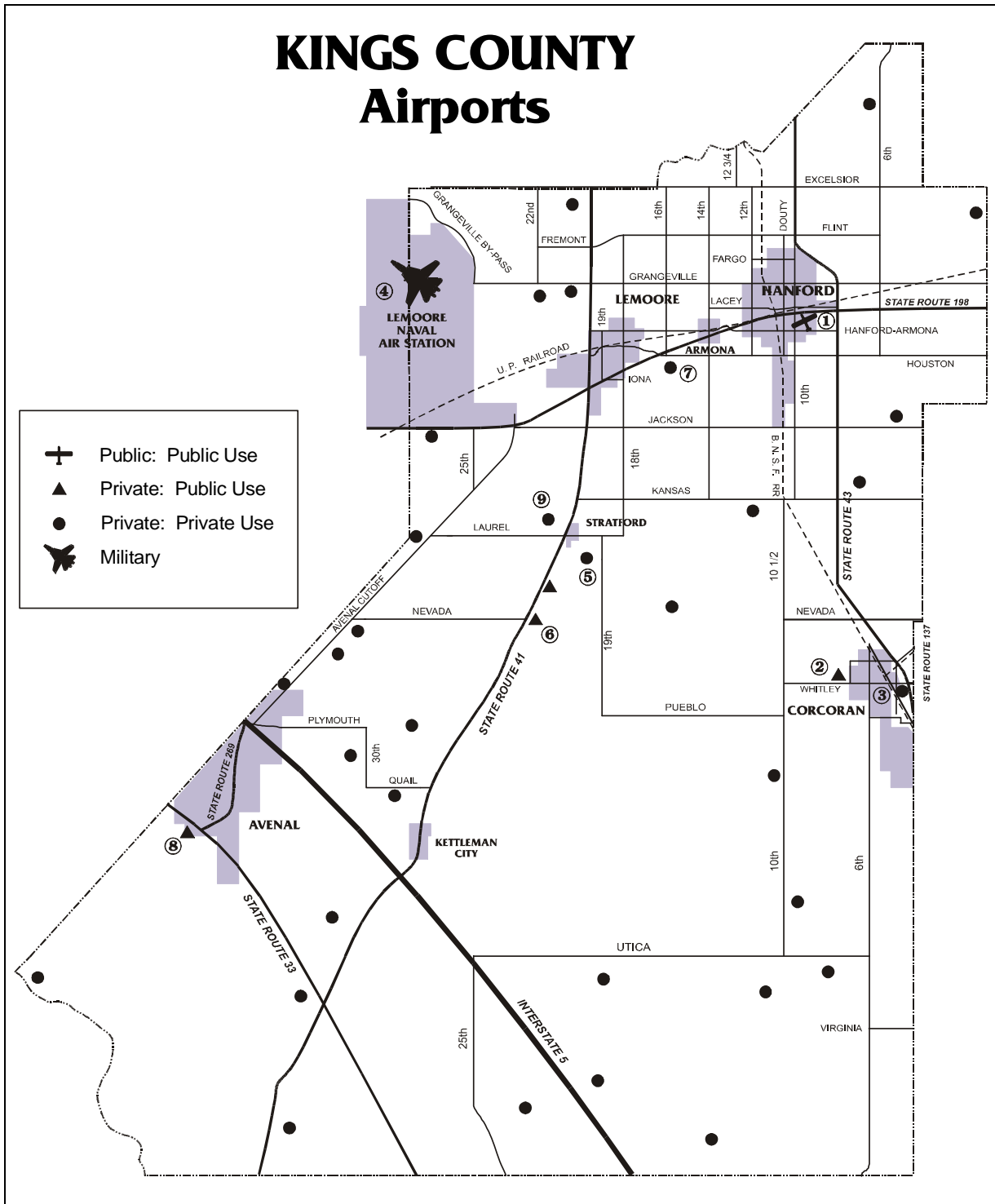
Hanford Municipal Airport is located on 295 acres at 9½ Avenue and Hanford Armona Road. The City of Hanford acquired the site in 1950 by using Federal Aviation Administration (FAA) and State Department of Airports grants, and developed the location as Hanford's airport. Today, the facility consists of one runway that is 5,180 feet in length; a 75-foot wide paved taxiway; several conventional hangers and tee shelters; and medium-intensity runway lights. All types of General Aviation aircraft use the facility including recreation and business aircraft. As of 2004, jet fuel is available. The average daily aircraft operations in 2010 was approximately 8,800 with 63% of those being single-engine propeller aircraft and 27% being itinerant operations. Annual operations are forecasted to be 13,800 and the number of based aircraft are expected to be 110 by the year 2025.

2. Private Airports: Open to Public Use

a. Avenal Airport

Located adjacent to the city off of State Route 33, the Avenal Airport is operated by the Central Valley Soaring Club. Prior permission is required for public use of the facility. Avenal Airport encompasses 83 acres which includes one runway consisting of compacted earth with some stabilization. Two planes are based at the airport as well as several gliders owned by members of the soaring club. Noise impacts are not considered a problem at Avenal Airport as daily aircraft operations are too infrequent to contribute significantly to any airport noise problems for residents in the area.

FIGURE 7-1



Source: KCAG

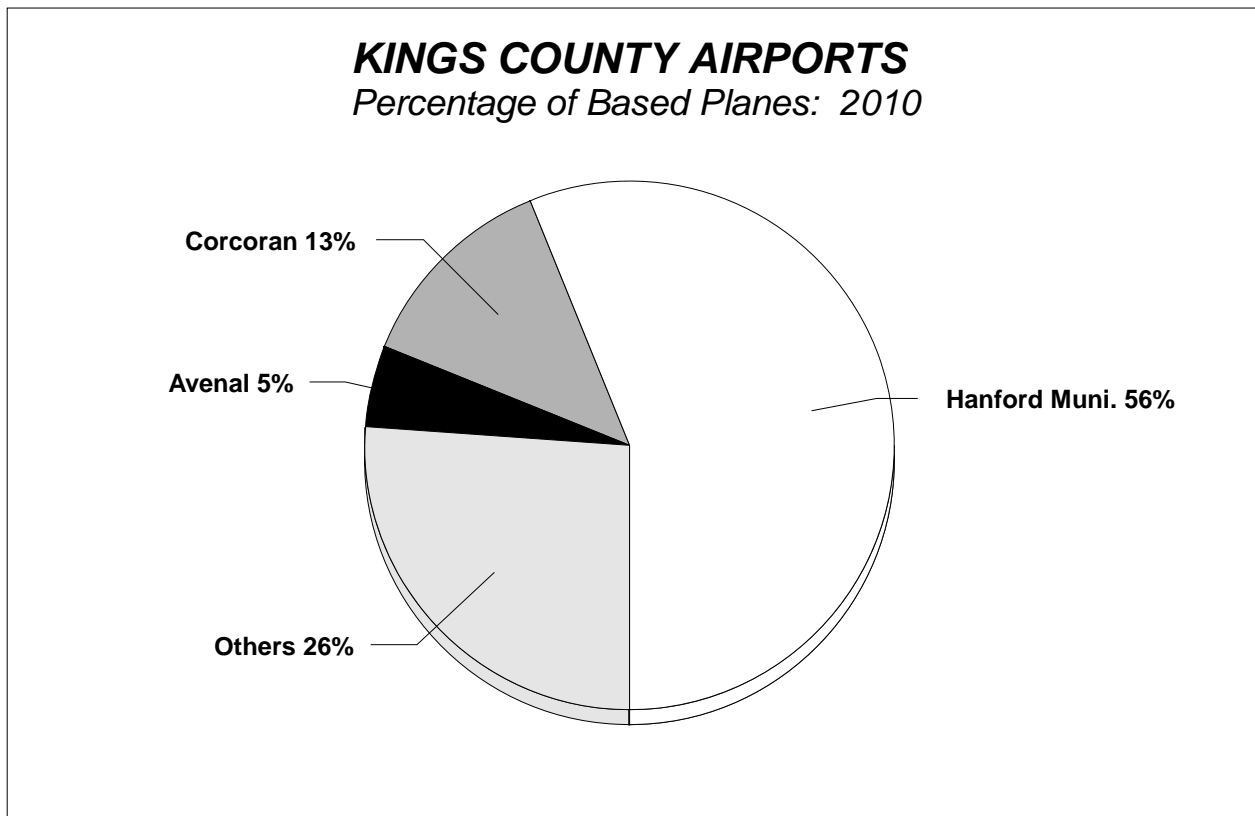
FIGURE 7-2

**KINGS COUNTY AVIATION FACILITIES
2010**

AIRPORT/OWNER NAME	ASSOCIATED CITY	TYPE OF USE	OPEN TO PUBLIC	RUNWAY DESCRIPTION			BASED PLANES
				LENGTH	WIDTH	SURFACE	
1. Hanford Municipal	Hanford	Public	Yes	5,180	75	Asphalt	67
2. Corcoran (Lakeland Dusters)	Corcoran	Public	Yes	3,800	50	Asphalt	16
3. Boswell/Salyer	Corcoran	Private	No	7,000	80	Asphalt	3
4. LNAS(Reeves Field)	Lemoore	Private	No	13,520	200	Concrete	0
5. Machado Field	Lemoore	Private	No	2,600	60	Asphalt	5
6. Westlake Farms	Lemoore	Private	No	3,600	50	Asphalt	3
7. Blair Strip/Hewitt	Lemoore	Private	No	2,150	45	Asphalt	3
8. Avenal	Avenal	Private	No	2,880	100	Dirt	6
9. Jones Farms	Lemoore	Private	No	1,900	50	Asphalt	1
10. Others	---	---	---	---	---	---	15
TOTAL							119

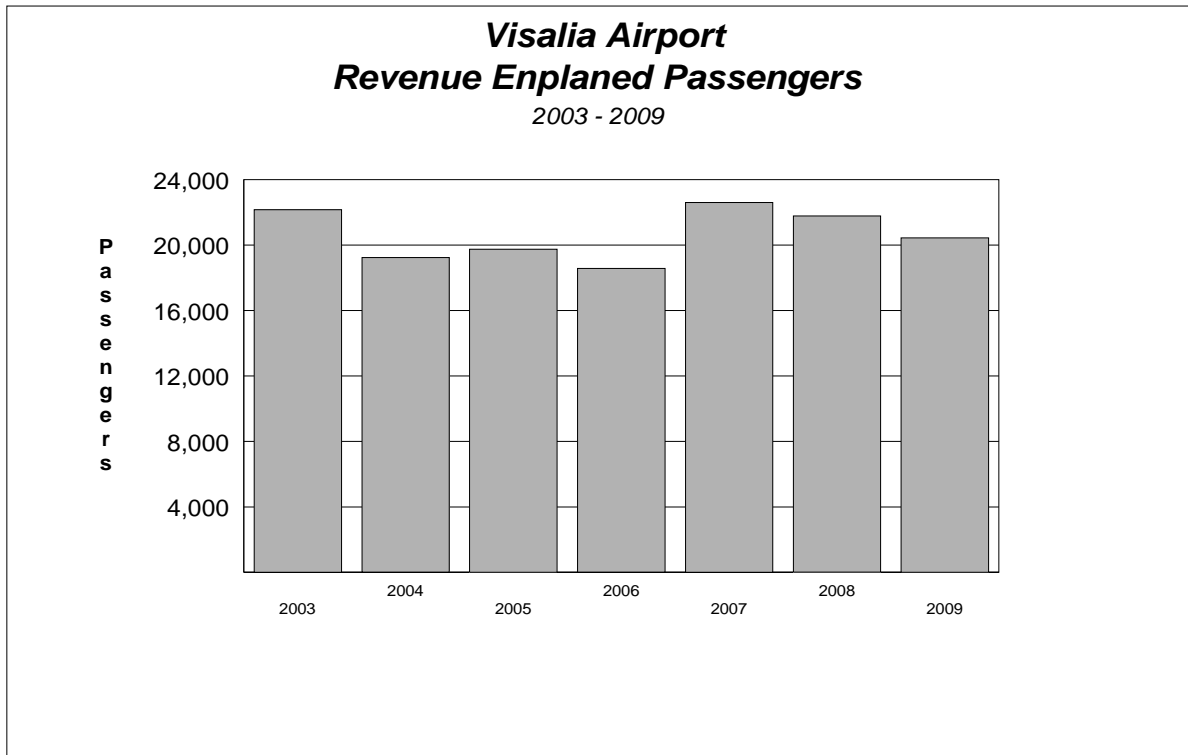
Source: FAA Aeronautical Information Services, Airport Facilities Directory (AFD)

FIGURE 7-3



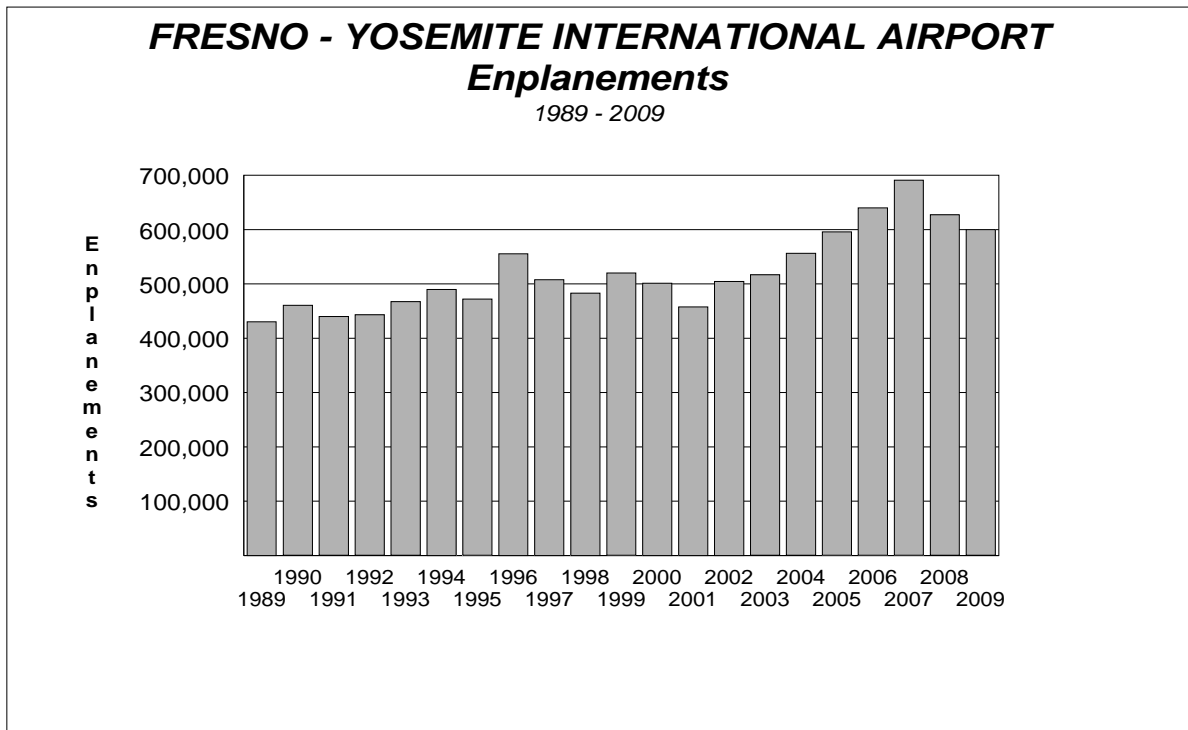
Source: Kings County Assessor, KCAG

FIGURE 7-4



Source: FAA, DOT, ACAIS Database

FIGURE 7-5



Source: Fresno Yosemite International Airport

b. Corcoran Airport

Serving as a basic utility airport with 16 based planes, Corcoran Airport is the second busiest public-use airport in Kings County. The airfield is located on the west side of the City of Corcoran on Whitley Avenue and occupies 220 acres which includes agricultural acreage. The airport has an asphalt runway with a parallel taxiway. Under private ownership of Lakeland Dusters Inc., the airfield is used primarily by a fleet of chemical application aircraft. Approximately 5,000 operations originate from the field at present. Single-engine propeller aircraft traffic will increase to 8,100 and the number of based aircraft are expected to be 33 by the year 2020, according to Caltrans' forecasts. The distribution of aircraft operations by aircraft type will be 50 percent crop dusters, 45 percent single-engine propeller aircraft and five percent twin-engine propeller aircraft by the year 2020. Low-intensity runway lighting is available upon request and all aircraft operate in daylight hours from 7:00 a.m. to 7:00 p.m. There are accommodations for a total of 20 aircraft to be parked at the airport.

3. Private Airports: Private Use Only

In addition to the two main public airports, there are approximately 40 other aircraft landing facilities in Kings County. The great majority of these smaller landing strips are used by crop dusters, though several are for the sole use of personal aircraft. These facilities range in size from 1,000-foot unnamed and unpaved landing strips, to somewhat larger airfields with asphalt and lighted runways.

4. Military Air Facilities

Lemoore Naval Air Station

Commissioned in 1961, NAS Lemoore is the Navy's largest and only west coast Master Jet base. Its principal mission is to support the Strike-Fighter Wing of the U.S. Pacific Fleet, whose mission is to train, man, and equip the west coast Strike-Fighter squadrons. NAS Lemoore hosts fourteen F/A-18 operation Strike-Fighter squadrons, two Strike-Fighter Fleet replacement squadrons, and all four west coast Carrier Air Wing Commanders and their staffs. With the primary focus on offensive tactical strike-fighter operations, the 283 F/A 18 Hornets and Super Hornets stationed at NAS Lemoore flew approximately 250,000 flight operations last year. NAS Lemoore employs approximately 11,700 military and civilian personnel and contributes an estimated \$900 million to the local economy.

Additionally, the base generates about 13,500 jobs for the county, which includes military personnel, Department of Defense civilians and contractors, contracts, payroll employees, transient personnel and retirees/veterans. In addition, the naval hospital on base serves over 17,249 active and retired military, military dependents and Department of Defense personnel in the county. The installation feeds about 2,000 students to local college campuses and 1,600 students to the area's Central Union School District. The base also contributes to the economy through on-going construction projects, which currently total about \$72 million in economic activity.

III. SUMMARY OF AVIATION ISSUES

A. PUBLIC AIRPORTS: PUBLIC USE

1. Hanford Municipal Airport

Regional Economic Importance. The Central California Aviation System Plan (CCASP) identified airport system requirements based on forecasted operations and number of based planes, and presented an action plan to implement the system improvements. The improvements to Hanford Municipal Airport facilities are tied to the airport's role as a beneficiary to Kings County's projected population and employment growth. The improvements for Hanford Municipal Airport should be implemented for Kings County's economic benefit.

Area of Influence. It is the primary responsibility of County Airport Land Use Commissions (ALUCs) to ensure that proposed land uses in the vicinity of airports are compatible with airport operations. The three primary concerns for the ALUC are height restrictions to protect airspace around airports, reducing risk to the public from airport operation and accidents, and minimizing the effects of noise in the surrounding communities. Any project that falls within the boundaries of the airports safety zone must be reviewed and approved by the Commission. The Federal Aviation Administration (FAA) make determinations regarding potential height and safety violations and California Code Regulations determine noise level violations. With the changing of state law in 1993 that made the creation of county ALUCs optional, Kings County decided that local zoning policies could adequately address airport/land use compatibility issues without an ALUC.

Both the City of Hanford and Kings County have utilized policies found in the Kings County Airport Land Use Compatibility Plan regarding land uses surrounding Hanford Municipal Airport. The City of Hanford land use ordinance is the mechanism by which inappropriate or potentially dangerous land uses are prohibited from Airport Clear Zones A & B. No new residential construction, including schools, churches, libraries, hospitals, or other facilities which accommodate large groups of people are to be developed in Clear Zone A (closest to the runway), no new structures may be built within 300 feet of the center line of the runway or 1,000 feet from the ends of the runway, and height limitations of structures shall be in conformance with federal regulations. Residential lot development is prohibited in Clear Zone B (adjacent and further out from Clear Zone A), however single family homes may be built on existing lots in Clear Zone B once an evaluation of hazard risk is completed.

Kings County and KCAG will continue to coordinate with the City of Hanford and the Airport Land Use Commission in order to develop further consistency in developing City and County land areas affected by the Hanford Municipal Airport.

B. PRIVATE AIRPORTS OPEN TO PUBLIC USE

1. Avenal Airport

There are no facility changes or improvements to Avenal Airport planned in the foreseeable future. The airport is considered in the Avenal General Plan sections covering aircraft noise and public safety. There are scattered residences in the airport sphere of influence, especially in the area immediately south of the runway. This area has been zoned agricultural and very low-density residential uses. However, there is presently no threat to these residences by aircraft operations and the City of Avenal and Kings County will continue to monitor any changes in land uses in the proximity of the airport.

2. Corcoran Airport

Possible Public Ownership. Although the idea of public ownership of Corcoran Airport has been considered in past planning documents, there are no plans by either Lakeland Dusters or the City of Corcoran for the public purchase of the airport. In addition, there is no long range master plan that has been prepared regarding future use and development of Corcoran Airport. The Capital Improvement Program (CIP) for Corcoran Airport is the implementation tool used by Lakeland Dusters Inc. for any future facility improvements.

Area of Influence. The 1996 Corcoran General Plan established an area of airport influence extending one-quarter mile from the sides of the runway and one-half mile from the ends. The southern runway protection zone extends 1,000 feet and the northern protection zone extends 1,250 feet. There are scattered residences in this area, especially in the area immediately south of the runway. The area has been zoned AG (agriculture) and VLD (very low-density) residential uses. The zone of high noise exposure surrounds the airport at approximately 4,750 feet from the runway. To the east of the airport, and within this zone, are low, medium and high residential uses as well as some commercial and public uses. Approaching aircraft are required to maintain 1,000 feet above airport elevation to minimize overflight of the City of Corcoran in order to comply with noise abatement procedures.

Incompatible land uses, which would diminish the existing operation and the future expansion of the Corcoran Airport, shall be prohibited according to Corcoran's land use policies. Any development along Orange Avenue, north of the airport runway and Whitley Avenue must be in compliance with the Kings County Airport Land Use Compatibility Plan (KCALUCP). The Corcoran Area Plan includes a land use policy to create a buffer along 7th Avenue between the airport and intensive residential development to protect residences from hazards associated with the airport in the approach zone south of Whitley Avenue. Kings County, the City of Corcoran and KCAG will carefully monitor future land use changes near the airport in order to forestall any threat to the viability of the airport and its impacts on nearby residences.

C. PRIVATE AIRPORTS: PRIVATE USE ONLY

Planning Considerations. Kings County's exceptionally high ratio of aircraft to population is due to the intensive use of aircraft in the agricultural industry for aerial spraying and for business accounts. Land-use planning for agricultural airports must be concerned with a number of factors:

- The need to prohibit new air facilities where there is a danger to neighboring land uses. In Kings County's agricultural zone districts, developers of new private airports must obtain Conditional Use Permits. Aircraft crash potential, night operations, and the use of toxic chemicals have constituted the principal issues of debate in county zoning cases.
- Noise impacts from crop dusters cannot be measured accurately due to the seasonal and varying nature of chemical application spraying. Noise impacts are greatest in the vicinity of agricultural fields and not necessarily in the immediate area of airports. These impacts should be considered in local government's land use and public safety planning on a case-by-case basis.
- Consideration of interference with other air facilities, especially LNAS military air operations.

- The need to provide agricultural airstrips in close proximity to intensive farming areas, such as the Tulare Lake Basin.

D. MILITARY AIR FACILITIES

1. Lemoore Naval Air Station

Land Use Compatibility:

The responsibility for land use and air base development decisions is shared between Lemoore NAS and local governments. Historically, military air facilities have attracted development to their surrounding areas, generally housing and service establishments for military personnel and their families, and for civilian employees. Without adequate land-use controls, such development can be incompatible with the mission of the air base. The land around air bases is subject to high noise levels and potential aircraft accidents.

Air Installation Compatible Use Zone Study (AICUZ):

To help ensure compatible development near its airfields, in 1993 Lemoore NAS prepared its AICUZ. To assist the Installation and local municipality in mitigating encroachment on the installation while simultaneously allow for smart growth, the Installation is in the process of updating its AICUZ study. The updated study will support Federal, State, and local planning efforts and land use compatibility initiatives. Results of the Study are expected in mid 2010.

Joint Land Use Study:

In partnership with Kings County, Fresno County and the City of Lemoore, KCAG submitted a grant application to the Office of Economic Adjustment to prepare a Joint Land Use Study (JLUS) for the Lemoore NAS. A Joint Land Use Study is a basic planning process designed to identify encroachment issues confronting both the civilian community and the military installation and to recommend strategies to address the issues in the context of the local general plan process. The Lemoore NAS military installation will be an important partner in the study, with administrative oversight provided by Kings County Association of Governments.

The Joint Land Use Study will be conducted in a collaborative manner involving a variety of stakeholders, including the local elected officials, planning commissioners, the Lemoore NAS military base command staff, community business leaders, land owners, natural resource groups, the development community, and chambers of commerce or other redevelopment agencies. Several public meetings will be conducted throughout the study so that interested members of the public can have the opportunity to learn about the project and provide comments.

The Lemoore NAS Joint Land Use Study will have two primary goals; to encourage cooperative land use planning between the military installation and the surrounding jurisdictions so that future civilian growth and development are compatible with the training or operational missions of the installations and to find strategies to reduce the operation impacts on the adjacent lands. This study will examine the land use planning concerns from both the jurisdictions and Lemoore NAS perspectives. The recommendations that emerge from this JLUS will be used to guide the local jurisdictions in the development and implementation of land use and related policies.

West Coast Basing of F/A-18E/F Aircraft:

Lemoore NAS is the home base to 6 F/A-18E/F Squadrons “Super Hornet” and one Fleet Replacement Squadron. The super hornet is expected to stay in service for another twenty years.

West Coast Basing of JSF-35 Lighting II “AKA Joint Strike Fighter” Aircraft:

The Department of the Navy mandated a replacement of its F/A-18C/D Hornets aging legacy jets. NAS Lemoore is one of several installations being considered for basing of the JSF-35 Strike Fighter. The Navy’s first F-35C squadron could be operational by September 2014.

E. HELIPORTS

There are three heliports (helipads) located in Kings County for private use only. These are located at the JG Boswell Company in Corcoran, the Helistop at the Hanford Community Hospital, and a landing pad at the Westlake Farms airfield.

Hanford Municipal Airport does not have a separate helipad for helicopter operations. However, helicopters are used for chemical applications, air ambulance service, and for private use. The annual aircraft operations of helicopters utilizing Hanford Municipal Airport facilities is currently about 1,240 and projected to be 2,000 in 2025.

There are three HH-1N type Search and Rescue Helicopters based at Lemoore NAS.

IV. ACTION ELEMENT

A. CENTRAL CALIFORNIA AVIATION SYSTEM PLAN

Kings County participated in a demonstration project to coordinate regional, state and federal aviation system planning with the development of the Central California Aviation System Plan (CCASP). This was a departure from previous airport planning that was done primarily between the federal and state aviation authorities and local airports.

The CCASP was developed over a four year period and included several elements. Issues impacting the aviation community and how they impacted each airport were identified; aviation goals, objectives and policies were summarized; aviation funding resources and needs were described; airport profiles were developed to identify existing facilities and the role each airport had in the community or region; forecasts of based planes, flight operations, commercial service passengers and cargo were developed; needs were identified to accommodate the forecasts; and an action plan was developed to meet those needs. Airport projects included in future Capital Improvement Programs will reflect a more focused and accurate view of the airport’s role to the community it serves.

B. HANFORD MUNICIPAL AIRPORT

1. Recent Projects

The City of Hanford has secured federal grants over the last few years for several projects to install runway signs, airport beacons, fencing and gates; rehabilitate the runway, taxiway, and parking areas; and acquire land for runway expansion. The City of Hanford purchased 114 acres for expanding the runway approach protection zone in anticipation of future airport improvements.

2. Airport Master Plan

The Hanford Municipal Airport will continue to upgrade its facilities as outlined in the Airport Master Plan prepared in 1994. An update of the master plan was completed in early 2010. The primary objective of the plan was to provide upgraded aviation facilities in order to reasonably accommodate anticipated increases in aviation demand, improve the airport's operational efficiency, and enhance safety. The highlight of the 2010 plan was a proposal to maintain the extended existing runway. The runway extension was necessary to upgrade the airport's operational capacity, provide access to more diverse jet aircraft, and provide greater aviation safety by allowing aircraft to more easily execute the right turn upon departure from Runway 14-32 and to avoid lower flight occurrences over residential and commercial areas within the city and county.

Other improvements included in the plan that have recently been completed are the replacement of the Visual Approach Slope Indicator (VASI) with the Precision Approach Path Indicator (PAPI) to make landing safer, a new Runway End Identifier Light (REIL) placed at the end of the runway, and an Automated Surface Observing System (ASOS) was installed and commissioned on February 18, 1998 to disseminate weather information. It is recommended that the Master Plan and Layout Plan illustrate land use and surface transportation impacts and changes which may occur as a result. The following table lists the capital improvements proposed in the 2010 Airport Master Plan.

FIGURE 7-6

HANFORD MUNICIPAL AIRPORT MASTER PLAN PROGRAM

Short Range (within 5 years)
Underground utility poles at Runway 32 end Environmental Assessment (Acquisition 45 acres) Land Acquisition (45 Acres and 8 residential properties) Appraisal of land and property ALP Update Install MALSR approach light system Environmental Assessment (Acquisition of 108 acres) Land acquisition of 108 acres Appraisal for purchase of farmland FBO site infrastructure Rehabilitate runway, aprons and hanger taxilanes
Mid Range (within 6-10 years)
Box Hangar Area (39,000 square feet new pavement) Overlay runway and taxiway
Long Range (within 11-20 years)
Box Hangar Area (38,000 square feet new pavement) Slurry seal runway and taxiway, overlay apron

Source: 2010 Hanford Municipal Airport Master Plan

C. CORCORAN AIRPORT

Since Corcoran Airport is privately owned, most federal funding grants cannot be used for airport improvements. Corcoran Airport is listed in the National Plan of Integrated Airport Systems (NPIAS) and is eligible for funding under the Federal Airport Improvement Program (AIP), but does not receive AIP grants. Lakeland Dusters could apply for California Aid to Airports Program (CAAP) funding to purchase land for extension of the runway protection zone if required for future airport expansion. Corcoran Airport is also eligible for annual state grants of \$10,000/year, which can be used for smaller projects or for operations and maintenance. The City of Corcoran is eligible for Acquisition & Development (A & D) grant through the state's Aeronautic Program for the airport's capital improvements. Essentially, Lakeland Dusters, through revenues acquired through its chemical application services, is responsible for its own facility improvement financing. The airport does not meet minimum requirements for Longest Runway Weight Rating. The city should take advantage of grants to make improvements to the airport to rectify this safety situation. It is recommended that the Master Plan and Layout Plan illustrate land use and surface transportation impacts and changes which may occur as a result.

D. LEMOORE NAVAL AIR STATION

Recently completed projects include new housing units, air terminal, offices, veterinary clinic and a car wash. The assignment of 92 new F/A-18E/F aircraft and 1,550 personnel and their families to LNAS will necessitate additional operational, training, maintenance, storage, administrative, housing, community, and utility facilities. Because F/A-18s are currently stationed at LNAS, most of the facilities necessary for the new aircraft are available and would require only renovation or adaptation. New construction or large-scale expansion would be required for some aircraft facilities and for associated personnel buildings.

E. CAPITAL IMPROVEMENT PROGRAMS

The Capital Improvement Program (CIP) is a ten-year capital improvement program that serves as a guide for future public-use airport development. The CIP is required to be based upon each airport's Master Plan and is to be prepared in cooperation with the airport and the regional transportation planning agency for submittal to Caltrans every two years. Only projects included in the CIP are eligible for state aeronautics funds. The following are projects included in the CIP for the two public use airports, Hanford Municipal Airport and the Corcoran Airport.

FIGURE 7-7

**CAPITAL IMPROVEMENT PROGRAM
HANFORD MUNICIPAL AIRPORT
2010 - 2015**

PROJECT	COST	STATE	FAA	LOCAL	YEAR
Complete Environmental Assessment	\$160,000	X	X	X	2010
Purchase Land	\$1,650,000	X	X	X	2010
FBO site infrastructure	\$450,000	X	X	X	2011
Rehabilitate runway	\$750,000	X	X	X	2010
Box Hangar area pavement	\$420,000	X	X	X	2013
Overlay Runway	\$1,825,000	X	X	X	2015
TOTAL	\$5,255,000				

Source: KCAG, Hanford Municipal Airport

FIGURE 7-8

**CAPITAL IMPROVEMENT PROGRAM
CORCORAN AIRPORT
2010-2014**

ID	PROJECT	COST	STATE	FAA	YEAR	COMMENTS
F-Kin-4-01	Maintenance	\$5,000	X	X	2010-11	Cost estimate based on other similar projects
F-Kin-4-03	Maintenance	\$5,000	X	X	2011-12	Cost estimate based on other similar projects
F-Kin-4-04	Maintenance	\$5,000	X	X	2012-13	Cost estimate based on other similar projects
F-Kin-4-02	Maintenance	\$5,000	X	X	2013-14	Cost estimate based on other similar projects
TOTAL		\$20,000				

Source: KCAG, Corcoran Airport

V. FINANCIAL ELEMENT

A. FEDERAL SOURCES

General Aviation airport development grants, known as Airport Improvement Program (AIP) grants, are available through the Federal Aviation Administration (FAA). These grants are derived from aviation fuel taxes, aircraft fees, and air passenger fare surcharges. Congress must approve funding for the grants each year.

The FAA's AIP has a number of funding categories. Airports near major airports are normally designated "reliever airports" and are funded from the reliever airport funding category. Airports in Kings County are funded from the General Aviation category and do not compete with the larger, urban airports. From 1988 to 1993, primary airports made up the largest segment of those airports receiving AIP grants (54 percent), followed by General Aviation airports (42 percent), and reliever airports (4 percent).

Hanford Municipal Airport qualifies for \$150,000 per year in AIP funds that can be used for environmental studies; pavement rehabilitation; installation of signs, beacons, fencing; acquisition of land for the runway protection zone; and extension of the runway.

B. STATE SOURCES

The majority of the revenues for the Aeronautics Program are derived from an 18-cent per gallon tax on aviation gas and a 2-cent per gallon tax on jet fuel. The tax is levied on general aviation aircraft only. Revenues generated from aviation gasoline are expected to gradually decline as the industry moves to jet fuel-powered aircraft. As it stands, the request for funding by General Aviation airports in the CIP is some 30 times greater than funding availability in the California Aid to Airports Program (CAAP).

The California Aid to Airports Program (CAAP) encompasses four categories of state aeronautics funding.

1. Annual Grants

Annual grants of \$10,000 are awarded to public-use, publicly-operated airports which are neither Reliever nor Commercial Service Airports, as designated by the FAA. The funds can be accumulated for up to five years. The funds are to be used for airport development, operation, and maintenance and may also be used to match FAA money. No local match is required for an Annual Grant.

2. AIP Matching Program

This program involves state funds used specifically for local matching requirements of the federal AIP grant. The local match rate is currently 5 percent for an AIP grant. The project must be included in the Capital Improvement Program (CIP) to be eligible for match funding. These funds are subject to allocation by the California Transportation Commission.

3. Acquisition and Development (A&D) Grants

Acquisition and Development program grant funds are allocated by the California Transportation Commission. The CIP is used as the basis for programming these funds. With over 250 publicly operated airports in California desiring a portion of the available funds, competition is keen. The local match requirement can vary from 10 to 50 percent of the project's total cost as determined by the California Transportation Commission (CTC). However, a 10 percent match percentage has been generally adhered to over the past 10 years of the program. Caltrans uses a rating and ranking system for grant applications which gives priority to those projects that:

- are requested by airports with high levels of air traffic;
- enhance the safe operation of the airport;
- confer environmental benefits;
- help maintain existing facilities;
- improve the efficient operation of the airport; and
- complement the California Aviation System Plan.

4. California Airport Loan Program

This local airport loan program provides financial assistance in the form of loans repayable over a period not to exceed 25 years. Interest rates are based on the latest state bonds issued prior to granting the loan. These loans can be used by general aviation airports for most facility improvements and land acquisitions.

There are two types of loans available: 1) loans for matching FAA grants, and 2) revenue generating loans for demonstrated project needs.

C. LOCAL SOURCES

Local funding has been an increasingly important source of revenues for General Aviation airports. Two categories of local funding are available for airports. One of the most important is lease income from hangar fees from operators of flight service facilities, or fixed-base operators (FBO's), and from other enterprises located at the airport. The Hanford Flight Center is an FBO providing fuel, aircraft maintenance, services and supplies, generating lease income for the Hanford Municipal Airport. Lease income also includes revenues generated from airport owned land not relating to aircraft operations. At Hanford Municipal Airport, 60 acres are leased for agricultural production, which generates approximately \$2,400 per year. The Hanford City Council establishes charges for the use of specific airport facilities such as tie downs, shelters, and hanger space. The planned increase in hanger spaces will provide additional airport funds.

The second source of revenues are funds collected in the City of Hanford's general fund. The general fund revenues are normally used to supply matching funds for CAAP grants.

FIGURE 7-9

**ANTICIPATED HANFORD MUNICIPAL AIRPORT REVENUES
2010-2020**

REVENUE CATEGORY	TOTAL \$
HANGER RENT/TIEDOWNS	\$417,473
BUILDING RENTALS	\$230,258
LAND LEASES	\$139,837
GENERAL FUND	\$57,189
OTHER AIRPORT REVENUES	\$61,314
CAAP	\$110,000
TOTAL	\$1,016,072

Source: KCAG, City of Hanford

FIGURE 7-10

**ANTICIPATED HANFORD MUNICIPAL AIRPORT EXPENDITURES
2010-2020**

EXPENSE CATEGORY	TOTAL
OPERATIONS	\$252,797
MAINTENANCE	\$357,095
CAPITAL	\$406,180
TOTAL	\$1,016,072

Source: KCAG, City of Hanford

CHAPTER 8

NON-MOTORIZED FACILITIES

I. OVERVIEW

With an increased focus on green infrastructure at the state, local, and federal levels, non-motorized facilities have been elevated to greater importance as a necessary component of the overall transportation system. Although SAFETEA-LU has been extended, KCAG anticipates that the prioritization of green technology will remain a key component of the new legislation whenever it is enacted. While the term "non-motorized" includes pedestrian, ADA and equestrian modes, this chapter will primarily focus on the development of bicycle facilities in Kings County.

Pedestrian facilities are most often the responsibility of local government and are implemented during the normal land use development process. Pedestrian facilities incorporate ADA components in their construction. Recent legislation highlights the role of walkable communities as a means of promoting public health and improving the environment. With these initiatives, pedestrian facilities have gained an increased importance as non-motorized facilities. KCAG appreciates the importance of promoting walkability in future planning endeavors.

In addition to bicycle and pedestrian facilities, equestrian trails are generally considered as passive recreational areas. Opportunities for the public to choose bicycling over the automobile for local commuting are a desirable end for local governments to work towards. The development of bicycle and pedestrian programs and facilities provides an alternative to the automobile and results in many public benefits, including the following:

- lessens traffic congestion
- does not emit air pollutants
- is energy efficient as it uses no fuels
- does not lead to deterioration of roadways
- is virtually silent in its operation, reducing noise pollution
- reduces space needed for on-street parking and parking lots
- is an inexpensive form of transportation available to all able-bodied persons
- provides convenient, non-destructive, door-to-door transportation and
- has health benefits for regular users.

II. RECENT PLANNING EFFORTS

The 2005 Kings County Regional Bicycle Plan was adopted by the KCAG Transportation Policy Committee and has been certified by the Caltrans Bicycle Facilities Unit as being consistent with the Regional Transportation Plan and the California Bikeways Act. This Plan was prepared under the guidance of a Bicycle Advisory Committee. Membership of this committee is comprised of stakeholders with an understanding of the diverse needs of the various bicycling needs in Kings County. In addition, the City of Lemoore prepares and adopts its own Lemoore Bikeways Plan that is also certified by Caltrans. For more detailed information, reference can be made to these bicycle plans on the KCAG and City of Lemoore websites.

The Kings County Regional Bicycle Plan provides a coordinated and comprehensive bicycle plan that integrates the facilities in the unincorporated county area with those in each of the four cities within the county. The Plan is also prepared to provide a “stand-alone” bicycle plan for each jurisdiction, which can be used by each agency to secure funding to implement their individual bicycle plans. This Plan provides a blueprint for a bikeway system that will make bicycling safer, more convenient, and more enjoyable for all bicyclists.

KCAG is currently revising the 2005 Regional Bicycle Plan so that it is reflective of our current bicycling needs in Kings County. Recent legislation in California such as Senate Bill 375 provide incentives for local governments to implement multi-modal transportation projects in their jurisdictions. The bicycle plan update will take recent legislation into account and will disseminate its impacts on member agencies for future bicycle planning endeavors.

III. ASSUMPTIONS

- A. The Kings County Regional Bicycle Plan and the Lemoore Bikeways Plan will be used as the basis for implementing future bicycle facilities within Kings County.
- B. The active participation of local interest groups to focus public support for bicycle improvements can assist local agencies in determining the need for bicycling facilities in the effort to implement the Kings County Regional Bicycle Plan and the Lemoore Bikeways Plan.
- C. The construction of an integrated system of safely and conveniently connected bike lanes, bike routes, and bicycle parking facilities will lead to greater use of the bicycle for local commuting.
- D. Bicycling should be promoted as a transportation control measure to reduce single-occupant vehicle commuting in an effort to reduce vehicle emissions.
- E. Most bicycle travel has and will continue to occur on roads in a shared-use fashion. Bicyclists are encouraged to use designated bicycle routes.
- F. Bicycle accidents are most effectively avoided by teaching cyclists and drivers to safely share roadways. Bicycle lanes and routes do not prevent bike-auto accidents.

IV. SUMMARY OF NON-MOTORIZED ISSUES

- A. A great deal of bicycle commuting is done by children traveling to and from school. Children often ride in a haphazard manner and may not properly use bike lanes if they are provided. Young people who will properly use bike lanes have a small political voice. They depend on their parents and school officials to speak out for bicycle improvements.
- B. While a number of individuals now commute on bicycles in this county, most riding by adults is done for recreational and health reasons. Without designated bicycle routes, such riders will continue to use shared roadways and utilize their own preferred circuits. Generally, use of undesignated shared-use routes may present a greater safety risk.
- C. Local governments have been caught between rising road construction and maintenance costs and limited revenues for several years. Although there is funding for construction of bicycle and pedestrian facilities, there is no funding to maintain the facilities once constructed. They resist devoting scarce capital improvement dollars to construct bicycle facilities.

- D. Local police departments should continue to conduct bicycle training seminars at elementary schools and community centers to promote bicycle safety and reduce the number of bicycle riders who ride against traffic or violate other traffic laws should be cited.
- E. Secure bicycle parking is lacking throughout Kings County. Investment in parking facilities near shopping areas and other high-use destinations is needed.
- F. Pavement quality conditions need improvement throughout Kings County. Improvements such as the widening of shoulders and the repaving of rough areas will benefit both motorists and bicycle riders.
- G. Most federal, state, and regional funding sources available for non-motorized facilities are for commuter, rather than recreational purposes.
- H. From a liability perspective, Class II and III bikeways are treated similar to roadways and sidewalks, meaning that the City becomes liable only if the facility is improperly designed, constructed, or maintained. Deteriorating conditions that develop over time represent potential liability concerns. A regular maintenance and monitoring program will help reduce this liability and should be adopted by each jurisdiction to ensure that the bikeways are being adequately maintained. However, improper maintenance due to funding shortfalls generally does not put the City at risk.

V. ACTION ELEMENT

A. IMPLEMENTATION STRATEGIES

1. Carry out the recommendations of the Kings County Regional Bicycle Plan and the Lemoore Bikeways Plan. For example, the City of Lemoore has revised its zoning ordinance so that large commercial and industrial employer sites are required to integrate bicycle racks and lockers into the overall site and building design.
2. On designated shared-use roads, provide adequate shoulder space, stripe the pavement, place bike route indicator signs, and maintain a good riding surface.
3. Ensure that public and private sectors provide adequate bicycle parking. This can be done by amending each jurisdiction's zoning ordinance. The ordinances could be written to allow installation of secure bicycle parking "in lieu" of a portion of automobile parking normally required.
4. Utilize existing private and public bicycle safety seminars. Seminars can be scheduled at schools, adult education programs, local retailing outlets, and public workshops. Funding opportunities should be explored in the private sector (retailers, social service clubs, recreational clubs, etc.) and in public/private partnerships. Additional funds could be drawn from state traffic safety grants.
5. Local police departments should conduct regular campaigns and enforce traffic laws regarding, riding against traffic, disregarding traffic signals and signs, and the appropriate use of working bicycle lights in the evening or early morning as well as efforts to education motorists concerning the rights of cyclists on the roadway.
6. Each city should have an active bicycle registration program.

7. KCAG should join with other counties to petition the State Department of Motor Vehicles to require knowledge of bicycle traffic laws in licensing tests. DMV should be held responsible for making motorists aware of bicyclists' rights and responsibilities.
8. Seek all available state, federal, and private grant funds to install and maintain bicycle facilities and to conduct educational programs.
9. Local agencies should consider bicycle issues in all phases of planning for transportation. This includes local land use, air quality, zoning and circulation elements of general plans, capital improvement plans, and recreational programs.
10. KCAG should consider bicycle issues in its Regional Transportation Plan, Federal Transportation Improvement Program, and Regional Transportation Improvement Plan. KCAG should also ensure that bicycle issues are represented at annual LTF allocation discussions and public hearings.
11. Better coordination in developing and implementing bicycle plans can be achieved by:
 - a. Designating a single individual within each jurisdiction to ensure that bicycle issues are represented in that agency's various functions.
 - b. Encouraging bicycle advisory and support groups to work closely with local officials in identifying and seeking solutions to bicycle problems. These groups should assume the responsibility of keeping bicycle issues before decision-makers.
12. The rehabilitation of roads will benefit bicycle users. As roads are repaved, wider shoulders should be provided to upgrade the riding surface for bicyclists.
13. Bicycle parking facilities should be installed at transit stops, park-and-ride lots, and intermodal stations to provide a seamless transition with other transportation modes. Transit buses should continue to be equipped with bicycle transporting racks.
14. Encourage newly developing areas to incorporate bicycle facilities along appropriate roadways and off-road systems as part of open space and recreational amenities.
15. Continue to develop and maintain a safe sidewalk system that facilitates pedestrian and ADA access to public transit for commuting, recreation, or other purposes.
16. The abandonment of rail lines provides an opportunity to establish trails for non-motorized, recreational, or open space uses. Converting abandoned rail corridors into trails also preserves the right-of-ways for any future transit use.

B. BIKE ROUTE DESIGNATIONS

The Kings County Regional Bicycle Plan identifies several categories of street improvements classified as bicycle facilities that are described as:

1. Class I Bikeways (Bike Path) are separated from vehicular traffic and used exclusively by bicyclists and pedestrians.

2. Class II Bikeways (Bike Lane) are designated bike lanes adjacent to vehicular travel lanes. These can be installed on existing streets that are most heavily used by bicyclists. Bike lanes are usually four or six-foot wide rights-of-way assigned to bicycles, and are delineated by a six-inch painted stripe. A good riding surface should be provided.
3. Class III Bikeways (Bike Route) are designated routes on roadways that are shared with motorists. Only signage is provided and there are no pavement stripes or bicycle lane designation markers. This is a shared right-of-way along a commuter corridor that either links Class II bikeways, or routes. A good riding surface should be provided.
4. Class III with Stripe bikeways are delineated by a shoulder stripe, but do not include bicycle lane pavement markings. These facilities do include the "Bike Route" signage identical to a regular Class II facility. This type of bikeway is most appropriate when insufficient pavement width is available to provide a standard Class II facility, but it is desirable to designate a portion of the roadway for bicyclists. The added shoulder stripe provides an additional comfort level for the bicyclists that they are riding in a delineated shoulder area.
5. Touring. This designation has been given to those routes that are often narrow, without adequate shoulders, or carry high speed traffic and/or heavy traffic volumes, but which are known to be used by the more experienced bicyclist. Touring routes are not for the casual, less experienced bicyclist.
6. Sidewalk. This type of bikeway is basically a wide sidewalk that is intended to be shared by both bicyclists and pedestrians.
7. Shared-Use Roadway (No Bikeway Designation). KCAG recognizes that most bicycle travel occurs on roads that are not bikeways, even in communities where bikeways are provided. The shared-use designation shows recommended bicycle commuter routes. The development of a high-quality road and shoulder surface with a standard four-inch fog stripe in rural areas will enhance cyclist's safety and will benefit motorists as well. Shared-use roadways can be considered for reclassification as a Class II or III bikeway, if warranted by bicycle usage.

C. BICYCLE PARKING FACILITIES

Bicycle parking facilities are often overlooked. The lack of adequate and theft-resistant parking will continue to be an obstacle to bicycling commuting. There are three types of bicycle parking facilities that could be made available to increase bicycle use.

1. Class I - High Security

These parking facilities include bicycle lockers and/or locked enclosures in supervised areas that provide weather and vandalism protection. These types of facilities are located in areas where day long or longer storage is needed on a regular basis. Bike lockers are generally rented or reserved and require some type of management program.

2. Class II - Medium Security

These parking facilities are stands or racks that allow a user to secure a bicycle frame and one or both wheels with a U-lock or cable. This type of rack supports the entire bike frame rather than a wheel only. Class II parking facilities should be located near commercial areas, places of employment, schools, and any other areas where there is a need to store bicycles for several hours or more with minimum supervision.

3. Class III - Low Security

These parking facilities are traditional stands that support the bicycle by the front wheel only. These stands do not support or secure the frame, and are difficult to use with high-security U-locks. Although common in use, this type of facility is not recommended, especially with the growing popularity of fat-tire mountain bikes which are incompatible with many Class III racks and quick-release bicycle wheels which make theft easy if the frame is not secured to the parking facility. For these reasons, existing Class III stands should be phased out and replaced with Class II racks.

D. PROJECTS

1. Bicycle Facilities

Figures 8-1 through 8-10 provide the list and maps of the bike routes recommended for each jurisdiction by the Kings County Regional Bicycle Plan.

a. Recent Projects

In recent years, local agencies have been successful in receiving State grant funds through the Bicycle Transportation Account (BTA) to develop bicycle facilities. In 2004 the City of Lemoore received \$500,000 for construction of a Class I bike path along the Union Pacific Railroad. Lemoore city officials with the assistance of local political representatives initiated several attempts to negotiate with the UP Railroad for right of way access. With UP Railroad unwilling to negotiate, Lemoore was left with no choice but to return the BTA grant funding. The City of Lemoore continues to evaluate new bicycle routes.

Kings County received BTA funds in 2002 to complete a class III bicycle route on segments of 18th Avenue between Flint Avenue and Grangeville Boulevard and on Flint Avenue between 18th Avenue and 17 ½ Avenue. The Kings County Area Public Transit Agency (KCAPTA) received BTA funds to purchase bicycle racks for placement on transit buses in 2001. To date, no other additional projects have been submitted for competitive BTA funding.

2. Pedestrian Facilities

The City of Lemoore has completed several sidewalks in recent years including specific routes where children frequently walk to school. New subdivisions are now required to provide 10' wide sidewalk connections through cul-de-sacs. Under this designation, new sidewalks have been installed along Hanford Armona Road from 19th Avenue to Liberty Drive, down Liberty Drive from Hanford Armona Road to Cinnamon, along Cinnamon Drive from Liberty Drive to 19th Avenue, and along a small segment of 19th Avenue south of Hanford Armona Road. Funding has also been used to construct streetscaped sidewalks in various section of the city.

The City of Avenal is continuing to discuss possible improvements at the Arroyo del Camino waterway to allow pedestrian and bicycle use as part of its open space, park, and recreational facilities planning efforts. This site is currently an unimproved water course that runs in a north-south direction through the eastern portion of the community.

In 2008, KCAG and the County of Kings were awarded \$140,000 for a Caltrans environmental justice planning grant for use in Kettleman City. This study will evaluate and develop ideas for pedestrian and traffic safety measures along State Route 41 and General Petroleum Avenue within the community.

A Caltrans Safe Route to School grant for FY 2009-10 was awarded to the County of Kings for Gardenside Elementary School in the unincorporated community of Home Garden. The project will include constructing pedestrian and bicycle improvements at Garden Drive and Shaw Place roadways.

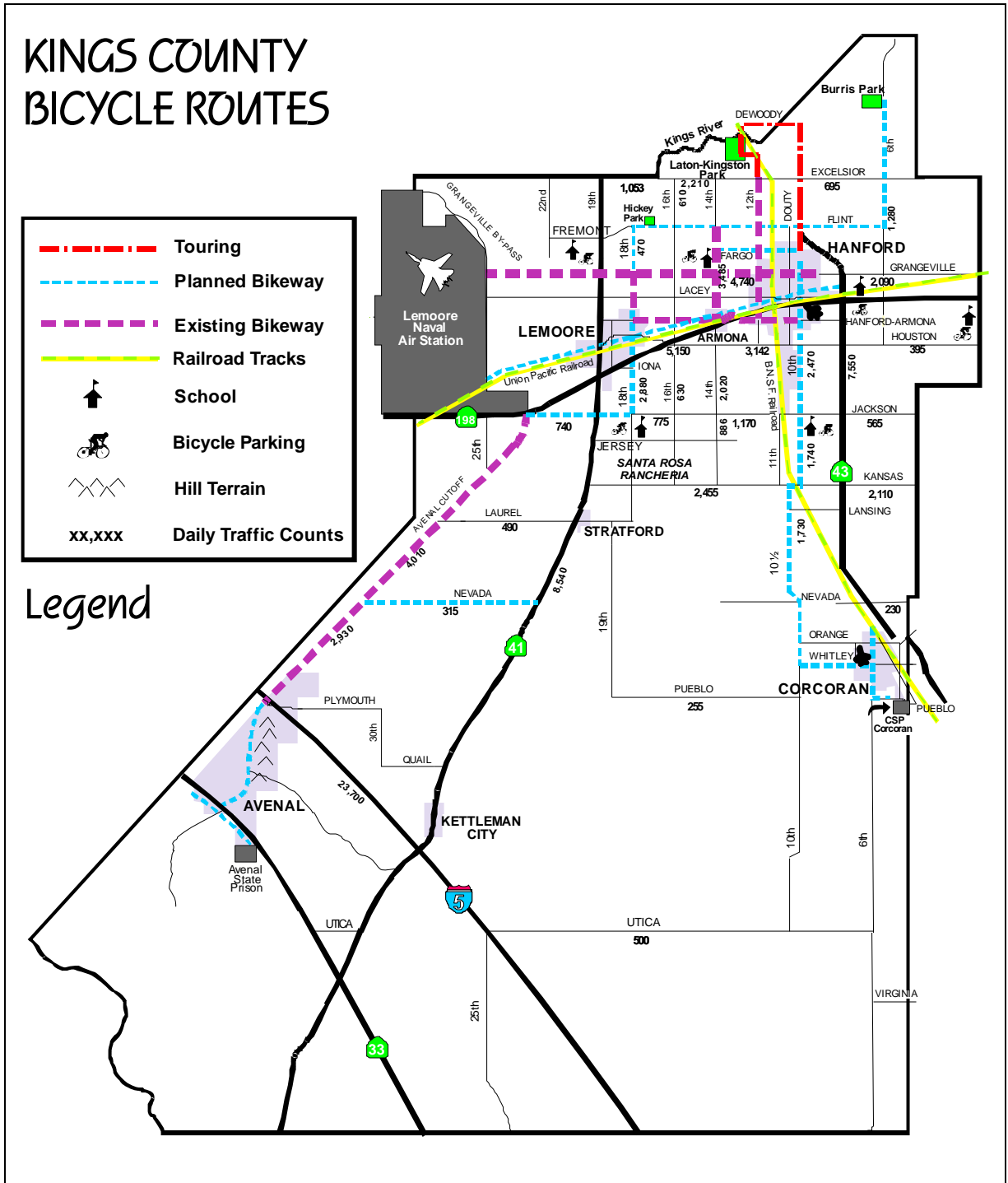
FIGURE 8-1

Kings County Bicycle Project List

Street	From	To	Facility Type	Cost
10th Ave.	Houston	Kansas	Class III with stripe	\$2,100,400
10 1/2 Ave.	Kansas	Nevada	Class III with stripe	\$1,700,800
10th Ave.	Nevada	Whitley	Class III with stripe	\$950,000
Whitley Ave.	10 1/2 Ave.	6 1/2 Ave.	Class III with stripe	\$1,000,00
18th Ave.	Jackson Ave.	Lemoore City Limit	Class II	\$2,650
Flint Ave.	Hickey Park	6th Ave.	Class III with stripe	\$27,500
Jackson Ave.	Avenal Cutoff	18th Ave.	Class III	\$26,150,000
Fargo Ave.	14th Ave.	B.N. Santa Fe RR	Class III with stripe	\$550,000
12 3/4 Ave.	Excelsior Ave.	Fresno Co. Line	Class III	\$479,750
Nevade Ave.	Avenal Cutoff	State Route 41	Class III	\$2,000,000
6th Ave.	Flint Ave.	Burris Park	Class III	\$2,750

Source: 2005 Kings County Regional Bicycle Plan

FIGURE 8-2



Source: KCAG

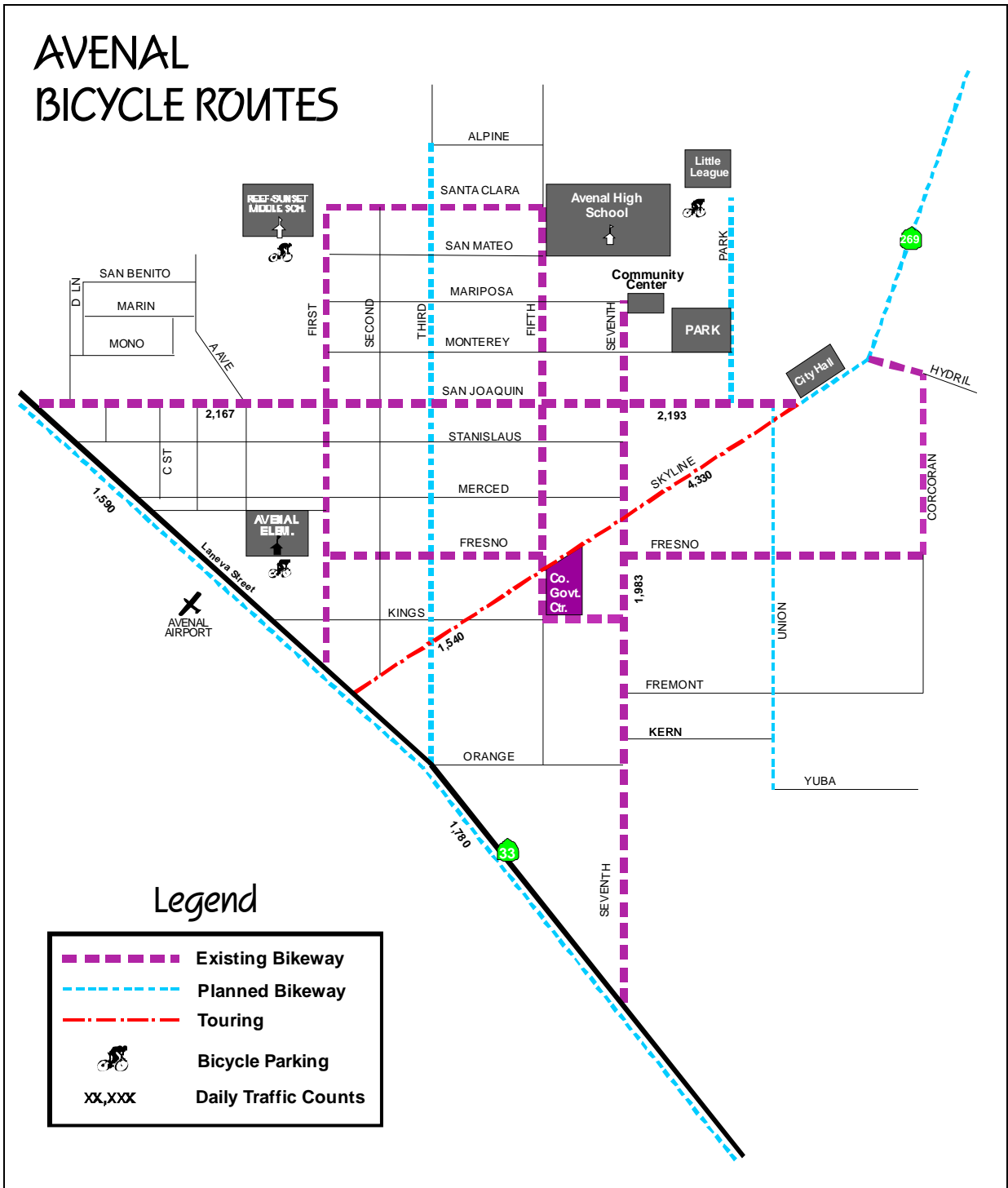
FIGURE 8-3

**Avenal
Bicycle Project List**

Street	From	To	Facility Type	Cost
Park Ave.	Monterey St.	San Joaquin St.	Class III with stripe	\$1,080
Third Ave.	Alpine St.	Orange St.	Class III with stripe	\$78,000
Union Ave.	Skyline St.	Kern St.	Class II	\$2,000
State Route 269	Avenal Cutoff	San Joaquin St.	Touring	N/A

Source: 2005 Kings County Regional Bicycle Plan

FIGURE 8-4



Source: KCAG

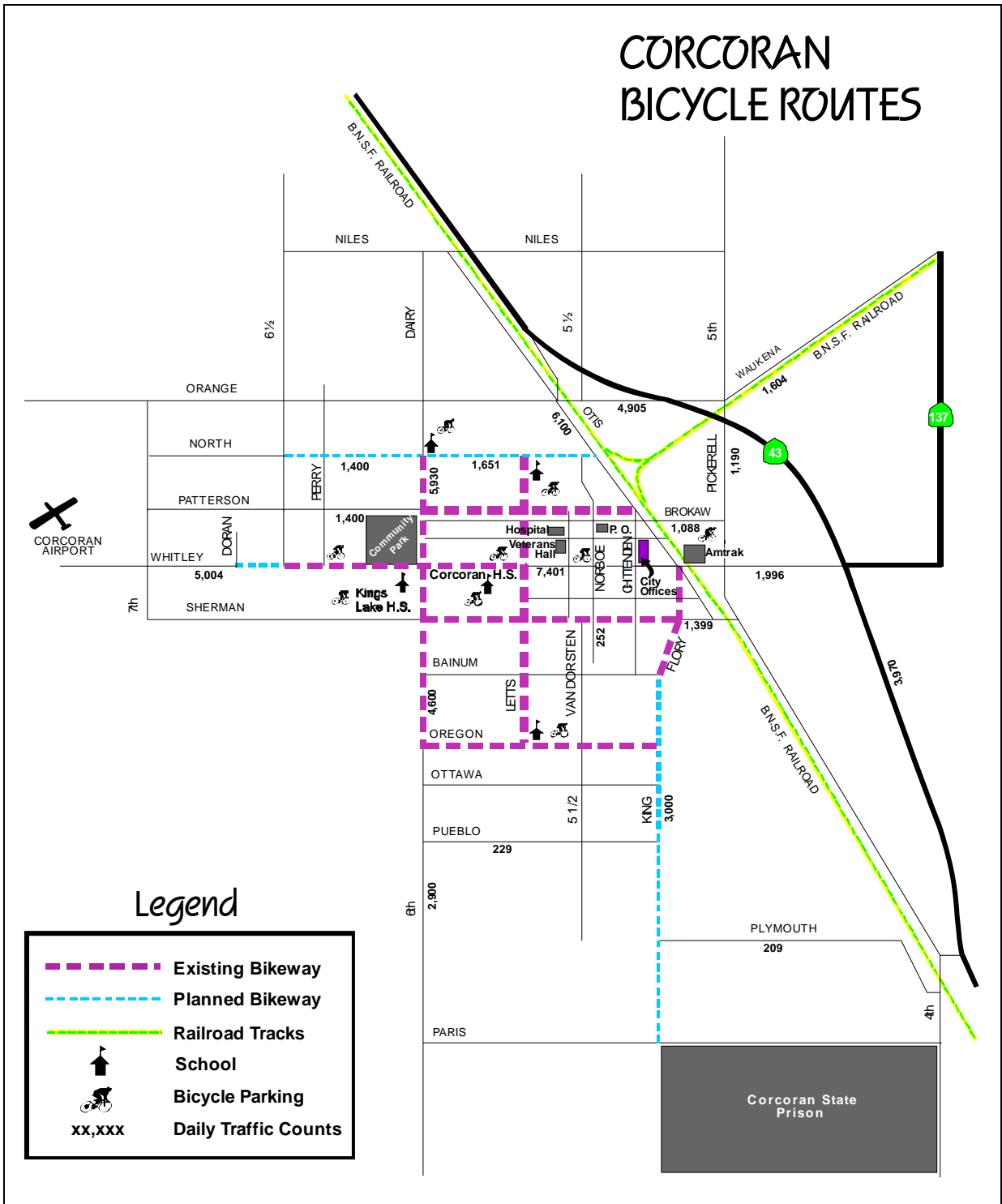
FIGURE 8-5

Corcoran Bicycle Project List

Street	From	To	Facility Type	Cost
North Ave.	6 1/2 Ave.	Otis Ave.	Class II	\$1,200
Whitley Ave.	6 1/2 Ave.	Corcoran Airport	Class III	\$800
King Ave.	Banium Ave.	Corcoran Prison	Class II	\$1,200

Source: 2005 Kings County Regional Bicycle Plan

FIGURE 8-6



Source: KCAG

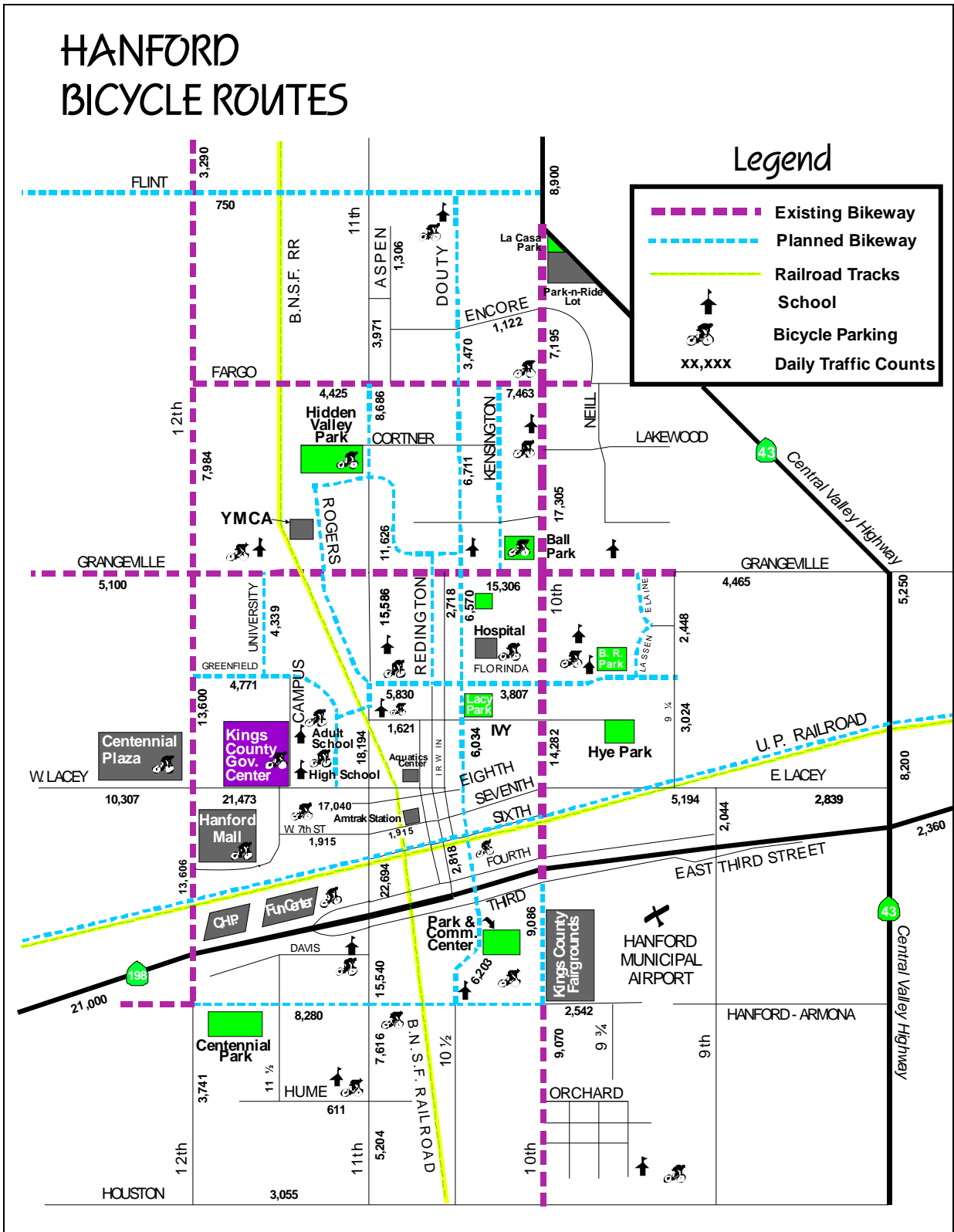
FIGURE 8-7

Hanford Bicycle Project List

Street	From	To	Facility Type	Cost
11th Ave.	Elm St.	Mulberry St.	Class III	\$600
Elm St.	Greenfield	11th Ave.	Class III	\$360
Centennial Dr.	Lacey	Berkshire	Class II	\$3,125
Cortner St.	11th Ave.	Kensington	Class III	\$1,875

Source: 2005 Kings County Regional Bicycle Plan

FIGURE 8-8



Source: KCAC

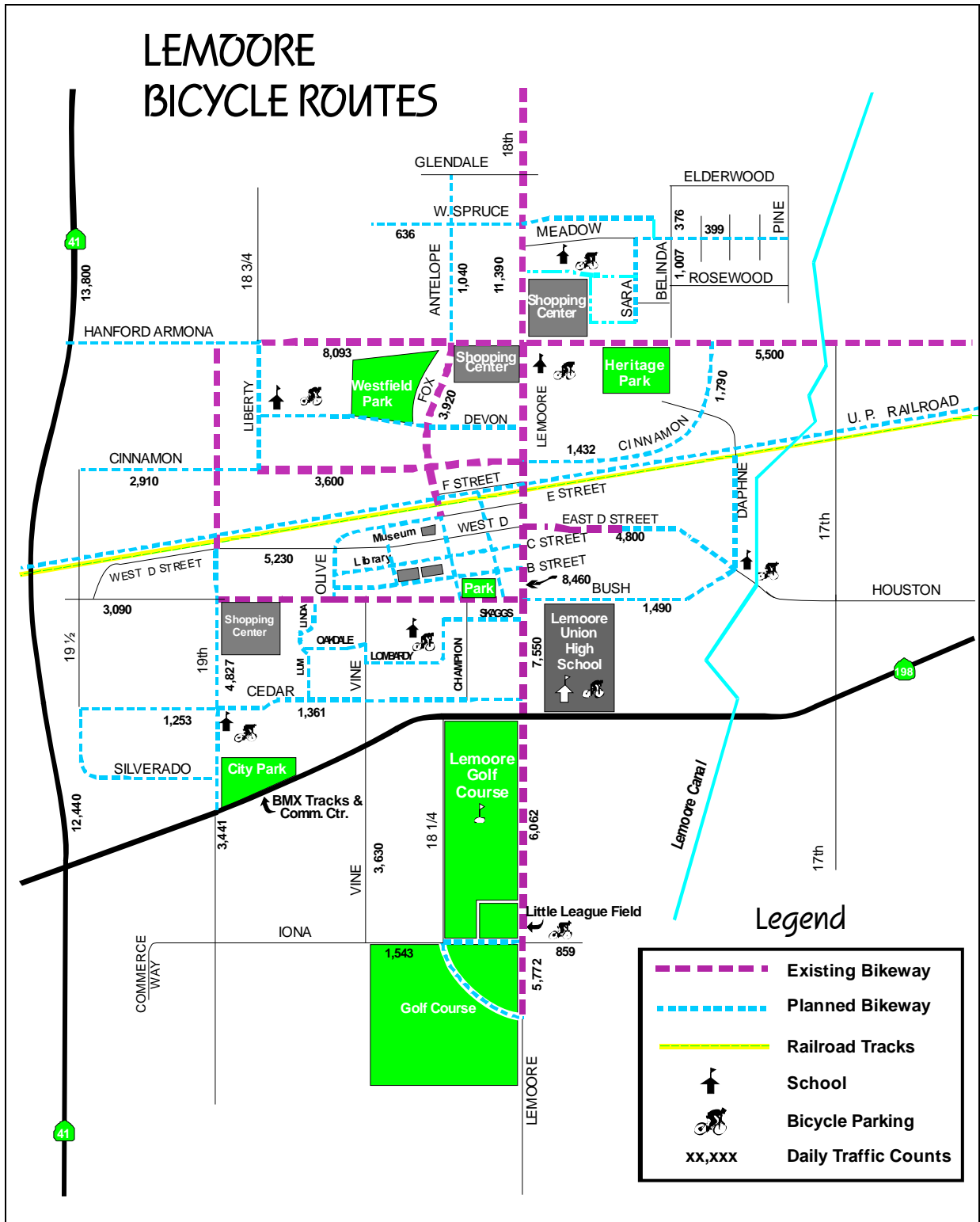
FIGURE 8-9

**Lemoore
Bicycle Project List**

Street	From	To	Facility Type	Cost
Cinnamon Dr.	19 1/2 Ave.	Hanford Armona	Class II	\$175,000
19th Ave.	Railroad	State Route 198	Class II	\$2,100
Cedar Ln.	19 1/2 Ave.	Vine Street	Class II	\$3,000
C St.	Olive St.	Lemoore Ave.	Class II	\$1,750
Bush St.	State Route 41	West Hills College	Class II	\$600
Bush/ Daphne	Lemoore Ave.	UP Railroad	Class II	\$3,300
Follett St.	F St.	Bush St.	Class II	\$1,500
Hanford Armona Rd.	State Route 41	E. of Liberty Dr.	Sidewalk	\$280,000
Iona Ave.	Golf Links Ave.	Lemoore Ave.	Class II	\$600
Silverado Dr.	Cedar Ln.	19th Ave.	Class II	\$2,800

Source: 2005 Kings County Regional Bicycle Plan

FIGURE 8-10



Source: KCAG

VI. FINANCIAL ELEMENT

A. FEDERAL SOURCES

1. Surface Transportation Program

This program provides funds that can be used for construction, rehabilitation, and operational improvements for highways and bridges. This would include projects that are necessary to accommodate other transportation modes and for bicycle transportation and pedestrian walkways principally for transportation, rather than recreation purposes, and for carrying out nonconstruction projects related to safe bicycle use. Funds are payable up to 80% of the total project cost. Project selection is made by local jurisdictions from their annual apportionments and programmed through the Federal Transportation Improvement Program (FTIP). RSTP funds that are exchanged can also be used for non-motorized projects.

2. Congestion Mitigation and Air Quality

This program provides funds for projects that help achieve air quality standards under the 1990 Clean Air Act. Like the Surface Transportation Program, these funds can be used for construction of pedestrian walkways, bicycle transportation facilities, and for carrying out nonconstruction projects related to safe bicycle use payable up to 80%. CMAQ projects are locally programmed by each jurisdiction through the Federal Transportation Improvement Program (FTIP).

3. Transportation Enhancement

The Transportation Enhancement (TE) program was established to fund transportation related projects that enhance quality of life, in or around transportation facilities. The construction of bicycle and pedestrian facilities and the preservation of abandoned railroad corridors for use as pedestrian or bicycle trails are examples of the eligible projects that can be funded through this program. The allocation of TE funds is accomplished through the Regional Transportation Improvement Program (RTIP) by selecting candidate projects for programming by KCAG following a project selection process.

4. Bridge Repair and Replacement Program

Often times a road designated as a shared-use route has sufficient shoulder width to accommodate bicycles, except at the location of bridges. This program provides funds for bridge repair or replacement, which includes existing and future bikeways.

5. National Highway Safety Act

This program was developed to reduce motor vehicle fatalities and injuries through a national highway safety program. Bicycle and pedestrian safety is eligible for funding, but it is not considered a priority program.

6. Federal Transit Act

This act provides funds to non-urbanized areas for various transit operating and capital assistance projects. Eligible projects include those that provide access to mass transit facilities or to install racks or other equipment for transporting bicycles on mass transit.

7. Recreational Trails Program

This program provides an appropriation of funds to California for development and maintenance of recreational trails and trail related facilities for both nonmotorized and motorized recreational trail uses. Recreation trails includes a thoroughfare used for recreational purposes such as bicycling, hiking, equestrian, and off-road motorized vehicle activities. The California Department of Parks and Recreation administers the program. There is no minimum or maximum limit on grant request amounts, but a local match of at least 12% of the total project cost is required. Projects are approved on a competitive basis to cities, counties, districts, and nonprofit organizations with management responsibility over public lands.

B. STATE SOURCES

1. Bicycle Transportation Account

Bicycle Transportation Account (BTA) funds are allocated on a competitive basis to counties and cities for bikeways and related facilities that improve safety and convenience of bicycle commuters, including planning and education projects. No single agency may receive more than 25% of the amount deposited in the BTA in a single fiscal year. Grant funds cover up to 90 percent of a project's costs. In FY 2010-2011 the BTA will provide \$7 million to city and county agencies for projects that improve the safety and convenience for bicycle commuters.

To be eligible for funding, a city or county must have an adopted bicycle plan that is consistent with the Regional Transportation Plan and the California Bikeways Act. The Kings County Regional Bicycle Plan and the Lemoore Bikeways Plan have both been certified by Caltrans. Therefore, local agencies are able to apply for these funds for projects that are included in the certified bike plans. To remain eligible for BTA funds, a local agency must have a current bicycle plan that is updated every four years. KCAG is updating its 2005 bicycle plan accordingly.

2. Office of Traffic Safety

Comprehensive bicycle safety programs that involve enforcement, education, public health, driver education, transportation engineering and public communication are eligible project types under this program. Communities from throughout the state are invited to submit annual applications for program grants.

3. Land and Water Conservation Fund Program

This program provides grants to plan, acquire, and develop recreation parks and facilities including bikeway and pedestrian trails. The California Parks and Recreation provides reimbursement grant funds of 50% of the total projects costs. Grants for local agencies are divided, with 40% of the total funding going to Northern California and 60% to Southern California.

4. Mello-Roos Community Facilities District Act of 1982

This program allows a sponsoring agency to issue a special tax bond for a community facilities district to finance public facilities and services such as parks, recreation areas, parkways and open spaces. Bicycle and pedestrian projects could be included in any proposed public facility.

C. LOCAL SOURCES

1. Local Transportation Fund

Up to two percent of each county's Local Transportation Fund (LTF) can be claimed annually by local jurisdictions to be used for installing or maintaining bicycle and pedestrian facilities (Public Utilities Code, Section 99233.3). This amount would provide around \$60,000 each year for bicycle and pedestrian projects.

The RTPA may also reserve an amount so designated, up to 2% of the LTF, each year for later allocation to claimants for pedestrian and bicycle facilities or bicycle safety programs. If the RTPA finds that all or any portion of the amount reserved could be used more appropriately for other purposes, that amount can be added to the total apportionment available the following year.

Generally, local jurisdictions prefer to use LTF allocations claimed for street and road purposes for bicycle and pedestrian projects in order to minimize administrative costs. KCAG could apportion an amount of LTF to provide a bicycle facilities maintenance fund. If the funds are not needed for bicycle facility maintenance, the funds can be returned to the following fiscal year's estimated LTF for reapportionment.

2. REMOVE II PROGRAM

This program is sponsored by the San Joaquin Valley Air Pollution Control District (SJVAPCD) to fund vehicle emission reduction projects such as the development of comprehensive bicycle networks through the expansion of bicycle transportation facilities. Funding for this competitive first-com, first-serve program is derived from a \$4 vehicle registration fee. Projects serving commuters, rather than recreational users are given higher priority for funding. The maximum incentive for a Class I bicycle path and a Class II bicycle lane is \$150,000 and \$100,000.

3. General Fund

As with any public improvement, local general fund revenues can be used to build and maintain bicycle facilities, or to provide a match for State and Federal grants.

4. Private Money

Funds from private sources can be used to provide secure bicycle parking at high-use destinations. Such facilities can be required as part of the zoning review processes used by each of the local agencies.

5. Developer Fees

Development fees could be levied and administered by local jurisdictions to provide improvements to accommodate new development.

6. Development Agreements

Agreements can stipulate that developers provide portions of bikeway facilities where the construction becomes a part of the development.

7. Other Local Programs

Local agencies may implement other local programs to provide bikeways and bicycle facilities including "adopt-a-trail", symbolic shares in trail right-of-way, and memorials. These programs require that private individuals or groups donate money, property, or time for the design, acquisition, and construction of bikeway facilities.

CHAPTER 9

TRANSPORTATION SYSTEM MANAGEMENT

I. OVERVIEW

KCAG developed a Transportation System Management (TSM) Program in 1983. The intent of this Program is to apply various low cost transportation measures that can by themselves, or in association with other measures, help to increase the operational efficiency, safety, and utility of Kings County's existing regional transportation system. In conformance with State guidelines, it is intended to help accomplish the following:

1. Foster the safe and efficient flow of passenger vehicles and trucks along heavily traveled corridors;
2. Minimize the costs of improving the existing transportation system;
3. Reduce dependency on the automobile for individual commuting;
4. Minimize environmental impacts of the existing transportation system; and
5. Improve transit system ridership.

II. PURPOSE

The central themes of Transportation System Management (TSM) are conservation and efficiency. Persons conducting TSM studies are looking for ways to optimize the efficiency of the existing transportation system, while alleviating the need for costly construction projects. When these goals are realized, public tax dollars are conserved, as are natural resources such as energy, air quality, land, and materials. KCAG's TSM program provides a way to let decision-makers weigh lower-cost measures against more expensive options when transportation improvements are being considered.

TSM is an administrative process carried out to select improvements for the existing transportation system. Already in Kings County, TSM-like studies are routinely conducted as a part of local traffic and parking management programs, and by the Kings County Area Public Transit Agency (KCAPTA) to assess the performance of the Kings Area Rural Transit (KART) bus system. These agencies continually evaluate their transportation systems using various surveillance procedures, such as transit ridership counts, traffic counts, accident reports, field reconnaissance, etc.

KCAG's program was undertaken to foster countywide coordination and to define the extent that TSM should be formalized as a planning activity. In doing so, the program: 1) sets goals and objectives for countywide TSM planning; 2) assigns KCAG as coordinator of TSM planning for the regional system; 3) provides an "idea book" or "shopping list" describing alternative TSM measures; and 4) suggests methods to monitor the effectiveness of TSM implemented projects.

III. ASSUMPTIONS

- A. The physical transportation system in Kings County is largely in place, but the system has critical deficiencies, and improvements are needed if it is to fulfill its intended function.
- B. The existing system represents a very large investment of public money and natural resources. It should be maintained and upgraded.
- C. Transportation improvement revenues to state and local agencies are limited. Unless new monies are made available, there will probably not be enough to cover the expense of alleviating system deficiencies.
- D. Transportation improvements are not limited to road construction and parking projects. Public transit improvement measures, non-motorized facilities, carpooling, and strategies to manage travel demand can be considered transportation improvements.

IV. ROLES AND RESPONSIBILITIES

In order to have a coordinated TSM planning program in Kings County, the participation of individual entities in carrying out TSM should be understood.

- A. KCAG fills the most important TSM role as coordinator of the TSM review process in the region. KCAG is also responsible for setting region-wide TSM goals and policies, and for documenting the TSM process.
 - 1. Coordinator. KCAG will continue acting as regional forum for the exchange of information between the county and cities. In addition, KCAG will use its responsibility as preparer of the RTP, the Regional and Federal Transportation Improvement Programs, and the Overall Work Program to ensure that TSM considerations are given to projects and needs of regional significance. This can be easily carried out as KCAG biennially reviews the programs of individual entities to ensure conformance to the goals and objectives of the RTP.
- B. Caltrans should assure that TSM considerations are given to State Transportation System improvements in Kings County. They could train and make staff available to provide technical assistance to local agencies that wish to conduct TSM studies.
- C. Cities and the County have the best knowledge of their own transportation systems. Therefore, project evaluations can be carried out locally and scaled to the urgency of particular problems.
- D. Transit Operators oversee the operation of their transit system and is in the best position to carry out the roles listed above under "Cities and the County" in reference to transit operations.
- E. Private Businesses can initiate many TSM actions with their own employees and business associates.

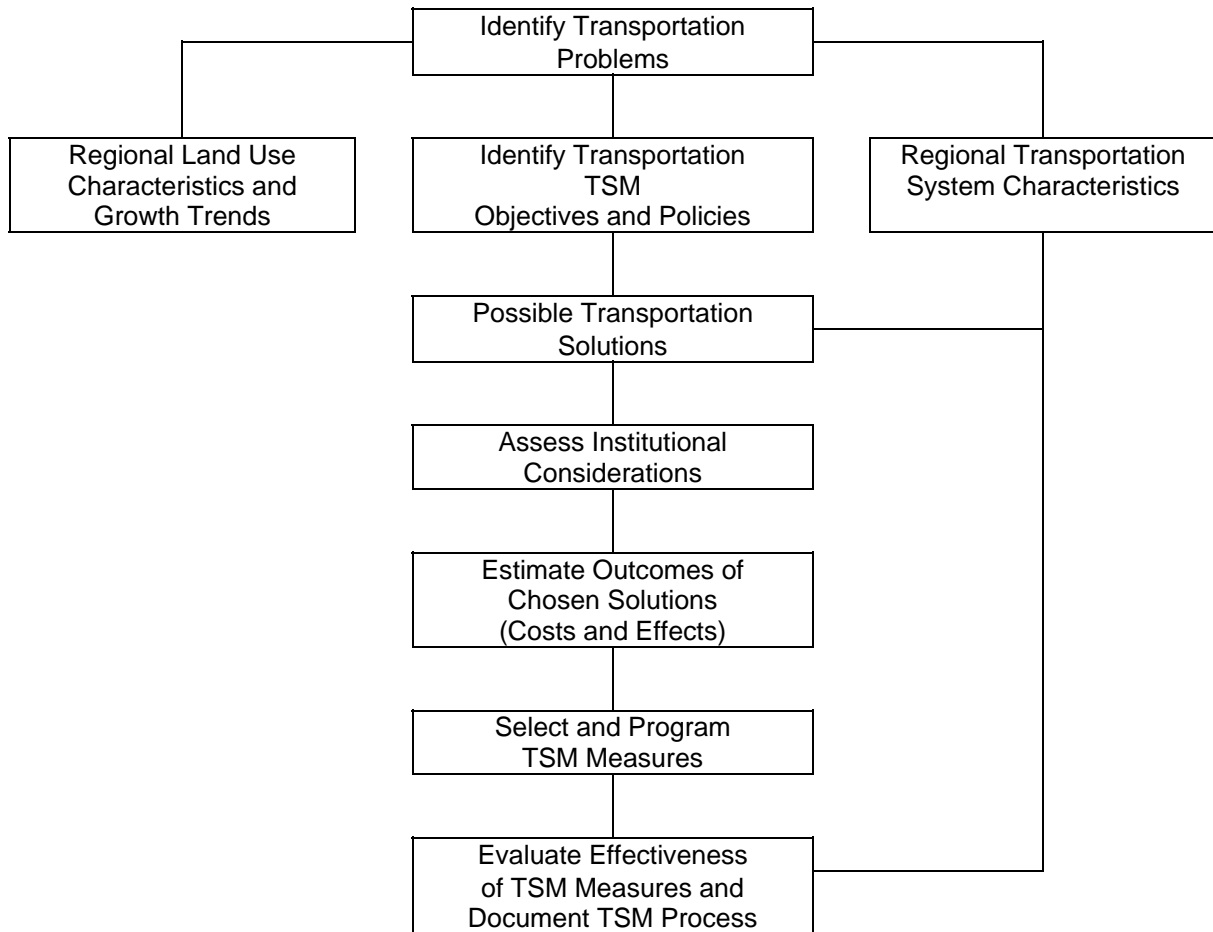
V. TSM PROGRAM DESIGN

- A. Set Goals and Objectives. The Federal Highway Administration suggests several goals and objectives for TSM efforts. Many of these are examined for their applicability to the problems and needs of Kings County.

- B. Identify Problems and Issues. Each local agency is asked to list and rank specific problems that hinder the efficient transportation of people and goods in their areas. Such lists can be used in addition to other regional system data compiled by KCAG.
- C. Select and Evaluate Alternative Measures. Many different actions can be taken to meet the transportation needs of an area. These can be either low or high cost alternatives. Fifty-eight measures are reviewed and a method to evaluate their relationship to TSM goals and objectives, as well as their impacts and effectiveness, is developed.
- D. Document TSM Actions in the RTP

FIGURE 9-1

TSM PROGRAM DESIGN



VI. ACTION ELEMENT

A. TSM STRATEGIES

State planning guidelines suggest that TSM objectives be time-specific and quantified. This is to allow year-by-year analysis of progress toward TSM targets. Contrary to this suggestion, the objectives in KCAG's program are not themselves quantified or time-specific. Staff acknowledges that Kings County is very rural and its transportation improvements are small in scale compared to those of urbanized areas. While Kings County's size does not preclude TSM planning, it does make it hard to set realistic or meaningful target figures. The attainment of TSM objectives can be documented by periodic studies of the effectiveness of TSM measures in future RTPs.

FIGURE 9-2

TSM STRATEGIES AND ACTIONS

STRATEGY	ACTION
Improve Traffic Flow through Road Improvements	Pavement Management Techniques Road Reconstruction Intersection / Street Widening Install Turn Lanes Turning Movement and Lane Use Restrictions One-Way Streets Speed Restrictions
Improve Traffic Flow through Traffic Signalization	Signal Installation Left Turn Signal Installation Signal Timing/Computerized Signal Controls Eliminate Unnecessary Traffic Control Signs Install Traffic Control Signs
Improve Traffic Flow through Parking Management	Curb Parking Restrictions Off-Street Parking Areas Parking Duration Restrictions Residential Parking Controls Carpool Preferential Parking
Facilitate Non-Motorized Transportation	Pedestrian Activated Traffic Signals Install / Widen Sidewalks Shoulder Area for Bicycles Provide Bicycle Lanes and Routes Install Secure Bicycle Parking
Divert Traffic Away from Sensitive or Congested Areas	Auto-Restricted Zones Residential Traffic Controls
Improve Transit Patronage	Route and Schedule Modification Express Bus Service Park-and-Ride and Express Bus Service Subscription Bus Service Dial-a-Ride Service Substitute Dial-a-Ride Service for Fixed Route Service in Selected Time Periods Transit Marketing Program Operations Monitoring Program Maintenance Improvements Vehicle Fleet Improvements

FIGURE 9-2
(Continued)

TSM STRATEGIES AND ACTIONS

STRATEGY	ACTION
Increase Car and Van Occupancy (Paratransit)	Carpool Matching Service Vanpool Programs (Employer) Jitney Service Paratransit Subsidies Youth, Elderly and Handicapped Van Services
Encourage Transit, Non-Motorized and Paratransit Use by Providing Intermodal Facilities	Park-and-Ride Lots Covered Bus Stops Bus Stop Benches Bus Loading Bays Bicycle Racks at Bus Stops and Park-and-Ride Lots Bicycle Racks on Buses
Reduce the Need to Travel	Flex Time / Staggered Work Hours (Employer) Compressed Work Week (Employer) Use Telecommunications Instead of Travel Land Use Planning Policies
Transportation Pricing Measures	Gasoline Tax Parking Fees Reduce Transit Fares
Information Services	Widespread Distribution of Transit Schedules Install Road Signs Bearing Rideshare Phone Number Carpool / Non-Motorized / Transit Promotional Campaigns Bicycle Safety / Education Seminars RTPA to Inform Local Employers of Paratransit Subsidies

B. TSM STUDY PROJECTS

Several problem areas on the state highway system have been subjected to TSM review. The process used to evaluate these areas is generally the same as that process used to develop projects for the STIP: identify problems; coordinate among governmental entities; consider solutions; recommend and seek to implement projects. The product of this research is the highway inventory presented in the Appendix. TSM review adds two additional tasks: relating TSM objectives and policies to alternative solutions; and project monitoring.

The adopted TSM program suggests a way to document the TSM evaluation process. The method is encapsulated in the following project evaluation worksheets. The worksheets briefly described problems and needs, and weigh TSM objectives and policies against selected improvement strategies. The sheets are most helpful in organizing one's thinking about the trade-offs in benefits and costs associated with alternative actions.

Worksheet documentation is provided for the following project areas:

- SR 43 between 10th Avenue and Fresno County
- SR 198 at 19th Avenue
- SR 41 near Lemoore
- SR 198 from SR 43 to Tulare County

Of these project areas, only the SR 41 project near Lemoore has been implemented. (Completed in 2000). However, construction began on the SR 198 project from SR 43 to the Tulare County line in November 2009. It is anticipated to be open to traffic in 2012.

FIGURE 9-3

TSM EVALUATION WORKSHEET

Area: SR 43 North of Hanford
 Location: 10th Avenue to Fresno County Line

Objective	Problem Description	Policies	Possible TSM Projects			
	Rapidly increasing traffic loads on 2-lane road. Operates at LOS C		Do nothing	Park and Ride Lot Rideshare Program	Add passing lanes	Widen to 4 lanes
Quality	High percentage of trucks limits capacity	Shorten travel time. Increase safety. Comfort and convenience. Enhance reliability.	- - - -	0 0 0 0	+ + + +	+ + + +
Efficiency	Large number of commuters in a.m. and p.m.	Reduce auto dependency. Increase transit use. Facilitates bicycles.	0 0 0	+ + +	0 0 +	0 0 +
Environmental	Commuter traffic uses excess fuel and causes air and noise pollution	Reduce noise. Improve air quality. Reduce energy use.	0 0 0	+ + +	0 0 +	+ 0 +
Social / Economic	Is main road from Corcoran and Hanford to Fresno area	Complement general plans.	-	0	0	+
	Cost to implement		\$0	Unknown	Unknown	Unknown
	Overall Recommendation		Not recommended	Recommended	Implement for short term	Implement for long term

Code: + Positive Impact
 0 No Impact
 - Negative Impact

FIGURE 9-4

TSM EVALUATION WORKSHEET

Area: 19th Avenue at SR 198
 Location: In Lemoore

Objective	Problem Description	Policies	Possible TSM Projects				
			Do nothing	Restrict access	Install traffic signals	Step up ridesharing	Construct interchange
	At-grade intersection. Serves rapidly growing sector of Lemoore.						
Quality	High accident rate. Long wait / idle periods for cross-traffic.	Shorten travel time. Increase safety. Comfort and convenience. Enhance reliability.	- - - -	- + - -	- + + +	0 0 + 0	+ + + +
Efficiency	Major access point on SR 198 for LNAS commuters.	Reduce auto dependency. Increase transit use. Facilitates bicycles and pedestrians.	0 0 0	0 0 0	0 0 +	+ 0 -	0 + 0
Environmental	Excess idle time uses fuel and causes air pollution.	Improve air quality. Reduce energy use.	- -	0 0	- -	+ +	+ +
Social / Economic	General plans show vicinity for residential and commercial development.	Complement general plans.	-	-	-	0	+
	Cost to implement		\$0	Unknown	Unknown	Unknown	\$38.4 mil.
	Overall Recommendation		Not recommended	Not recommended	Not recommended	Recommended	Implement

Code: + Positive Impact
 0 No Impact
 - Negative Impact

FIGURE 9-5

TSM EVALUATION WORKSHEET

Area: SR 41 near Lemoore
 Location: SR 198 to Hanford-Armona Road

Objective	Problem Description	Policies	Possible TSM Projects			
			Step up Ridesharing	Increase transit use	Widen lanes, add shoulders	Construct 4-lane expressway
	Major state highway; congested 2-lane road.					
Quality	Traffic delays. Low operating speeds. High percentage of trucks.	Shorten travel time. Lower travel costs. Increase safety. Comfort and convenience.	- - - -	0 0 0 0	+ + + +	+ + + +
Efficiency	Major commuter corridor for LNAS and statewide traffic.	Reduce auto dependency. Facilitates bicycles. Use transit system.	0 0 0	+ 0 0	0 0 +	0 0 +
Environmental	Idling vehicles use gas; generate noise on acceleration.	Reduce noise. Improve air quality. Reduce energy use.	0 0 0	+ + +	0 0 +	+ + +
Social / Economic	Limits Lemoore area traffic flow.	Minimize neighborhood impacts. Complement general plans.	-	0	0	+
	Cost to implement		\$0	Unknown	Unknown	Unknown
	Overall Recommendation		Recommended	Recommended	Recommended; short term only	Implement

Code: + Positive Impact
 0 No Impact
 - Negative Impact

FIGURE 9-6

TSM EVALUATION WORKSHEET

Area: SR 198
 Location: SR 43 to Tulare County Line

Objective	Problem Description	Policies	Possible TSM Projects			
	Conventional 2-lane highway; gap between freeway segments in Kings and Tulare Counties.		Step up Ridesharing	Consider Kings / Tulare transit service	Add passing lane	Widen to 4-lane expressway
Quality	Congestion at commute hours. High truck traffic. Safety problem.	Shorten travel time. Lower travel costs. Increase safety. Comfort and convenience. Enhance reliability.	0 + 0 + 0	0 + 0 + 0	+ + + + +	+ + + + +
Efficiency	Carries more commuters than any road in Kings County.	Reduce auto dependency. Facilitates bicycles. Use transit system.	+ 0 0	+ 0 +	0 + 0	0 + 0
Environmental	Single-occupant commuting uses excess gas and causes noise and air pollution.	Reduce noise. Improve air quality. Reduce energy use.	+ + +	+ + +	0 0 0	0 0 0
Social / Economic	2-lane road hinders social / economic interchange with Tulare County.	Complement general plans.	0	0	0	+
	Cost to implement		Unknown	\$85,000/yr.	Unknown	\$80 mil.
	Overall Recommendation		Recommended	Recommended	Temporary measure	Implement

Code: + Positive Impact
 0 No Impact
 - Negative Impact

C. MEASURING THE EFFECTIVENESS OF TSM ACTIONS

Once a project has been selected and implemented, it should be periodically evaluated to ensure that it is fulfilling its intended purpose. The following is a listing of research and monitoring projects that are now or could be, used to assess the effectiveness of TSM projects. Such assessments could be done by formal evaluations, with the aid of specially designed evaluation worksheets or through various analyses using a microcomputer and appropriate software. Several possible methods are listed below under individual TSM objectives.

Shorten Travel Time

- Total point-to-point travel time in person minutes.
- Total point-to-point average speed per mode.
- Total point-to-point time delay during rush vs. non-rush hours.

Lower Travel Costs

- Estimated travel costs per person mile.
- Estimated travel costs per person trip.
- Annual user costs per capita.
- Average annual user costs.

Safety

- Total number of motor vehicle accidents.
- Total number of injuries and fatalities.
- Accidents, injuries, and fatalities per million vehicle miles.
- Total number of pedestrian and bicycle injuries or fatalities.

Security

- Total number of crimes (by classification) for each type of mode or facility.

Reliability

- Variance of individual travel times between selected points.
- Percentage of scheduled travel times (transit) within "on-time" tolerance limits.

Reduce Auto Dependency, Increase Transit and Paratransit Ridership

- Total number of transit riders.
- Mode-split percentages (people who use both automobiles and transit or paratransit on their journeys).
- Estimated number of seat miles of transit or paratransit in service.
- Percentage of population within walking distance of scheduled transit service.
- Total number of "matched" carpools.

Pedestrian and Bicycle

- Total miles of improved, shared-use bike routes.
- Total miles of bike lanes.
- Number of bicyclists using bike routes and lanes.
- Total number of secure bicycle parking racks at public buildings and other destinations.

Capacity/Productivity/Freight Movement

- Vehicle capacity (passenger car/bicycle/truck, etc.) on facilities in units per hour.
- Passenger capacity on facilities in persons per hour.
- Freight capacity on facilities in tons per hour.

Cost Effectiveness

- Specialized cost/benefit studies on case-by-case basis.
- Transit system self-support ratio (operating costs vs. farebox return).
- Net annual cost to provide transportation facilities (by mode).
- Percentage of LTF expenditures on transit versus streets and roads.
- Transit system cost per vehicle mile/hour.
- Transit system passengers per vehicle mile/hour.

Noise and Vibration

- Noise and vibration measurements at different distances from transportation source.
- Number of residents exposed to noise levels exceeding tolerance limits.

Air Pollution

- Grams of carbon monoxide, hydrocarbons, lead, and nitrogen oxide in air samples taken at different distances from transportation facilities.
- Areawide air pollution concentrations.

Energy Use

- Gas and diesel sold in county per month/year.
- Estimated average fuel economy in vehicle miles per gallon.
- Estimated average fuel economy in person miles per gallon.

Service to Disadvantaged/Affordability

- Percentage of special group population to who transit services are available.
- Percentage of special group disposable income devoted to public transit services.
- Routing and scheduling through low-income areas.

VII. FINANCIAL ELEMENT

In earlier chapters of the 2011 RTP, funds available through federal, state, regional, and local sources for street and road, transit, non-motorized, and air quality are discussed. Many of these funding sources may be used for TSM projects.

A. CONGESTION MITIGATION AND AIR QUALITY

Congestion Mitigation and Air Quality (CMAQ) program funds are allocated to Metropolitan Planning Organizations (MPO) in designated non-attainment areas such as the San Joaquin Valley Air Basin. These funds are to be directed toward transportation projects that will contribute to meeting air quality standards in non-attainment areas for ozone, carbon monoxide, PM-10 and PM-2.5. Priority is to be given to implementing those projects that have documented emissions reductions associated with them and are included in the approved State Implementation Plan (SIP) for air quality as a TCM.

B. REGIONAL IMPROVEMENT PROGRAM

Transportation system management projects are eligible for funding through the Regional Improvement Program (RIP) in the State Transportation Improvement Program (STIP) process. All STIP transportation system management projects are to be capital projects, except that non-capital projects are eligible if they are a cost-effective substitute for capital expenditures.

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CHAPTER 10

AIR QUALITY

I. OVERVIEW

The San Joaquin Valley Air Basin (SJVAB) experiences some of the poorest air quality in the nation. The Valley's long and narrow 250 mile bowl shape collects and holds emissions from vehicles, industry, agriculture, and various other sources. The long hot summers, ideal for agriculture production and stagnant foggy winters, contribute to the region's ability to produce and retain harmful air pollutants. The San Joaquin Valley Air Pollution Control District (SJVAPCD) was created as an agency with authority to regulate sources of air pollution and develop plans that will achieve and maintain air quality standards.

The SJVAB exceeds many of the health-based standards set by both the United States Environmental Protection Agency (EPA) and California's Air Resources Board (CARB) for criteria pollutants such as ozone, carbon monoxide, nitrogen dioxide, and particulate matter 10 microns or less (PM 10) and particulate matter 2.5 microns or less (PM 2.5). Specifically, the Valley is designated as a non-attainment area for meeting federal and state 1-hour and 8-hr ground level ozone and non-attainment for PM 2.5. Announced in October 2006 by the U.S. EPA, the previous status of serious non-attainment for PM-10 has improved to the attainment level for the standard. The SJVAB will continue to work towards achieving and maintaining the attainment status of all criteria pollutants.

For designated areas that do not meet established air quality standards including the SJVAB, the 1990 Federal Clean Air Act Amendments (FCAAAA) and the California Clean Air Act (CCAA) of 1988 required the implementation of transportation control measures (TCM). The goal of a TCM is to bring a region into compliance with state and federal air quality standards. TCMs are defined as any strategy to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling or traffic congestion for the purpose of reducing motor vehicle emissions. The remainder of this section will be devoted to TCMs that the San Joaquin Valley has identified.

II. ASSUMPTIONS AND INVENTORIES

The Regional Transportation Plan must provide for the expeditious implementation of TCMs included in the State Implementation Plan (SIP). Opportunities to support federal and statewide goals concerning air quality in transportation plans must also be identified. As a Regional Transportation Planning Agency (RTPA), KCAG will continue to fulfill their responsibility in developing, funding, and implementing transportation control strategies that will collectively improve the Valley's air.

A. TRANSPORTATION CONTROL MEASURES

The FCAAAA defines a TCM as including, but not limited to: programs for improved public transit; high occupancy vehicle lanes; employer-based transportation management plans; trip reduction ordinances; traffic flow improvements; park-a-ride lots; programs to restrict vehicle use during peak periods; rideshare services; bicycle and pedestrian programs; programs to control vehicle idling; flexible work schedules; programs and ordinances to facilitate non-automobile travel; and programs to encourage the voluntary removal of pre-1980 light duty vehicles and trucks. Best available control measures (BACM) are an example of a transportation control measure.

B. AIR QUALITY ATTAINMENT PLANS

1. 1979 Kings County Air Quality Plan

Following the federal Clean Air Act Amendments of 1977, the Kings County Air Pollution Control Board prepared and adopted the “Nonattainment Area Plan for Ozone”. This air quality plan made several findings and requests, and recommended several actions in an attempt to meet attainment by 1982. No specific TCMs were identified beyond the request to the California Legislature to authorize and fund the implementation of an annual motor vehicle inspection and maintenance program in Kings County.

Since attainment was not expected before the December 31, 1982 deadline, the air quality plan identified additional measures necessary for attainment before December 31, 1987. The air quality plan recommended nine actions, including the analysis of emissions and the development of TCMs to reduce ROG emissions.

2. 1991 Air Quality Attainment Plan

The SJVAPCD prepared and adopted the “1991 Air Quality Attainment Plan” to satisfy the requirements of the CCAA to reach ozone attainment standards by December 31, 1997. The strategy outlined in this Plan included all feasible control measures to reduce emissions and specifically included TCMs to address mobile source emissions.

This Plan identified the TCMs recommended for implementation by applicable areas, including: traffic flow improvements; public transit; passenger rail and support facilities; rideshare; park-and-ride lots; bicycling programs; trip reduction programs; parking management programs; telecommunications; alternative work schedules; alternative fuels; and rapid rail and support facilities.

3. San Joaquin Valley Transportation Control Measure Program

The TCMs identified in the “1991 Air Quality Attainment Plan” were further evaluated for their effectiveness, implementation, funding, monitoring, and enforcement with the preparation of the “San Joaquin Valley Transportation Control Measure Program”. This document was prepared for the SJVAPCD and the eight regional transportation planning agencies in the Valley to provide guidance for jurisdictions to develop and implement local TCMs.

4. Rate of Progress Plans

As required by the FCAAA, the SJVAPCD adopted the “1993 Rate of Progress Plan” to provide a base year inventory of volatile organic compound (VOC) emissions and to show how the District will achieve a 15% reduction in these emissions between 1990 and 1996 through the adoption of rules and contingency measures. The “1993 Rate of Progress Plan” included as contingency measures, Rule 9001 - Commute Based Trip Reduction and the Auto Buy-Back program.

The SJVAPCD was also required to prepare and submit a “Post 1996 Rate of Progress Plan” to demonstrate how the District achieves a 9% reduction in VOC emissions between 1996 and 1999. Applicable TCMs included in the “San Joaquin Valley Transportation Control Measure Program” were identified in the “Post 1996 Rate of Progress Plan” as a means to meet this mandate.

5. Ozone Attainment Demonstration Plans

1-Hour Ozone

The 1990 Federal Clean Air Act Amendments required the SJVAPCD to develop a plan to show how it would achieve attainment of the federal ozone standard by November 15, 1999. The "Ozone Attainment Demonstration Plan" was prepared and adopted in 1994. The plan showed how it would demonstrate attainment and included TCMs as Rules 9001 - Commute Based Trip Reduction; Rule 9010 - Fleet Inventory; and Rule 9011 - Light and Medium Duty Low Emission Fleet Vehicles, in addition to contingency measures identified as TCM projects already programmed and funded by the RTPAs.

The San Joaquin Valley Basin (SJVAB) did not attain the federal air quality standard for ozone by November 15, 1999. As a result, in November 2001 the Environmental Protection Agency (EPA) reclassified the SJVAB from "serious" to "severe". The EPA at this time also required implementation of six emission control measures from the 1994 Ozone Plan and established a May 31, 2002 deadline for a severe ozone non-attainment plan. This plan was to document attainment of the federal 1-hour ozone standard by November 15, 2005.

The SJVAPCD was not able to demonstrate the federal 1-hour ozone standard by the May 2002 target. In October 2002, the EPA issued severe area requirements which included the outstanding 1-hour ozone attainment plan by November 15, 2005, creditable emission reductions, Reasonably Available Control Technology for lime kilns, an emissions inventory, and contingency measures. In addition, the EPA's 2002 action triggered both 18 and 24 month timetables or "clocks" for imposing emissions and highway funding sanctions respectively. A Federal Implementation Plan was also to be prepared within a 24 month period from October 2002. The 1-hour ozone attainment was required to be submitted by March 18, 2004. Failure to put forth this document by the extension would trigger sanctions. All of the EPA requirements were submitted in 2003 except the plan demonstrating the federal 1-hour ozone standard.

In preparation for the federal 1-hour ozone plan, computer modeling illustrated that reductions from the SJVAB alone would not be enough to attain the ozone standard. For the SJVAB to show attainment, the SJVAPCD and CARB would have to implement rules for emission reductions. As many of CARB's upcoming rules were scheduled for enactment after November 15, 2005, other options had to be explored. On December 18, 2003 after much research and discussion with applicable parties, EPA was asked by the SJVAPCD and CARB to reclassify the SJVAB from severe to extreme non-attainment for the federal 1-hour ozone standard. This designation reflects a more serious air quality problem for the ozone health-based standard, but allows for more time to demonstrate attainment.

The classification to extreme non-attainment for the federal 1-hour ozone standard became final on May 17, 2004. The attainment date for the SJVAB is now November 15, 2010. Any previously imposed sanctions or the Federal Implementation Plan have been superseded by the extreme non-attainment classification. The Extreme Ozone Attainment Demonstration Plan was adopted on October 8, 2004 and amended in October 2005.

8-Hour Ozone

On April 15, 2004, the EPA designated and classified the SJVAB as serious nonattainment for the federal 8-hour ozone standard. As of June 15, 2004 the Valley officially became a serious non attainment area and had until June 15, 2013 to show that it can achieve the 8-hour ozone standard. The initial 8-hour ozone plan for the Valley, *2007 Ozone Plan*, was due to EPA by June 15, 2007. This plan is the first step in the Valley's path towards attainment to be followed by subsequent plans, rules, and programs that reduce emission to bring the area into attainment.

While many areas of the SJVAB currently meet this standard, several areas including Arvin and norwest Fresno would not reach attainment by June 2013. Based on the evidence, it was necessary to reclassify the SJVAB as an extreme nonattainment classification. On April 30, 2007 the governing board of the SJVAPCD approved an 8- hour ozone plan that would extend the attainment date from June 15, 2013 to June 15, 2024. The SJVAB must reduce 75% of nitrogen oxides, which come from such sources as motor vehicles. Under an extreme classification, an 8-hour ozone plan can take advantage of future advancements in technology in regards to emission reduction.

6. PM-10 Nonattainment Area Plan of 1991

The FCAAA classified the San Joaquin Valley as a “moderate” PM-10 nonattainment area, thus requiring the adoption and implementation of a “PM-10 Nonattainment Area Plan” to reach attainment by 1994.

On-road mobile sources of emissions do not contribute greatly to the problem of primary PM-10. However, mobile sources do contribute to the oxides of nitrogen (NOx) and reactive organic gases (ROG), which are considered to be significant precursors affecting the creation of PM-10. Therefore, the implementation of TCMs to reduce VMT and increase vehicle occupancy can aid in the attainment of PM-10 standards.

The SJVAPCD submitted a plan that contained reasonable available control measures as required for moderate areas, but was unable to demonstrate attainment by the December 31, 1994 deadline. Due to the magnitude of the PM-10 problem, it was determined that SJVAB could not feasibly achieve the standard, and therefore was reclassified as a “serious” nonattainment area effective February 8, 1993.

7. 1994 Serious Area PM-10 Plan

Classification as a “serious” nonattainment area mandated the SJVAPCD to adopt a plan that contains more stringent strategies and rules which would enable attainment of the PM-10 standard by December 31, 2001. Specifically the plan was to include implementable best available control measures (BACM).

The SJVAPCD adopted the 1994 Serious Area PM-10 Plan on September 13, 1994 which identified the only TCM considered to provide measurable benefits for PM-10 reductions as the Trip Reduction Ordinance. Individual TCMs would provide insignificant reductions in PM-10 emissions. Since several TCMs are included as part of any trip reduction program, their cumulative effect would produce favorable results.

8. PM-10 Attainment Demonstration Plan

Because the SJVAPCD could not show that the air basin could reach attainment by 2001, a "PM-10 Attainment Demonstration Plan" was prepared to describe existing and future efforts pursued by the District to attain the standard by December 31, 2006. The plan was finally submitted by the SJVAPCD on May 15, 1997 and requested an extension until 2006 to attain the 24-hour standard at all monitoring sites.

The EPA indicated that it intended to disapprove this Plan, because it did not include an adequate BACM demonstration and a "most stringent measures" demonstration required for an extension. Realizing that there was insufficient time to correct the deficiencies, the SJVAPCD withdrew the Plan.

9. 2003 PM-10 Plan

Because of the failure to submit the previously required PM-10 Plan, the SJVAPCD adopted the "2003 PM-10 Plan" on June 19, 2003 and approved amendments on December 18, 2003. The EPA approved the plan effective June 25, 2004 under the condition that the SJVAPCD would submit a SIP revision. This was required to evaluate if the identified emission reductions in the 2003 Plan would be enough to obtain the air quality standards for PM 10.

10. 2006 PM-10 Plan

The 2006 PM 10 Plan includes the SIP revision as stipulated for approval of the 2003 PM 10 Plan. The SIP revision is to specifically include from the California Regional Particulate Air Quality Study an inventory, the latest technical information, monitoring data, and modeling evaluation. The SJVAPCD was to submit the plan to the EPA by March 31, 2006. The EPA has six months to determine if the plan is complete and one year to find the plan in compliance within finding it complete. The plan was adopted by the SJVAPCD on February 16, 2006.

Most recently, in May of 2006, it was requested by California that the EPA consider the SJVAB in attainment of the PM-10 standards. This request of attainment was based on the air quality data from the years 2003-2005. The EPA concluded on October 17, 2006 that indeed the Valley had reached attainment and that the related contingency measures would be suspended. The SJVAB's maintenance plan was approved by the EPA and subsequently published in the November 12, 2008 Federal Register.

California Air Resources Board and the San Joaquin Valley Air Pollution Control District will continue with their commitment to keep the SJVAB in attainment of the PM-10 standard and work towards the attainment of all other identified air quality standards.

III. ACTION ELEMENT

A. KINGS COUNTY TCM PROGRAMS

KCAG and each local jurisdiction has under taken TCM programs and projects to implement the SJVAPCD air quality plans at the local level. The following is a summary of those efforts.

1. Traffic Flow Improvements

Traffic flow improvements will ease congestion and reduce pollutants. New signals, signal synchronization, addition of turn lanes, smoother railroad crossings, and construction of interchanges are being carried out to facilitate smooth, uncongested traffic flow. The process of widening road shoulders will also decrease the amount of dust in the air that cars and trucks produce as they travel on roads.

Local jurisdictions have sought to improve traffic operating conditions by replacing four-way stop signs with traffic-actuated signals or by upgrading existing traffic signals. Other improvements that have been implemented include adding turn lanes and pockets, median barriers, and other channelization techniques.

Actions to improve vehicle traffic flow should be carefully evaluated because they may become counterproductive to other methods in reducing air pollution by encouraging more VMT. Traffic flow improvements should be accompanied by actions to improve and encourage the use of transit and rideshare services.

2. Public Transit

Public transit is an alternative to the private automobile to reduce pollution. It is also an essential service that provides transportation to those of low-mobility so that they may be able to take advantage of what the county offers in commercial, business, medical, educational, employment, and social/recreational opportunities. Increasing the ridership of local transit systems to reduce the use of single-occupant autos can be accomplished through monitoring transit routes and making changes where indications suggest they be made, adding routes, providing better passenger information systems, increasing marketing efforts, and integrating transit modes for improved convenience.

Public transit improvements by the Kings Area Rural Transit (KART) and Corcoran Area Transit systems have been implemented and are ongoing as a result of increased ridership from past successful improvements. Expanded fixed routes, changes in route schedules, addition of commuter routes, acquisition of newer and larger buses, and the placement of passenger amenities at bus stops have all made a positive impact on ridership. The city of Lemoore completed the construction of a transit center in 2004, located in the central business district next to the SJVRR tracks. The centerpiece of the project is a renovated 1912 SPRR depot painted the original railroad colors to be used as the transit center complete with waiting area, kitchen, and bathrooms. This is also a multipurpose facility where community events are often held.

Contributions from the private sector can be utilized to reduce government cost in providing public transit. While new developments have traditionally provided parking facilities to accommodate vehicle trips, such developments have also provided facilities that encourage and accommodate transit as a means of mitigating increased vehicle traffic produced by their development.

3. Rideshare Programs

Ridesharing is an alternative and compliment to local public transit for reducing single-occupant vehicle travel. Ridesharing reduces air pollution, automobile congestion, fuel consumption, and the need for additional road and parking capacity by increasing the vehicle occupancy rate.

Kings County residents can utilize the convenient online ridesharing services through either the Valley Rides (<http://www.valleyrides.com/>) or South Valley Rideshare (<http://southvalleyrideshare.com/>) services. These programs provide computerized commuter matching, employer outreach, and public awareness through marketing efforts. Signs along major highways provide the toll free phone number for commuters to request rideshare information. KCAG staff takes part in various special events to promote ridesharing and is involved in committees to develop commuter options.

Employer-sponsored vanpools with tax incentives for vehicle purchase is another form of ridesharing. Local governments could make employers aware of these programs through their local development regulations. Where a large employer proposes a new plant or land use, part of the traffic and circulation concerns could be addressed through ridesharing and vanpool programs supported by the employer. KART has implemented a vanpool program that utilizes over 400 vans which transport workers from throughout the Central Valley to job sites. Most of the job sites of vanpool participants include the California State prisons in Avenal, Corcoran, Kern County, and Coalinga. However, due to the success of the program, it has now extended beyond the San Joaquin Valley and into Monterey, San Luis Obispo, Ventura, and Santa Barbara counties.

Two studies, the South Valley Rideshare Study and the San Joaquin Valley Express Transit Study, were completed in 2009 to evaluate future transit needs and better coordinate vanpooling efforts throughout the San Joaquin Valley. These studies pointed to vanpooling as a means of reducing greenhouse gas emissions and increase inter-county transportation choices with lower operating costs than traditional transit options.

As a result of these studies and the continued popularity of vanpooling, KCAPTA intends to form a new joint powers agency (JPA), called the California Vanpool Authority (CalVANS) with several councils of government (COG) throughout the Valley and the state. This would create a regional agency for vanpool services. Though KCAPTA plans on officially creating the new agency by July 1, 2010, it has been suggested that representatives from each of the COGs serve as a member of the new JPA. Currently, the following agencies intend on entering into the new JPA for CalVANS:

- Kings County Area Public Transit Agency
- Kings County Association of Governments
- Madera County Transportation Commission
- Association of Monterey Bay Area Governments
- Council of Fresno County Governments
- Tulare County Association of Governments
- Sacramento Area Council of Governments

Kings County has implemented an “Emergency Ride Home Program” to encourage ridesharing by its employees. Often times people are not willing to carpool for fear that they could be stranded at their workplace and be unable to return home for an emergency. This program offers a sense of security to potential rideshare participants by offering a choice of options for a return home for unexpected emergencies.

4. Bicycles

Bicycle use can be promoted for commuter and recreational travel that has the primary benefits of reducing traffic congestion and providing a non-polluting transportation mode.

Bicycle facilities in the unincorporated county area consist mainly of bike routes on a shared-use basis with automobiles. Within the urban areas, Class II facilities have been provided, along with shared-use routes. Generally road resurfacing improvements and the provision of wider road shoulders offer a good riding surface that benefits both the motorist and the cyclist.

The Kings County Bicyclists is a local bicycling group has been organized to among other things, encourage the implementation of bicycle facilities in Kings County. With their assistance, bicycle plans have been prepared for the region that will guide the development and installation of bicycle facilities throughout the county and each city.

Since bicycles must use the roadway with automobiles, safety plays a key in bicycle use. Promoting bicycle safety is generally carried out by local police departments within Kings County. For example, every year the Hanford Police Department presents the “Stop on a Dime” Program to elementary schools in Hanford. Many Police Departments also provide bicycle registration programs on a continual basis with no fee charged. Bicycle safety programs are also offered at the request of local schools.

Measures to encourage the use of bicycle and walk modes and measures to increase transit ridership mutually assist each other, because the modes are often complimentary.

5. Alternative Fuels

Although it does not impact travel behavior, decreases in vehicle emissions can be made through the use of cleaner burning fuels. Until recently, the developing technology and lack of a network of alternative fueling facilities has made it difficult to implement the use of alternative fuels in Kings County. A significant number of alternative fuel projects have been funded by the SJVAPCD and utility companies which have made it possible to further the implementation of alternative fuels throughout the Valley.

Kings County has constructed a compressed natural gas (CNG) fueling facility at its corporation yard and has converted a major portion of its vehicle fleet to CNG. KART has also converted a portion of its fleet to CNG use. Additionally, the City of Lemoore, in conjunction with the Lemoore Union High School District, Lemoore Union Elementary School District, Central Unified School District, and Island Union Elementary School District, is currently in the process of constructing a CNG fueling facility. Other public agencies and school districts within Kings County have also constructed alternative fueling stations and are in the process of converting their vehicle fleets.

6. Passenger Rail and Support Facilities

Passenger rail and support facilities are provided to give travelers an alternative to the automobile for longer trips. Amtrak intercity passenger rail service is available with the *San Joaquins*. This service provides an ideal opportunity for inter-modal connections in support of other regional public and private transportation providers at station locations.

Two stations are located within Kings County at Hanford and Corcoran. These stations have been upgraded into intermodal facilities that include options to transfer to other transportation providers for increased transit efficiency. Caltrans has implemented rail and signal projects to speed up the trains to reduce travel time in an effort to increase ridership. The new "California Cars" have been placed in service on the *San Joaquins*, which included new passenger amenities. Over time, trains have been added to the service to provide six daily round trips between Bakersfield and Oakland/Sacramento. Marketing campaigns are used to promote the *San Joaquins* train through television and radio advertisements. Fare promotions have also contributed to increased ridership.

7. Park and Ride Lots

To help promote ridesharing, designated park and ride lots provide a meeting place for commuters to form carpools for the majority of their trip. Park and ride lots are best located near major highways and arterials and are most effective on corridors of sufficient length serving metropolitan areas, or specific employment designations.

Most park and ride lots are constructed and designated with signs and used exclusively for that purpose, while others spring up in underused parking lots. Existing parking areas used by carpools should be located and plans made to designate these areas as park and ride lots with the Caltrans dispatch number posted. This may encourage others to carpool if they are aware that these lots exist.

A formal park and ride lot has been constructed at the intersection of State Highway 43 and 10th Avenue on the north end of Hanford for commuters traveling to Fresno and Corcoran.

8. Telecommunications

The availability of a telecommunication system or center enables commuters to eliminate or reduce the length of their trips to work. Telecommunications generally include both teleconferencing and telecommuting.

A trip to attend a meeting could be eliminated by the use of teleconferencing equipment by an employee to participate in the meeting from the current employment site. Telecommuting could also eliminate a trip to work altogether by allowing an employee to use a personal computer to conduct work activities at home.

Caltrans and the SJVAPCD have developed telecommunications systems that may be used by other agencies to reduce the need for trips to meetings of a regional nature.

The eight Regional Transportation Planning Agencies worked to purchase teleconferencing equipment in 2009, with the assistance of a grant from the SJVAPCD. This system is used by each agency to conduct meetings of a regional nature to reduce the amount of vehicle travel that would otherwise be made to physically attend meetings. KCAG also allows use of its teleconferencing equipment by member agencies and outside agencies who request the service for other meetings.

9. Alternative Work Schedules

To encourage employee travel to and from work outside the peak period, employers can offer alternative work schedules. The effect could be reduced congestion and smooth traffic flow during peak commuting hours by spreading the period over a greater range of time.

Efforts should be made to maintain existing carpools and to encourage new carpools to increase the effectiveness of alternative work schedules.

B. VALLEYWIDE TCM PROGRAMS

The SJVAPCD has developed TCM programs that have been implemented Valleywide and affect emission reductions in Kings County.

1. Auto-Buyback Program

The SJVAPCD has provided funding for a program to purchase pre-1974 light duty vehicles and trucks which are considered to be gross polluters, thereby reducing some of the worst on-road vehicle emissions. This program is considered to be one of the most effective short-term emission reduction measures available. Cars registered to owners in Kings County are eligible to take advantage of this program.

2. Smoking Vehicle Program

To encourage vehicle operators to maintain their vehicles and improve tailpipe emissions, the SJVAPCD has implemented a program that will notify owners that their vehicle is visibly emitting excessive tailpipe smoke. A toll-free number is available for people to call and report "smoking vehicles". The SJVAPCD then contacts the vehicle owner and asks them to voluntarily have the vehicle checked or repaired. This program is districtwide and includes Kings County. Since 1993, there have been more than 32,000 reports of smoking vehicles. About 50% of vehicle owners who respond to a notification sent to them say they have repaired their vehicles.

3. Employer Trip Reduction Programs

The SJVAPCD adopted Rule 9410 - Employer Based Trip Reduction in December of 2009 as a requirement for certain employers to develop an Employer Trip Reduction Implementation Plan and create incentives for their employees to reduce single-occupant vehicle trips to work. Employers could choose from some of the options and programs noted above, and any others to meet specific point targets specified in the rule.

4. Spare the Air Program

The SJVAPCD developed an educational program to notify the public when unhealthy levels of air pollution are forecasted during the summer months. On these days, the public is encouraged to reduce emissions by avoiding the use of gas-powered garden equipment, aerosol spray cans, charcoal lighter fluid for barbecue grills, oil-based paint, and non-essential automobile use. The public is notified by radio and television and through employers who sign up to participate and notify their employees. There are nearly 700 employers, representing 300,000 employees that are participating in the Spare the Air Program.

In the winter months, particulate matter pollution from lighting a fireplace or stove that burns wood, pellets, or manufactured logs contributes to unhealthy air quality. The "Check Before You Burn" Program is initiated between November and February each year. This program helps to discourage or prohibit the use of burning when the air quality is expected to be unhealthy. Residents who disregard the program may receive a Notice of Violation and be subject to fines. Fines for first-time violations start at \$50. There are several exemptions to this program including homes in areas with out natural-gas service or homes above 3,000 feet elevation. More information on any program sponsored by the SJVAPCD can be found online at www.valleyair.org.

IV. FINANCIAL ELEMENT

To finance the implementation of TCMs, various local, regional, state, and federal funding programs are available.

A. FEDERAL SOURCES

1. Congestion Mitigation and Air Quality

Congestion Mitigation and Air Quality (CMAQ) program funds are allocated to a Metropolitan Planning Organization (MPO) in designated non-attainment areas such as the San Joaquin Valley Air Basin. These funds are to be directed toward transportation projects that will contribute to meeting air quality standards in non-attainment areas for ozone, carbon monoxide, PM-10 and PM 2.5. Priority is to be given to implementing those projects that have documented emissions reductions associated with them and are included in the approved State Implementation Plan (SIP) for air quality as a TCM.

2. SAFETEA-LU

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the largest surface transportation investment in our Nation's history, was signed into law on August 10, 2005. SAFETEA-LU builds on the foundation of the Transportation Enhancement Activities (TEA-21) program and the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.

Several specific provisions are now required under SAFETEA-LU and include but are not limited to, incorporating visualization techniques to assist the public in understanding a project from early on and going to the general public and stakeholders with an extensive public participation effort in the beginning phases and throughout the development of a plan or project. The planning process must now consider and incorporate the existing resources available to an agency, rather than creating a transportation plan or developing a project with the historical isolated practices. SAFETEA-LU guarantees \$244.1 billion for highways, highway safety, and public transportation.

3. Federal Transit Act

This act provides funds to non-urbanized areas for various transit operating and capital assistance projects. Funds are available on a competitive basis or by regional apportionments under several programs for public and private non-profit transit providers, elderly and handicapped transit services, and intercity bus services. Eligible projects include those that provide access to mass transit facilities or to install racks or other equipment for transporting bicycles on mass transit.

4. Surface Transportation Program

This program provides funds that can be used for construction, rehabilitation and operational improvements for highways and bridges. This would include projects that are necessary to accommodate other transportation modes like transit and for bicycle transportation and pedestrian walkways principally for transportation, and for carrying out nonconstruction projects related to safe bicycle use. Funds could also be used to support transportation demand management, or rideshare programs.

B. STATE SOURCES

1. Bicycle Transportation Account

The amount of funding made available statewide each year through the Bicycle Transportation Account (BTA) is \$7 million per year. Funds are to be used for discretionary grants to fund the construction of non-motorized transportation facilities. No single agency may receive more than 25% of the amount deposited in the BTA in a single fiscal year. Grant funds cover up to 90 percent of a project's costs.

To be eligible for funding, a city or county must have an adopted bicycle plan that is consistent with the Regional Transportation Plan and the California Bikeways Act. The "Kings County Regional Bicycle Plan" and the "Lemoore Bikeways Plan" have both been certified by Caltrans. Therefore, local agencies are able to apply for these funds for projects that are included in the certified bike plans.

2. Environmental Enhancement and Mitigation Program

This program is designed to fund environmental enhancement and mitigation projects which are directly or indirectly related to the environmental impact of modifying existing transportation facilities, or for the design, construction, or expansion of new transportation facilities beyond the scope of the lead agency. Typical projects that may be eligible for funding include highway landscaping, acquisition of resource lands to mitigate the loss of land for right-of-way purposes, and roadside recreational opportunities. These funds are often used to match federal TEA funds.

C. REGIONAL SOURCES

1. REMOVE II

The Reduce Motor Vehicle Emissions (REMOVE II) funds are administered by the SJVAPCD to fund projects in the region that reduce emissions from motor vehicles. Funds are derived from a \$4 vehicle registration fee and are selected for funding on a competitive basis.

2. Heavy Duty Engine Program

The SJVAPCD also allocates funds for the implementation of new reduced emission technology. Applicants obtain approval from the SJVAPCD before purchasing and installing the engines. Funding categories include heavy-duty off-road vehicles, electric forklifts, and stationary agricultural irrigation pump engines. With the exception of agricultural engines that pump irrigation water, self-propelled vehicles are the only ones eligible for funding. Funds are provided on a first come first serve basis.

3. On Road Voucher Incentive Program

This program streamlines the process of replacing old, high-polluting heavy duty diesel trucks with newer, lower emission trucks. Vouchers are provided to truck owners toward replacing older vehicles.

4. Burn Cleaner Wood Stove Change-out Program

The air district also offers funding for residents to upgrade their wood-burning fire places to cleaner burning natural or propane gas stoves. This program helps reduce the number of particulates in the air.

5. Clean Green Yard Machine

This program enables valley residents to replace older gasoline-powered lawnmowers with electric lawnmowers. Gasoline-powered mowers can emit as much pollution as 40 newer automobiles.

6. Lower Emission School Bus Program

Funding is available to replace pre-1977 and the oldest 1977-1986 school buses with a retrofit of 1987 and newer buses with an ARB Level 3 verified emission control device.

7. Carl Moyer Program

The SJVAPCD and the Great Basin Unified Air Pollution Control District jointly administer the Carl Moyer Program. The program provides incentive funds for the implementation of new reduced emission technology. Categories include heavy duty on-road vehicles, off-road vehicles, and stationary agricultural irrigation pump engines.

D. LOCAL SOURCES

1. Transportation Development Act (TDA)

The Transportation Development Act of 1971 instituted a regular funding source for various local transportation programs. Special emphasis is given to local transit systems through the Local Transportation Fund (LTF) and the State Transit Assistance (STA) fund.

Of the LTF revenue that becomes available each year in Kings County, about 40 percent is normally directed to support local transit services. Up to two percent of each county's annual LTF can also be claimed by local jurisdictions to be used for installing or maintaining bicycle and pedestrian facilities and bicycle safety programs. STA funds can only be used for transit.

CHAPTER 11

FINANCIAL ELEMENT

I. OVERVIEW

Previous chapters of this 2011 RTP provided a description of each funding program by source and transportation mode. This Financial Element is intended to provide a summary table of the revenues available from specific federal, state and local governmental funding programs to fund the costs of implementing the Regional Transportation Plan. These resources are constrained to what is expected to be reasonably available during the 20-year planning period of the RTP.

II. ASSUMPTIONS

The assumptions used for each of the various federal, state, and local revenue projections are based upon the best available data provided for KCAG and Caltrans. These assumptions are based upon current information and do not reflect any attempt to predict future federal, state, or local actions or resolve currently pending issues.

Kings County is an urbanized area and is eligible for funding from additional programs not available to rural areas.

In developing the revenue projections for the RTP in the corresponding tables, the following assumptions were used:

A. FEDERAL FUNDS

The programs of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) are expected to continue or be replaced by similar programs throughout the life of the RTP following reauthorization.

1. Regional Surface Transportation Program (RSTP)

Funds from the federal Regional Surface Transportation program are based on the historical apportionment provided to Kings County in ISTEPA, TEA-21, and SAFETEA-LU. Estimates beyond the life of SAFETEA-LU are assumed to be equal to those currently available.

2. Congestion Mitigation and Air Quality (CMAQ)

Funds from the CMAQ program are based on the fund estimates received from Caltrans through the fiscal year (FY) 2013/14. Estimates beyond FY 2013/14 are established by a regression formula for fund projection based on the historical apportionment of CMAQ funds provided to Kings County. Estimates beyond the life of SAFETEA-LU are assumed to be equal/progressive to those currently available.

3. Transportation Enhancement (TE)

Funds from the TE program are assumed to be 10% of the RSTP apportionment.

4. Bridge Rehabilitation and Replacement, Barrier Rail Replacement Program, Railroad/Highway Grade Crossing, Hazard Elimination Safety

These are state-managed programs for projects in cooperation with local jurisdictions and there is no guarantee that funding will be received. However, it is reasonable to expect that Kings County will receive an equitable share similar to what it has received in the past.

5. Federal Transit Act - Technical Planning Assistance

KCAG may apply annually for these funds. Caltrans generally limits the amount of funding per project from \$5,000 to \$40,000.

6. Federal Transit Act - Section 5310

Applications must compete statewide for limited funding. Funding projections are based on historical amounts received.

7. Federal Transit Act - Section 5311

Kings County is expected to continue to receive annual apportionments based on historical amounts. Funding is expected to be used for operating assistance.

8. Federal Transit Act - Section 5307

Kings County is expected to continue to receive annual apportionments based on historical amounts. Funding is expected to be used for operating and capital assistance.

9. Jobs Access / Reverse Commute

Funds are not guaranteed under this program and Kings County transit operators are expected to apply for these competitive grant funds in the future. However, no revenues are projected.

10. Airport Improvement Program

Projected revenues are based on historical amounts and are expected to remain constant over the RTP planning period.

11. National Highway Safety Act

No revenues are projected from this funding source.

12. National Recreational Trails Fund

No revenues are projected from this funding source.

B. STATE FUNDS

1. Gas Tax

Funds from the State gas tax are based on the historical apportionments provided to Kings County jurisdictions. Projected increases are based on Caltrans' estimates of fuel consumption through 2030.

2. State Transportation Improvement Program

STIP revenues are based on actual regional share dollars available to Kings County in the 2010 STIP Fund Estimate.

3. California Aid to Airports

It is expected that the annual \$10,000 grants will continue to be available to the Hanford Municipal Airport. Projected revenues from the Acquisition and Development Grant program are based on historical programmed amounts and are assumed to be lower.

4. Bicycle Transportation Account

This is a competitive program. Projected revenues are based on historical amounts received by Kings County jurisdictions and are assumed to increase due to increased funding for the program.

5. Office of Traffic Safety

No revenues are projected from this source.

6. Environmental Enhancement and Mitigation

No revenues are projected from this source.

7. Proposition 1B: The Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006

This measure authorizes the state to sell approximately \$20 billion of general obligation bonds to fund transportation projects to relieve congestion, improve the movement of goods, improve air quality, and enhance the safety and security of the transportation system. KCAG received funds from the Corridor Mobility Improvement Account for widening of SR 198. There are no further projections of funding from Prop 1B.

B. LOCAL FUNDS

1. Transportation Development Act

Projected revenues are based on the most recent apportionments and are expected to increase at a rate of 1% per year over the RTP planning period.

2. General Fund

Projected revenues are based on historical amounts received by each jurisdiction and are expected to decrease over the RTP planning period.

3. Transportation Impact Fees

The City of Hanford is expected to continue receiving revenues as development occurs. The City of Lemoore has instituted an impact fee program since the previous RTP and will be receiving revenues as development continues. No traffic impact fees for other jurisdictions are proposed at this time.

Since 1992, the City of Lemoore has maintained Development Impact Fees for City traffic-related infrastructure needs directly attributable to new development. These fees have been indexed in time with the California Construction Cost Index, as costs for the identified project have increased over time. As part of a citywide study in 2005, it was determined that the separate fees should be determined for areas with significantly different existing infrastructure: the mostly-developed portion of the City east of 19 ½ Avenue, and the almost undeveloped western portion of the City. The Eastside Streets and Thoroughfares Fee was adopted in 2006; the Westside Streets and Thoroughfares Fee is currently the subject of a new study, and will likely be set in late 2010. In keeping with the Mitigation Fee Act, the collected fees are used exclusively for new infrastructure, and never used for maintenance of existing or upgrading of existing deficiencies in the infrastructure level.

4. Passenger Fares

Projected revenues are based on historical amounts received and are expected to increase over the RTP planning period.

5. Air District Grants

Projected revenues are based on historical amounts received and are expected to remain constant.

III. SUMMARY OF REVENUES AND EXPENDITURES

FIGURE 11-1

**SUMMARY OF REVENUES
(In Millions of \$)**

PROGRAM	APPLICABLE USES	2011 - 2016	2017 - 2035	TOTAL
FEDERAL FUNDS				
Regional Surface Transportation Program	Highways, Roads, Transit, Non-Motorized, TDM, TCM	\$9.4	\$	\$43.0
Congestion Mitigation and Air Quality	Roads, Transit, Non-Motorized, TDM, TCM	\$9.6	\$34.1	\$43.7
Highway Bridge Program (Formerly HBRR)	Highways, Roads	\$5.0	\$21.0	\$26.0
Highway/Railroad Grade Crossing Improvements	Highways, Roads	\$1.9	\$5.0	\$6.9
Hazard Elimination Safety Program	Highways, Roads	\$0.5	\$2.1	\$2.6
Federal Transit Act	Transit	\$0.3	\$1.3	\$1.6
Airport Improvement Program	Aviation	\$3.5	\$10.0	\$13.5
Transportation Enhancement	Highways, Non-Motorized	\$0.9	\$3.4	\$4.3
National Highway Safety Act	Highways, Non-Motorized	\$0.0	\$0.0	\$0.0
National Recreational Trails Fund	Non-Motorized	\$0.0	\$0.0	\$0.0
TOTAL FEDERAL FUNDS		\$31.1	\$76.9	\$141.6
STATE FUNDS				
Gas Tax	Highways, Roads, Transit	\$22.0	\$92.5	\$114.5
State Transportation Improvement Program	Highways, Roads	\$30.0	\$90.0	\$120.0
California Aid to Airports Program	Aviation	\$0.5	\$2.1	\$2.6
Bicycle Transportation Account	Non-Motorized	\$0.0	\$0.0	\$0.0
Office of Traffic Safety	Roads, Non-Motorized	\$0.0	\$0.0	\$0.0
Environmental Enhancement and Mitigation	Highways, Roads	\$0.0	\$0.0	\$0.0
TOTAL STATE FUNDS		\$52.5	\$184.6	\$237.1
LOCAL FUNDS				
Transportation Development Act	Roads, Transit, Non-Motorized	\$9.5	\$40.0	\$49.5
General Fund	Highways, Roads, Transit, Non-Motorized, Aviation, TDM, TCM	\$23.0	\$96.7	\$119.7
Transportation Impact Fees	Roads, Transit, Non-Motorized	\$2.0	\$8.4	\$10.4
Passenger Fares	Transit	\$1.9	\$8.3	\$10.2
Air District Programs	Transit, Non-Motorized, TDM, TCM	\$0.2	\$0.8	\$1.0
TOTAL LOCAL FUNDS		\$36.6	\$154.2	\$190.8
TOTAL ALL FUNDS		\$120.2	\$449.3	\$569.5

FIGURE 11-2

**SUMMARY OF EXPENDITURES
(In Millions of \$)**

MODE	AMOUNT	PERCENT OF TOTAL
Operations and Maintenance	271.7	47.7
Safety	51.6	9.1
Bike-Pedestrian	2.7	0.4
Transit	95.9	16.9
Airports	16.1	2.8
Rail	0.80	0.1
Highways	112.9	19.8
Other	17.8	3.1
	\$ 569.50	100%

APPENDICES

- I. Inventory of Countywide Regional Routes
 - A. State Routes
 - B. County-Maintained Regional Routes
 - C. Avenal Regional Routes
 - D. Corcoran Regional Routes
 - E. Hanford Regional Routes
 - F. Lemoore Regional Routes
- II. Unconstrained Projects Lists
- III. Environmental Document
- IV. San Joaquin Valley Chapter
- V. Review and Comment

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APPENDIX I

INVENTORY OF COUNTYWIDE REGIONAL ROUTES

This appendix is concerned with the following issues:

- What is the physical condition of Kings County's regional routes?
- What volume of traffic is now, and will be, carried by the regional routes?
- How efficiently do the roads handle existing traffic?
- What sorts of improvements will help the regional routes efficiently serve present and future traffic?

To answer these questions, an inventory of the countywide regional routes is presented. For each road, various structural and functional characteristics are tabulated, and needed improvements are discussed. At the heart of each analysis are two important, closely related, measures of highways: capacity and level of service. This appendix is merely for informational purposes only and any projects listed are not to be considered specifically for programming purposes.

Highway Capacity is simply a measure of road's ability to carry traffic. For planning purposes, highway capacity is calculated for peak-hour traffic loads. Based on the Highway Capacity Manual and the Florida Tables, it is estimated that under ideal conditions, a two-lane conventional highway can carry up to 2,800 vehicles per hour with the default for the Florida Tables being set at 2,600 vehicles per hour. Several components must be taken into account when calculating the peak-hour capacity on any given roadway such as road condition, lane width, shoulder width, percentage of truck traffic, and traffic engineering judgment. However, when traffic volumes approach the road's capacity, operating conditions worsen. Therefore, traffic volumes must be kept below a road's capacity in order to maintain an adequate level of service.

Level of Service denotes a road's efficiency in handling its average and peak-hour demands. Level of service evaluations express the effects of road geometrics and traffic volumes on the driver's speed, safety, convenience, comfort, and economy. The most important factor is the average speed, followed by road geometrics and traffic factors. It should be noted that levels of service differ between rural and urban roads. Service descriptions are relative to their context. The following six levels of service are used:

- Level A: Free flow. Low traffic volumes and high speeds; few if any restrictions in maneuverability. This level is possible only if speeds of 60 mph or higher are maintained.
- Level B: Stable flow. Operating speeds and maneuverability only slightly restricted by traffic and/or road conditions. This is the desired level for state routes and rural roads.
- Level C: Stable flow. Operating speed and maneuverability are more restricted by increasing traffic. Drivers are limited in freedom to change lanes or pass, but reasonable operating speeds can be maintained. This is the desired level for urban roads.

Level D: Unstable flow. Fluctuations in traffic volumes result in operating speeds that are considerably restricted. Drivers have little freedom to maneuver. Comfort and convenience are low, but can be tolerated for short periods.

Level E: Unstable flow. Traffic volumes are at or near capacity. Very low operating speeds with momentary stops.

Level F: Forced flow. Zero or low operating speeds. Roadway becomes a storage area for idling cars. Also known as a traffic jam.

In the inventories that follow, two general factors affecting capacity and level of service are examined: road conditions and traffic factors. The information was gathered from state highway inventories and from county and city road maintenance programs. Where hard data was not available, estimates have been calculated with the help of local engineering staffs. Attached to each road's inventory is a discussion of its physical deficiencies, followed by a listing of candidate improvements to correct them. The most significant regional candidate projects are shown in the programming tables in Chapter 4: The Regional Highway System. The following factors are examined:

ROAD CONDITIONS

Lane Width: The narrower the lane, the lower the capacity of a road. Narrow lanes also adversely affect user safety and maneuverability, as well as driver's comfort and convenience. A 12-foot travel lane is deemed ideal.

Paved Shoulder Width: If the capacity and service level of a road is to be maintained, adequate shoulders are needed. They increase the width of the roadway thus enabling better maneuverability, and provide a place of refuge for disabled vehicles. A closely-related factor, lateral clearance, is also involved. If walls, poles, parked cars, or guardrails are closer than, say, 6 feet from the edge of the travel lane, the effective capacity of the road is diminished. Eight-foot shoulders are deemed ideal.

Pavement Distress: There are several general types of pavement distress conditions. These include: pitting and raveling; fatigue cracking; shrinkage cracking; rutting and shoving; and base failures. These conditions are expressed in terms of the extent of the roadway showing them, and their severity.

Other Factors: Highway alignment affects both stopping and passing sight distances. Grades and turns affect sight distances, stopping distances, and truck climbing speeds. Interruptions, such as traffic lights and stop signs, and railroad crossing devices, intentionally regulate traffic flow, and thus alter a road's capacity and level of service. During wet winters, flooding occurs in low areas of some regional routes.

TRAFFIC FACTORS

Average Daily Travel (ADT) is an estimate of the average daily number of cars and trucks over a section of roadway. The adequacy of a road, however, is not judged according to the ADT, but according to how well the road carries its peak-hour demand.

Trucks: Over level Valley highways, large trucks displace about 2-3 cars each. This reduces the number of cars that can use the road per hour. In urban and in hilly areas, slow truck speeds even further reduce a road's capacity. In addition, trucks are major contributors to pavement deterioration.

Present Service Level: See above discussion.

Present Peak-Hour Volume is the estimated average number of vehicles traveling during the peak hour of each day over a section of highway.

Peak-Hour Capacity is the estimated highest number of vehicles that can travel over a section of road in one hour. Traffic engineers use various formulas (see Highway Capacity), that include many elements discussed in this inventory, to calculate a road's peak-hour capacity.

Hour Volume/Hour Capacity: Also known as the volume-to-capacity (v/c) ratio, this figure shows how close to capacity a road operates during its peak hour.

APPENDIX I-A

STATE ROUTES

Interstate 5

SR 33

SR 41

SR 137

SR 198

SR 269 (See under City of Avenal)

(See Figure 4-2 and 4-3 for Rural and Urban Functional Classifications)

INTERSTATE 5

From: Kern County Line
To: Fresno County Line
Survey Date: 5/02

SEGMENT: Segment Length:	Kern County Line to SR 41 PM .00/16.6	SR 41 to Avenal Cutoff Rd. PM 16.6/25.4	Avenal Cutoff Rd. to Fresno Co. PM 25.4/26.7
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	4/12'	4/12'	4/12'
Paved Shoulder Width	10'	10'	10'
Pavement Distress			
Type *	Transverse Crack	Transverse Crack	Transverse Crack
Extent: % of Roadway	< 25%	< 10%	< 25%
Severity	Moderate	Slight	Moderate
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Annual Average Daily Traffic			
Year 2008	32,500	27,000	30,000
Year 2035	48,660	48,193	47,604
% Trucks in 2008 ADT	30.5%	30.5%	30.5%
Present Service Level	B	B	B
Present Peak Hour Volume	3,550	3,650	3,500
Peak Hour Capacity	3,720	3,720	3,720
Hour Volume/Hour Capacity	.62	.53	.53

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

INTERSTATE 5

SYSTEM CONTINUITY (Highway Sphere of Influence): Interstate 5 is a four-lane freeway cutting 26.72 miles across the southwestern portion of the county. Stretching from Mexico to Canada, I-5 has three interchanges in Kings County.

Local use: most of its users are traveling through or out of the county. This route is not important for local travel of commuters.

DISCUSSION: Interstate 5 continues to efficiently carry much of the West Coast's north-south traffic. No major improvements are recommended for the next five years. Due to steady growth in all major population centers served by I-5 (Seattle, Portland, Sacramento, Bay Area -- via I-580, Los Angeles, and San Diego), the route's traffic load in Kings County is expected to reach light-to-moderate congestion levels by 2025. This will be compounded by larger numbers of conventional and oversize long-haul trucks. An additional lane in each direction will be needed to accommodate this heavy demand.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Install Changeable Message Signs Near Fresno Co. Line	Not Available	Not Available
Construct Safety Roadside Rest Area Near Kern Co. Line	Not Available	Not Available
AC Overlay Near SR 41 to Fresno County Line	Not Available	Not Available
Widen from 4 to 6 lanes Kern Co. Line to Fresno Co. Line	Not Available	Not Available

STATE ROUTE 33

From: Kern County Line
To: Fresno County Line
Survey Date: 5/02

SEGMENT: Segment Length:	Kern Co. to SR 41 PM 0.0/7.8	SR 41 to SR 269 PM 7.8/14.3	SR 269 to Fresno Co. PM 14.3/19.0
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/11'	2/12'	2/11-12'
Paved Shoulder Width	0'	1'	1-8'
Pavement Distress			
Type*	1 & 2	Cracking	Cracking
Extent: % of Roadway	25% - 50%	< 10%	< 25%
Severity	Moderate	Slight	Moderate
Striping/Reflector Condition			
Center	Fair	Good	Good
Sides	Fair	Poor	Good
Other		Flooding Zone	
<u>TRAFFIC FACTORS**</u>			
Annual Average Daily Traffic			
Year 2008	1,500	2,400	2,650
Year 2035	4,365	6,113	6,474
% Trucks in 2008 ADT	8%	8%	8%
Present Service Level	A	A	A
Present Peak Hour Volume	230	210	200
Peak Hour Capacity	1,390	1,900	1,880
Hour Volume/Hour Capacity	.17	.11	.11

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System; City of Avenal

* 1. Fatigue Cracking; 2. Pitting and Raveling; 3. Rutting and Shoving

** See discussion under "Inventory of Countywide Regional Routes."

STATE ROUTE 33

SYSTEM CONTINUITY (Highway Sphere of Influence): State Route 33 runs for 18.99 miles through the extreme southwestern portion of Kings County in a northwest to southeast direction. While it provides a way to travel from Ventura County to San Joaquin County, its main importance to Kings County is that it links Avenal with Coalinga and SR 41.

DISCUSSION: After I-5 was completed in 1972, SR 33 experienced a steady reduction in traffic. This condition was reversed as travel to the prison facility in Avenal grows.

The main problems of SR 33 are these:

1. Poor geometrics. Between the Kern County Line and SR 41, the road has no shoulders, and passing visibility is severely limited.
2. Pavement distress. Within the Avenal city limits, shoulders consist largely of dirt and gravel.
3. Drainage. Within the Avenal city limits, flooding and drainage are a serious problem on sections of SR 33. Large volumes of water flowing to the southwest cross SR 33 at San Joaquin Street, and between Second and Fourth Streets. At Tar Canyon Road, flood waters cross SR 33 from west to east, depositing quantities of mud on the road surface.
4. Odd angled intersections should be closed or reconfigured to improve traffic safety.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
AC Overlay: From SR 41 to Fresno Co. Line	Not Available	Not Available

STATE ROUTE 41

From: Kern County Line
To: Aqueduct
Survey Date: 5/02

SEGMENT: Segment Length:	Kern Co. to SR 33 PM 0.0/8.1	SR 33 to I-5 PM 8.1/16.3	I-5 to Bernard Dr. PM 16.3/16.7	Bernard Dr. to Aqueduct PM 16.7/17.0
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/12-16'	2/12-14'	2-4/12'	2/12'
Paved Shoulder Width	0-4'	1-4'	4-10'	4'
Pavement Distress	None	None		
Type	-	-	Cracking	Cracking
Extent: % of Roadway	-	-	< 10%	< 10%
Severity	-	-	Slight	Slight
Striping/Reflector Condition				
Center	Good	Good	Good	Good
Sides	Good	Good	Good	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Annual Average Daily Traffic				
Year 2008	6,400	9,200	5,500	6,600
Year 2035	7,966	7,730	10,113	9,657
% Trucks in 2008 ADT	18%	25.3%	18%	16%
Present Service Level	B	A	C	A
Present Peak Hour Volume	1,250	850	1,150	850
Peak Hour Capacity	1,620	1,620	3,720	1,860
Hour Volume/Hour Capacity	.77	.52	.31	.46

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System
 * See discussion under "Inventory of Countywide Regional Routes."

STATE ROUTE 41 - Cont'd

From: California Aqueduct
To: Jackson Avenue
Survey Date: 5/02

SEGMENT: Segment Length:	Aqueduct to Milham Ave. PM 17.0/18.4	Milham Ave. to Nevada Ave. PM 18.4/28.4	Nevada Ave. to Jersey Ave. PM 28.4/36.7	Jersey Ave. to Jackson Ave. PM 36.7/37.8
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/12'	2/12'	2/12'	2/12'
Paved Shoulder Width	1-10'	2-3'	0-8'	8'
Pavement Distress			None	
Type	Cracking	Rutting		Cracking
Extent: % of Roadway	<15%	<10%		<10%
Severity		Slight		Slight
Striping/Reflector Condition				
Center	Fair	Good	Good	Good
Sides	Good	Good	Good	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Annual Average Daily Traffic				
Year 2008	6,600	7,800	7,800	7,600
Year 2035	9,643	9,446	10,062	12,247
% Trucks in 2008 ADT	16%	16%	16%	16%
Present Service Level	A	A	A	A
Present Peak Hour Volume	850	800	1,050	1,050
Peak Hour Capacity	1,790	1,630	1,840	1,900
Hour Volume/Hour Capacity	.47	.49	.57	.55

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

STATE ROUTE 41 - Cont'd

From: Jackson Avenue
To: Belle Haven Dr.
Survey Date: 5/02

SEGMENT: Segment Length:	Jackson Ave. to S. of SR 198 PM 37.8/39.3	S. of SR 198 to SR 198 PM 39.3/40.1	SR 198 to Belle Haven Dr. PM 40.1/40.4
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	2/12-20'
Paved Shoulder Width	8'	8'	8'
Pavement Distress	None	None	None
Type			
Extent: % of Roadway			
Severity			
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Annual Average Daily Traffic			
Year 2008	7,600	13,900	19,400
Year 2035	18,630	28,782	42,980
% Trucks in 2008 ADT	16%	13%	13%
Present Service Level	A	B	C
Present Peak Hour Volume	1,150	1,150	1,500
Peak Hour Capacity	1,900	1,900	1,820
Hour Volume/Hour Capacity	.61	.61	.82

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

STATE ROUTE 41 - Cont'd

From: Belle Haven Dr.
To: Fresno County
Survey Date: 5/02

SEGMENT: Segment Length:	Belle Haven Dr. to Hanford-Armona Rd. PM 40.4/42.1	Hanford-Armona Rd. to Grangeville Blvd. PM 42.1/44.1	Grangeville Blvd. to Fresno County PM 44.1/48.3
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2-4/11-12'	4/12'	4/12'
Paved Shoulder Width	1-8'	8'	8'
Pavement Distress	None	Fatigue	None
Type		Cracking	
Extent: % of Roadway		< 10%	
Severity		Slight	
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Annual Average Daily Traffic			
Year 2008	19,400	15,500	16,700
Year 2035	28,112	32,216	26,794
% Trucks in 2008 ADT	13%	13%	16%
Present Service Level	B	B	B
Present Peak Hour Volume	1,750	2,050	1,750
Peak Hour Capacity	1,920	3,530**	3,840**
Hour Volume/Hour Capacity	.91	.58	.46

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System
 * See discussion under "Inventory of Countywide Regional Routes."
 ** One direction only.

STATE ROUTE 41

SYSTEM CONTINUITY (Highway Sphere of Influence): State Route 41 transects Kings County in 48.28 miles between Kern and Fresno Counties. Like SR 198, it is one of California's few cross-Valley highways. Because it joins Morro Bay with Yosemite National Park, it carries a high percentage of tourist traffic. It is used heavily by truckers, and it is also an important commuter corridor between Lemoore and LNAS and the Fresno metropolitan area.

SR 41 is a two-lane road for 42 miles between the Kern County line and just south of the Hanford-Armona Road. There it becomes a four-lane expressway for about 6 miles to the Fresno County Line, where it narrows again to a two-lane, heavily used road to SR 99.

DISCUSSION: South of SR 198, State Route 41 shows some evidence of neglect. Besides its generally poor geometrics south of Jackson Avenue, it has these problems:

1. Pavement Distress. Although State Route 41 is in good condition at this time, it tends to deteriorate at an accelerated rate due to the road's high percentage of trucks and farm-related equipment.
2. Inadequate shoulders in some places.
3. Congestion at the I-5 interchange at Kettleman City.

Improvements are needed between I-5 and the Kern County line. The above factors are aggravated by the hilly terrain, slow trucks, and restricted sight distances.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Construct left turn channelization: .8 mile north of Jersey Avenue to .3 mile north of Jackson Avenue	2010	\$2,753
Rehabilitate roadway: Utica Avenue to Quail Avenue	2010	\$31,617
Hanford Armona Road to Grangeville Boulevard	2010	\$28,932
Construct passing lanes: Various locations from Kern Co. Line to SR 33 Avenal Creek to s/o SR 33 Utica Avenue to I-5 Newton Avenue to 22nd Avenue	Not Available	Not Available
Construct interchange: Grangeville Boulevard Hanford-Armona Road	Not Available	Not Available
Widen to 4 lanes and construct interchange: SR 198 to Jackson Avenue	Not Available	Not Available
Widen from 2 to 4 lanes: Kettleman City to Jackson Avenue SR 33 to I-5	Not Available	Not Available
Widen Shoulders and Construct Passing Lanes: Kern Co. Line to SR 33	Not Available	Not Available

STATE ROUTE 43

From: Tulare County Line
To: Houston Avenue
Survey Date: 5/02

SEGMENT: Segment Length:	Tulare Co. to Pickerell Ave. PM 0.0/2.2	Pickerell Ave. to Santa Fe Ave. PM 2.2/3.7	Santa Fe Ave. to Houston Ave. PM 3.7/16.4
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2-4/12'	2-4/12'	2/12-18'
Paved Shoulder Width	8'	8'	8'
Pavement Distress	None	None	None
Type			
Extent: % of Roadway			
Severity			
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Annual Average Daily Traffic			
Year 2008	4,100	5,500	8,300
Year 2035	7,328	8,770	11,977
% Trucks in 2008 ADT	28%	28%	12%
Present Service Level	A	B	B
Present Peak Hour Volume	460	660	710
Peak Hour Capacity	1,840	1,840	1,840
Hour Volume/Hour Capacity	.25	.36	.39

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

STATE ROUTE 43 - Cont'd.

From: Houston Avenue
To: Fresno County Line
Survey Date: 5/02

SEGMENT: Segment Length:	Houston Ave. to SR 198 PM 16.4/18.2	SR 198 to 10th Ave. PM 18.2/22.3	10th Ave. to Fresno County PM 22.3/27.3
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12-18'	2/12'	2/12'
Paved Shoulder Width	8'	3-8'	8'
Pavement Distress	None	None	None
Type			
Extent: % of Roadway			
Severity			
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Annual Average Daily Traffic			
Year 2008	10,300	10,700	10,200
Year 2035	10,698	16,585	17,764
% Trucks in 2008 ADT	17%	19%	19%
Present Service Level	B	B	C
Present Peak Hour Volume	730	1,000	1,100
Peak Hour Capacity	1,860	1,840	1,880
Hour Volume/Hour Capacity	.39	.54	.59

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System
 * See discussion under "Inventory of Countywide Regional Routes."

STATE ROUTE 43

SYSTEM CONTINUITY (Highway Sphere of Influence): State Route 43, also known as the Central Valley Highway, extends from SR 119 and I-5 in western Kern County to SR 99 in Selma. In Kings County it is 27.29 miles long and is the primary link between Hanford and Corcoran, and between Hanford and the Fresno metropolitan area. SR 43 is a two-lane expressway in Kings County. Due to its proximity to the Tulare Lake Basin, it carries a high percentage of agricultural truck traffic.

DISCUSSION:

In terms of its volume to capacity ration, SR 43 is generally operating satisfactorily between the Tulare County line and 10th Avenue. Congestion and a much higher-than-average accident rate occurs between Pickerell and Santa Fe Avenues, because of three odd-angle intersections.

Between 10th Avenue and the Fresno County Line, the road's traffic volume more than doubles. During commute hours this section of highway operates at service level C. As Hanford and the Fresno metropolitan areas continue to accommodate this demand, construction of a 4-lane expressway from SR 198 to SR 99 in Fresno County is recommended. A park-and-ride lot is located at 10th Ave. to accommodate commuters between Corcoran, Hanford and Fresno.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Lengthen left turn channelization and install traffic signals: From .8 miles north of Elder Avenue to .8 miles south of Dover Avenue	2010	\$3,090
Construct round-about or traffic signals: At SR 137 (Whitley Avenue)	Not Available	Not Available
Relocate Intersection: In Corcoran at 5 ½ Avenue	Not Available	Not Available
AC Overlay and widen shoulders: Tulare County Line to SR 137	Not Available	Not Available
Gateway: 10th Avenue	2011	\$500
Widen to 4 lane expressway: Fresno County Line to 10th Avenue 10th Avenue to Houston Avenue Houston Avenue to Tulare County Line	Not Available	Not Available

STATE ROUTE 137

From: SR 43
To: Tulare County Line
Survey Date: 5/02

SEGMENT: Segment Length:	SR 43 to Tulare County PM 0.0/2.1
<u>ROAD CONDITIONS</u>	
Lanes/Lane Width	2/12'
Paved Shoulder Width	2'
Pavement Distress	Fatigue
Type	Cracking
Extent: % of Roadway	< 25%
Severity	Slight
Striping/Reflector Condition	
Center	Fair
Sides	Fair
Other	
<u>TRAFFIC FACTORS*</u>	
Annual Average Daily Traffic	
Year 2008	2,600
Year 2035	7,196
% Trucks in 2008 ADT	10%
Present Service Level	A
Present Peak Hour Volume	390
Peak Hour Capacity	1,920
Hour Volume/Hour Capacity	.20

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System
 * See discussion under "Inventory of Countywide Regional Routes."

STATE ROUTE 137

SYSTEM CONTINUITY (Highway Sphere of Influence): State Route 137 is the main link between Corcoran and the City of Tulare. Since Corcoran residents probably have as much interchange with the City of Tulare as they do with Hanford, this is an important road. Other than this, SR 137 is a 2.09 mile, low-traffic, farm-to-market road in Kings County. Poor alignments exist in Tulare County.

DISCUSSION: This road adequately serves its limited demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No Projects Identified		

STATE ROUTE 198

From: Fresno County Line
To: 18th Avenue
Survey Date: 5/04

SEGMENT: Segment Length:	Fresno County to LNAS PM 0.0/3.0	LNAS to Avenal Cutoff PM 3.0/5.0	Avenal Cutoff to SR 41 PM 5.0/8.9	SR 41 to 18th Ave. PM 8.9/10.9
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/12'	4/12'	4/12'	4/12'
Paved Shoulder Width	4-6'	8'	8'	8'
Pavement Distress	None	None	None	Fatigue
Type				Cracking
Extent: % of Roadway				< 25%
Severity				Slight
Striping/Reflector Condition				
Center	Good	Good	Good	Good
Sides	Good	Good	Good	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Annual Average Daily Traffic				
Year 2008	7,000	17,500	18,000	21,300
Year 2035	11,284	31,446	41,341	44,244
% Trucks in 2008 ADT	8%	8%	8%	9%
Present Service Level	C	B	B	B
Present Peak Hour Volume	1,700	1,700	2,000	1,700
Peak Hour Capacity	1,900	3,800*	3,880**	3,880**
Hour Volume/Hour Capacity	.89	.45	.52	.44

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System; Transportation Concept Report; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

** One direction only.

STATE ROUTE 198 - Cont'd

From: 18th Avenue
To: 12th Avenue
Survey Date: 5/04

SEGMENT: Segment Length:	18th Ave. to Houston Ave. PM 10.9/12.1	Houston Ave. to 16th Ave. PM 12.1/15.8	16th Avenue to Hanford-Armona PM 15.8/16.4	Hanford-Armona to 12th Avenue PM 16.4/17.1
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	4/12'	4/12'	4/12'	4/12'
Paved Shoulder Width	8'	8'	8'	8'
Pavement Distress	Fatigue	Fatigue	Fatigue	Fatigue
Type	Cracking	Cracking	Cracking	Cracking
Extent: % of Roadway	25%	< 10%	< 10%	< 10%
Severity	Moderate	Slight	Slight	Slight
Striping/Reflector Condition				
Center	Good	Good	Good	Good
Sides	Good	Good	Good	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Annual Average Daily Traffic				
Year 2008	21,300	27,500	32,000	27,500
Year 2035	54,510	53,832	65,319	66,059
% Trucks in 2008 ADT	9%	9%	14%	14%
Present Service Level	B	B	B	B
Present Peak Hour Volume	2,200	2,850	2,550	2,650
Peak Hour Capacity	3,840**	3,840**	3,840**	3,880**
Hour Volume/Hour Capacity	.57	.74	.66	.68

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System; Transportation Concept Report; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

** One direction only.

STATE ROUTE 198 - Cont'd.

From: 12th Avenue
To: SR 43
Survey Date: 5/04

SEGMENT: Segment Length:	12th Avenue to 10th Avenue PM 17.1/19.0	10th Ave. to 9th Ave. PM 19.0/19.8	9th Ave. to SR 43 PM 19.8/21.0
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	4/12'	4/12'	4/12'
Paved Shoulder Width	8'	8'	8'
Pavement Distress			
Type	None	None	None
Extent: % of Roadway			
Severity			
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Annual Average Daily Traffic			
Year 2008	27,500	18,300	18,000
Year 2035	58,152	33,472	39,557
% Trucks in 2008 ADT	14%	15%	15%
Present Service Level	B	B	B
Present Peak Hour Volume	2,550	2,100	1,550
Peak Hour Capacity	3,880**	3,880**	3,880**
Hour Volume/Hour Capacity	.66	.54	.40

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System; Transportation Concept Report

* See discussion under "Inventory of Countywide Regional Routes."

** One direction only.

STATE ROUTE 198 - Cont'd.

From: SR 43
To: Tulare County Line
Survey Date: 5/04

SEGMENT: Segment Length:	SR 43 to 7th Ave. PM 21.0/22.3	7th Ave. to Tulare County PM 22.3/28.3
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/12'	2/12'
Paved Shoulder Width	8'	8'
Pavement Distress		
Type	None	None
Extent: % of Roadway		
Severity		
Striping/Reflector Condition		
Center	Good	Good
Sides	Good	Good
Other		
<u>TRAFFIC FACTORS*</u>		
Annual Average Daily Traffic		
Year 2008	18,000	19,000
Year 2035	32,032	34,672
% Trucks in 2008 ADT	13%	13%
Present Service Level	B	D
Present Peak Hour Volume	1,650	1,500
Peak Hour Capacity	3,720	1,800
Hour Volume/Hour Capacity	.44	.83

Source: Caltrans: Route Segment Report, Traffic Volume on the California State Highway System; Transportation Concept Report; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

** One direction only.

STATE ROUTE 198

SYSTEM CONTINUITY (Highway Sphere of Influence): State Route 198 is the most heavily used commuter corridor in Kings County, and is of primary concern to both Kings and Tulare counties. It is one of California's few cross-Valley routes, joining the Salinas Valley with Sequoia National Park. Except for that 16.98-mile stretch of 4-lane divided highway between the LNAS main gate and SR 43, it is a conventional 2-lane road. Its total length in Kings County is 28.33 miles.

SR 198 provides direct linkage to I-5 in western Fresno County, SR 99, and the Visalia metropolitan area. As such, it has been designated as a route for oversize trucks authorized by the Federal Transportation Act. It is identified as a high emphasis focus route in the Interregional Improvement Strategic Plan.

DISCUSSION:

Kings County is concerned with three particular areas of SR 198: the 2-lane portion west of LNAS; at-grade intersections along the existing 4-lane portion; and traffic loads along the 2-lane portion into Tulare County.

1. 2-lanes west of LNAS. This segment was reconstructed in FY 83-84. It was narrow, without shoulders, and physically deteriorated to Lassen Avenue in Fresno County. If it is to carry oversize trucks, major pavement repairs are needed all of the way to I-5.
2. Interchanges. To help prevent accidents, and to facilitate better flow on an otherwise excellent stretch of 4-lane highway, interchanges are needed to replace at-grade intersections. Most needed is an interchange at 19th Avenue (which serves a rapidly growing sector of Lemoore and would replace two grade crossings), followed by 12th and 9th Avenue. An overcrossing at 16th Avenue, or closure of the crossing would complete the 4-lane segment as a freeway. Signals and turn lanes were recently added to the interchange at 18th Ave. to correct deficiencies. Once the 4-lane segment between SR 43 and SR 99 is completed, interchanges at 2nd Avenue and 7th Avenue would be constructed to complete the freeway segment.
3. 4-lanes to Tulare County. Serving as the major link to Tulare County, the 2-lane section experiences congestion during commute hours. Expected traffic increases, compounded by oversize trucks, will overly burden this road. To prevent a further decline in service levels, construction of a 4-lane expressway to SR 99 in Tulare County is currently under construction.
4. Median Barriers. As of 2007, the segment of SR 198 between Hanford and Lemoore now has concrete median barriers.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Construct Interchange: 19th Avenue	2013	36,234
9th Avenue	Not Available	Not Available
6th Avenue	Not Available	Not Available
2nd Avenue	Not Available	Not Available
21st Avenue Alignment		
Reconstruct Interchange: At 13th Avenue/Hanford Armona Road	Not Available	Not Available
12th Avenue	2015	24,024
Rehabilitate bridge decks: 14th Avenue Bridge #45-0078, Hanford-Armona Road Bridge #45-0079 and 11th Avenue Bridge #45-0038	Not Available	12,139
Modify Interchange: 18th Avenue	Not Available	Not Available
Construct Passing Lanes: Fresno Co. Line to SR 41 Fresno County Line to LNAS	Not Available	Not Available
Install Changeable Message Signs: Various Locations	Not Available	Not Available
Construct Overcrossing: At 16th Avenue	Not Available	Not Available

APPENDIX I-B

COUNTY-MAINTAINED REGIONAL ROUTES

Avenal Cutoff
Excelsior Avenue
Flint/Fremont Avenue
Grangeville Boulevard
Grangeville Bypass
Houston Avenue
Jackson Avenue
Kansas Avenue
Lacey Boulevard
Laurel Avenue
Nevada Avenue
Pueblo Avenue
Utica Avenue
Whitley Avenue
6th Avenue
10th Avenue
10 1/2 Avenue
12th Avenue
12 3/4 Avenue
14th Avenue
18th Avenue
22nd Avenue

(See Figure 4-2 for Rural Functional Classifications)

AVENAL CUTOFF

From: State Route 269
To: State Route 198
Survey Date: 4/97

SEGMENT: Segment Length:	SR 269 to Nevada Ave. 6.5 mi.	Nevada Ave. to SR 198 11.4 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/12'	2/12'
Paved Shoulder Width	4'	4'
Pavement Distress	None	None
Type		
Extent: % of Roadway		
Severity		
Striping/Reflector Condition		
Center	Good	Good
Sides	Fair	Good
Other		
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 1999	2,091	3,336
Year 2035	8,915	8,706
% Trucks in ADT	7%	15-20%
Present Service Level	B	B
Present Peak Hour Volume	289	506
Peak Hour Capacity	1,796	1,718
Hour Volume/Hour Capacity	.16	.08

Source: Kings County Public Works, KCAG; City of Avenal

* See discussion under "Inventory of Countywide Regional Routes."

** One direction only.

AVENAL CUTOFF

SYSTEM CONTINUITY (Highway Sphere of Influence): Avenal Cutoff runs for 17.9 miles between the SR 269/I-5 Interchange and SR 198. As the name indicates, it provides direct access between north Kings County, I-5, and the City of Avenal.

DISCUSSION:

At present this road adequately services its traffic demand. With travel to the Avenal Prison, Avenal has grown to become more a destination for area residents. The volume of traffic on the Avenal Cutoff has escalated significantly from about 3,000 ADT in 1981 to over 4,000 ADT in 1997. To adequately serve this demand, this road has been improved to full 12-foot lane widths with adequate shoulders and fog striping.

CANDIDATE IMPROVEMENTS		
Description	Year of Completion	Cost (\$1,000)
Overlay: From SR 198 to 25th Avenue	2029	\$588

EXCELSIOR AVENUE

From: 22nd Avenue
To: 12 ¾ Avenue
Survey Date: 4/97

SEGMENT: Segment Length:	22nd Ave. to SR 41 2.4 mi.	SR 41 to 19th Ave. .5 mi.	19th Ave. to 14th Ave. 5 mi.	14th Ave. to 12 ¾ Ave. 1.3 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/12'	2/12'	2/12'	2/12'
Paved Shoulder Width	0-2'	0-2'	0-3'	2'
Pavement Distress				
Type	Cracking	Cracking	Cracking	Cracking
Extent: % of Roadway	25-50%	25-50%	10-50%	< 35%
Severity	Moderate	Moderate	Slight/Severe	Slight
Striping/Reflector Condition				
Center	Good	Fair	Good	Good
Sides	Good	Good	Good	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 2006	1,489	2,199	3,317	(09) 3,070
Year 2035	695	2,850	3,500	5,002
% Trucks in ADT	9%	11%	10%	9%
Present Service Level	A	A	B	B
Present Peak Hour Volume	102	136	208	371
Peak Hour Capacity	1,688	1,672	1,764	1,779
Hour Volume/Hour Capacity	.06	.07	.11	.21

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

EXCELSIOR AVENUE - Cont'd.

From: 12 ¾ Avenue
To: 6th Avenue
Survey Date: 4/97

SEGMENT: Segment Length:	12 ¾ Ave. to 12th Ave. .7 mi.	12th Ave. to SR 43 2 mi.	SR 43 to 6th Ave. 4 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/11-12'	2/11-12'
Paved Shoulder Width	6'	1'	0'
Pavement Distress		None	None
Type	Cracking		
Extent: % of Roadway	< 35%		
Severity	Severe		
Striping/Reflector Condition			
Center			
Sides	Good	Good	Good
Other	Fair/Poor	Good	Fair/Good
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2006	4,521	(09) 2,750	798
Year 2035	5,002	6,875	2,519
% Trucks in ADT	6%	12%	17%
Present Service Level	B	A	A
Present Peak Hour Volume	366	235	70
Peak Hour Capacity	1,971	1,526	1,461
Hour Volume/Hour Capacity	.19	.15	.05

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

EXCELSIOR AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Excelsior Avenue serves farm and cross-country traffic for 15.9 miles between 6th Avenue and 22nd Avenue. It is often used as a route between 12th Avenue and SR 43 to connect to SR 99 for travel to the Fresno area.

DISCUSSION:

This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Year of Completion	Cost (\$1,000)
Overlay:		
From 0.25 mile west of 12th Avenue to SR 43	2019	\$451
From 14 ½ Avenue to Kings River	2019	\$432
From SR 41 to 22nd Avenue	2027	\$645
Reconstruction:		
From SR43 to 6th Avenue	2027	\$1,268

FLINT/FREMONT AVENUE

From: 6th Avenue
To: 16th Avenue
Survey Date: 4/97

SEGMENT: Segment Length:	6th Ave. to SR 43 4 mi.	SR 43 to 12th Ave. 2 mi.	12th Ave. to 14th Ave. 2 mi.	14th Ave. to 16th Ave. 2 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/12'	2/12'	2/11'	2/10-11'
Paved Shoulder Width	0'	0'	0'	0'
Pavement Distress				None
Type	Cracking	Cracking	Cracking	
Extent: % of Roadway	<25%	<10%	<25%	
Severity	Moderate	Slight	Moderate	
Striping/Reflector Condition				
Center	Fair	Good	Good	Good
Sides	None	Good	None	None
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 2006	475	1,275	625	596
Year 2035	503	6,064	778	2,463
% Trucks in ADT	5%	9%	7%	13%
Present Service Level	A	A	A	A
Present Peak Hour Volume	46	82	63	50
Peak Hour Capacity	1,752	1,688	1,672	1,628
Hour Volume/Hour Capacity	.03	.05	.04	.03

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

FLINT/FREMONT AVENUE - Cont'd.

From: 16th Avenue
To: 22nd Avenue
Survey Date: 4/97

SEGMENT: Segment Length:	16th Ave. to 18th Ave. 2 mi.	18th Ave. to SR 41 1.6 mi.	SR 41 to 22nd Ave. 2.2 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	2/12'
Paved Shoulder Width	0'	0'	0'
Pavement Distress	None	None	
Type			Cracking
Extent: % of Roadway			< 25%
Severity			Moderate
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	None	None	None
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2007	562	717	646
Year 2035	2,739	2,284	2,767
% Trucks in ADT	7%	10%	9%
Present Service Level	A	A	A
Present Peak Hour Volume	57	32	54
Peak Hour Capacity	1,719	1,672	1,688
Hour Volume/Hour Capacity	.03	.02	.03

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

FLINT/FREMONT AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Flint Avenue is another cross-county route which becomes Fremont Avenue west of 18th Ave. crossing the Kings River and linking north Kings County to State Route 41. Its primary function is to facilitate farm-related cross-county travel. The section between 18th Ave. and 22nd Ave. is a designated flood plane.

DISCUSSION:

This road adequately meets its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Overlay: From SR 43 to 12th Avenue	2014	\$425

GRANGEVILLE BOULEVARD

From: Grangeville Bypass
To: 12th Avenue
Survey Date: 4/97

SEGMENT: Segment Length:	Grangeville Bypass to 22nd Ave. 3 mi.	22nd Ave. to SR 41 2.5 mi.	SR 41 to 18th Ave. 1.5 mi.	18th Ave. to 12th Ave. 6 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/12'	2/12'	2/12'	2/12'
Paved Shoulder Width	3-4'	3-4'	0-4'	2-6'
Pavement Distress				None
Type	Cracking	Cracking	Cracking	
Extent: % of Roadway	<10%	<10%	<25%	
Severity	Slight	Slight	Moderate	
Striping/Reflector Condition				
Center	Good	Good	Fair/Good	Good
Sides	Good	Good	Fair	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 2001	(09) 4,426	3,594	3,438	(03) 6,416
Year 2035	8,090	9,017	4,860	16,616
% Trucks in ADT	5%	5%	7%	5%
Present Service Level	B	B	B	B
Present Peak Hour Volume	700	735	422	386
Peak Hour Capacity	1,847	1,847	1,813	1,933
Hour Volume/Hour Capacity	.38	.39	.23	.20

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

GRANGEVILLE BYPASS

From: Grangeville Blvd.
To: Fresno County Line
Survey Date: 4/97

SEGMENT: Segment Length:	Grangeville Blvd. to Fresno County Line 4.8 mi.
<u>ROAD CONDITIONS</u>	
Lanes/Lane Width	2/11'
Paved Shoulder Width	0'
Pavement Distress	
Type	Cracking
Extent: % of Roadway	<10%
Severity	Slight
Striping/Reflector Condition	
Center	Good
Sides	Good
Other	Sight Restrictions
<u>TRAFFIC FACTORS*</u>	
Average Daily Travel	
Year 2007	4,251
Year 2020	5,210
% Trucks in ADT	30%
Present Service Level	A
Present Peak Hour Volume	121
Peak Hour Capacity	1,310
Hour Volume/Hour Capacity	.09

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

GRANGEVILLE BOULEVARD/GRANGEVILLE BYPASS

SYSTEM CONTINUITY (Highway Sphere of Influence): Grangeville Boulevard is a direct and heavily used commuter corridor for 13.26 miles between 12th Avenue and the LNAS operations gate. It also facilitates a significant amount of farm-related cross-county travel. The Grangeville Bypass circumscribes the north boundary of LNAS in a 4.8 mile segment and carries a high percentage of truck traffic.

DISCUSSION:

Both roads adequately serve their demands. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Year of Completion	Cost (\$1,000)
Overlay:		
From SR 41 to 18th Avenue	2012	\$379
From 12 ½ Avenue to 15th Avenue	2017	\$536
From SR 41 to 22nd Avenue	2020	\$569
From 5th Avenue to 6th Avenue	2024	\$493
From 1st Avenue to 2 ½ Avenue	2024	\$319
From Highline Canal to 5th Avenue	2025	\$319
Reconstruction:		
From SR 43 to 6th Avenue	2024	\$435
From 2 ½ Avenue to Highline Canal (Reconstruct)	2024	\$493

HOUSTON AVENUE

From: 17th Avenue
To: 10th Avenue
Survey Date: 5/97

SEGMENT: Segment Length:	17th Ave. to 14th Ave. 3 mi.	14th Ave. to 12th Ave. 2 mi.	12th Ave. to 10th Ave. 2 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/11-12'	2/12'	2/12'
Paved Shoulder Width	1-2'	1-2'	1-2'
Pavement Distress	None	None	Fatigue
Type			Cracking
Extent: % of Roadway			25%
Severity			Slight
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2007	1,529	2,247	2,521
Year 2035	5,783	6,900	7,050
% Trucks in ADT	6%	6%	9%
Present Service Level	A	A	A
Present Peak Hour Volume	146	158	230
Peak Hour Capacity	1,729	1,761	1,744
Hour Volume/Hour Capacity	.08	.09	.13

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

HOUSTON AVENUE - Cont'd

From: 10th Avenue
To: Tulare County Line
Survey Date: 4/97

SEGMENT: Segment Length:	10th Ave. to SR 43 2 mi.	SR 43 to 6th Ave. 2 mi.	6th Ave. to 2nd Ave. 4 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	2/12'
Paved Shoulder Width	0'	1-3'	6'
Pavement Distress			None
Type	Cracking	Cracking	
Extent: % of Roadway	< 10%	< 10%	
Severity	Slight	Slight	
Striping/Reflector Condition			
Center	Fair	Fair	Good
Sides	Fair	Fair	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 1997	2,963	3,109	4,237
Year 2035	4,677	2,369	5,699
% Trucks in ADT	<10%	5%	11%
Present Service Level	A	B	A
Present Peak Hour Volume	295	319	274
Peak Hour Capacity	1,767	1,767	1,833
Hour Volume/Hour Capacity	.17	.18	.15

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

HOUSTON AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Houston Avenue links the southern portion of Hanford with Armona and Lemoore. It is also an important inter-county corridor. Starting at 17th Avenue near Lemoore, it crosses SR 198 and extends for 16 miles to the Tulare County Line. There it becomes Avenue 280. Many use it as an alternative to SR 198 for getting to SR 99 or the Visalia area.

DISCUSSION:

This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Maintenance: From 1st Avenue to SR 43	2013	\$1,307
Reconstruction: From 10th Avenue to 10 ½ Avenue	2017	\$275
Overlay: From SR 43 to 10th Avenue	2020	\$303
From 13th Avenue to 14th Avenue	2023	\$183

JACKSON AVENUE

From: SR 198
To: 14th Avenue
Survey Date: 4/97

SEGMENT: Segment Length:	SR 198 to SR 41 3.25 mi.	SR 41 to 18th Ave. 1.5 mi.	18th Ave. to 16th Ave. 2 mi.	16th Ave. to 14th Ave. 2 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/11'	2/11'	2/12'	2/12'
Paved Shoulder Width	2'	2'	0'	0'
Pavement Distress		None		
Type	Cracking		Cracking	Cracking
Extent: % of Roadway	50%		15%	<10%
Severity	Severe		Moderate	Slight
Striping/Reflector Condition				
Center	Fair	Good	Fair	Fair
Sides	Fair	Good	None	None
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 2007	862	1,093	1,113	(03) 1,628
Year 2035	1,799	4,135	4,287	4,734
% Trucks in ADT	12%	3%	10%	3%
Present Service Level	A	A	A	A
Present Peak Hour Volume	87	87	84	56
Peak Hour Capacity	1,484	1,404	1,508	1,472
Hour Volume/Hour Capacity	.06	.06	.06	.04

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

JACKSON AVENUE - Cont'd.

From: 14th Avenue
To: SR 43
Survey Date: 4/97

SEGMENT: Segment Length:	14th Ave. to 12th Ave. 2 mi.	12th Ave. to 10th Ave. 2 mi.	10th Ave. to SR 43 2 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	2/12'
Paved Shoulder Width	0'	0'	0'
Pavement Distress			
Type	Cracking	Cracking	Rutting
Extent: % of Roadway	<10%	<10%	<15%
Severity	Slight	Slight	Moderate
Striping/Reflector Condition			
Center	Fair	Fair	Fair
Sides	None	None	None
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2007	797	1,142	760
Year 2035	4,390	4,249	2,224
% Trucks in ADT	10%	10%	25%
Present Service Level	A	A	A
Present Peak Hour Volume	58	135	58
Peak Hour Capacity	1,672	1,600	1,472
Hour Volume/Hour Capacity	.03	.08	.04

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

JACKSON AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Jackson Avenue is another cross-county route and is heavily used by trucks and agricultural equipment.

DISCUSSION:

This road adequately meets its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Year of Completion	Cost (\$1,000)
Reconstruction:		
From SR 43 to 11th Avenue	2018	\$1,062
From 11th Avenue to 14th Avenue	2018	\$948
Widen to 28 feet:		
From 14th Avenue to 17th Avenue	2018	\$853

KANSAS AVENUE

From: SR 41
To: 10 ½ Avenue
Survey Date: 4/97

SEGMENT: Segment Length:	SR 41 to 18th Ave. 2 mi.	18th Ave. to 15th Ave. 3 mi.	15th Ave. to 10 ½ Ave. 4.5 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	2/12'
Paved Shoulder Width	3'	3'	3'
Pavement Distress	None	None	None
Type			
Extent: % of Roadway			
Severity			
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2007	1,852	2,060	3,714
Year 2020	1,847	3,924	8,930
% Trucks in ADT	20%	20%	14%
Present Service Level	A	A	A
Present Peak Hour Volume	105	155	175
Peak Hour Capacity	1,533	1,533	1,940
Hour Volume/Hour Capacity	.07	.10	.10

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

KANSAS AVENUE - Cont'd.

From: 10 ½ Avenue
To: Tulare County
Survey Date: 4/97

SEGMENT: Segment Length:	10 ½ Ave. to SR 43 3.5 mi.	SR 43 to Tulare County Line 3.5 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/12'	2/12'
Paved Shoulder Width	1-3'	1-3'
Pavement Distress	None	None
Type		
Extent: % of Roadway		
Severity		
Striping/Reflector Condition		
Center	Good	Good
Sides	Good	Good
Other		
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 2007	2,503	3,553
Year 2035	4,654	4,887
% Trucks in ADT	13%	12%
Present Service Level	A	A
Present Peak Hour Volume	207	164
Peak Hour Capacity	1,628	1,642
Hour Volume/Hour Capacity	.08	.10

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

KANSAS AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Kansas Avenue is a true regional highway. In its 16 miles, Kansas Avenue joins SR 41 with SR 43, and carries a significant amount of truck and commuter traffic to and from Tulare County. There it becomes Avenue 282, a major Tulare County corridor.

DISCUSSION:

This road adequately serves its demands. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Overlay:		
From 4th Avenue to SR 43	2014	\$994
From 14th Avenue to 16th Avenue	2014	\$569

LACEY BOULEVARD

From: 13th Avenue
To: SR 41
Survey Date: 4/97

SEGMENT: Segment Length:	13th Ave. to 18th Ave. 5.5 mi.	18th Ave. to SR 41 1.75 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/12'	2/12'
Paved Shoulder Width	1-3'	0'
Pavement Distress	None	
Type		Cracking
Extent: % of Roadway		< 15%
Severity		Slight
Striping/Reflector Condition		
Center	Good	Good
Sides	Good	Good
Other		
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 2007	4,439	1,765
Year 2035	7,473	4,418
% Trucks in ADT	3%	1%
Present Service Level	A	A
Present Peak Hour Volume	698	150
Peak Hour Capacity	1,828	1,842
Hour Volume/Hour Capacity	.38	.08

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

LACEY BOULEVARD

SYSTEM CONTINUITY (Highway Sphere of Influence): Lacey Boulevard is a cross county corridor connecting SR 41, Lemoore and Hanford. It is used as a “rear” access to the Hanford Mall as well as a commuter route going to and from Lemoore. The east section of Lacey Boulevard extending from Hanford to Tulare County lies on the existing SR 198 alignment.

DISCUSSION:

This road adequately serves its demands. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Year of Completion	Cost (\$1,000)
At 13th Avenue (Signals and Bridge Work)	2013	\$500
From 18th Avenue to SR 41	2020	\$345

LAUREL AVE.

From: 18th Avenue
To: Avenal Cutoff Road
Survey Date: 4/97

SEGMENT: Segment Length:	18th Ave. to SR 41 3.5 mi.	SR 41 to Avenal Cutoff Rd. 3.5 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/12'	2/12'
Paved Shoulder Width	0'	0'
Pavement Distress		None
Type	Cracking	
Extent: % of Roadway	<10%	
Severity	Slight	
Striping/Reflector Condition		
Center	Good	Good
Sides	Good	None
Other		
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 2007	735	(08) 621
Year 2035	739	1,290
% Trucks in ADT	4%	7%
Present Service Level	A	A
Present Peak Hour Volume	85	49
Peak Hour Capacity	1,530	1,953
Hour Volume/Hour Capacity	.05	.03

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

LAUREL AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Laurel Avenue is the main arterial joining the community of Stratford with SR 41 and the Avenal Cutoff. It also carries a high percentage of truck traffic between SR 41 and the Avenal Cutoff.

DISCUSSION:

This road adequately serves its demands. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Overlay:		
SR 41 to 18th Avenue	2021	\$588
Avenal Cut-Off Raod to SR 41	2027	\$1,177

NEVADA AVENUE

From: Fresno County Line
To: Tulare County Line
Survey Date: 4/97

SEGMENT: Segment Length:	Fresno County to Avenal Cutoff 7.5 mi.	Avenal Cutoff to SR 41 7.2 mi.	22nd Ave. to Tulare County 17.5 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/11-12'	2/11-12'	2/11-12'
Paved Shoulder Width	0'	0'	0'
Pavement Distress		None	
Type	Cracking		Cracking
Extent: % of Roadway	> 50%		<10%
Severity	Moderate		Slight
Striping/Reflector Condition			
Center	Good	Fair	Fair
Sides	None	None	None
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2007	(08) 2,225	375	(90) 232
Year 2035	668	522	3,045
% Trucks in ADT	38%	14%	7%
Present Service Level	A	A	A
Present Peak Hour Volume	140	34	23
Peak Hour Capacity	1,405	1,564	1,953
Hour Volume/Hour Capacity	.09	.02	.01

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

NEVADA AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Nevada Avenue functions as a 7.5 mile inter-county arterial connecting the City of Coalinga with Avenal Cutoff Road and SR 41. In Fresno County the road is called Jayne Avenue. In Kings County, Nevada Avenue is not continuous between SR 41 and SR 43.

DISCUSSION:

A significant amount of truck traffic during harvest season uses Nevada Avenue. This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Overlay: From Avenal Cut-Off Road to SR 41	2029	\$1,360

PUEBLO AVENUE

From: 10th Avenue
To: 19th Avenue
Survey Date: 5/97

SEGMENT: Segment Length:	10th Ave. to 13th Ave. 3 mi.	13th Ave. to 19th Ave. 6 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/11'	2/11'
Paved Shoulder Width	0'	0
Pavement Distress		N/A
Type	Cracking/Rutting	
Extent: % of Roadway	75%	
Severity	Severe	
Striping/Reflector Condition		
Center	Poor	
Sides	None	
Other	Sight Restrictions	Under Water
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 1992	255	N/A
Year 2035	662	112
% Trucks in ADT	12%	N/A
Present Service Level	B	N/A
Present Peak Hour Volume	72	N/A
Peak Hour Capacity	1,570	1,570
Hour Volume/Hour Capacity	.05	N/A

Source: Kings County Public Works; KCAg

* See discussion under "Inventory of Countywide Regional Routes."

PUEBLO AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Pueblo Avenue provides a connection between 10th Avenue near Corcoran to 19th Avenue. Due to heavy rains during the winters, a large portion of Pueblo Ave. is under water.

DISCUSSION:

This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No Projects Identified		

UTICA AVENUE

From: 25th Avenue
To: 6th Avenue
Survey Date: 5/97

SEGMENT: Segment Length:	25th Ave. to 14th Ave. 11 mi.	14th Ave. to 12th Ave. 2 mi.	12th Ave. to 10th Ave. 2 mi.	10th Ave. to 6th Ave. 4 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/12'	2/12'	2/12'	2/12'
Paved Shoulder Width	0'	0'	1'	1'
Pavement Distress				
Type	Cracking	Rutting	Rutting	Rutting
Extent: % of Roadway	< 25%	<25%	<25%	<25%
Severity	Moderate	Moderate	Moderate	Moderate
Striping/Reflector Condition				
Center	Fair	Fair	Fair	Fair
Sides	Good	Good	Good	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 1990	N/A	(84) 308	504	(00) 500
Year 2035	204	57	300	564
% Trucks in ADT	15-20%	15-20%	17%	17%
Present Service Level	A	A	A	A
Present Peak Hour Volume	N/A	(84) 83	62	67
Peak Hour Capacity	1,571	1,571	1,571	1,571
Hour Volume/Hour Capacity	N/A	.05	.04	.04

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

UTICA AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Utica Avenue is the only major county road providing direct access across the Tulare Lake Basin in "dry" years. Its 19 miles extend from I-5 to 6th Avenue.

DISCUSSION:

This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Reconstruction: From 20th Avenue to 25th Avenue	2022	\$1,197
Overlay: From 11th Avenue to 16th Avenue	2030	\$902
From 16th Avenue to 20th Avenue	2031	\$807
From 6th Avenue to 11th Avenue	2032	\$1,125

WHITLEY AVENUE

From: 6 ½ Avenue
To: 10th Avenue
Survey Date: 5/97

SEGMENT: Segment Length:	6 ½ Ave. to 8th Ave. 1.5 mi.	8th Ave. to 10th Ave. 2.0 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/12'	2/12'
Paved Shoulder Width	3-10' Parking	0'
Pavement Distress		
Type	Cracking	None
Extent: % of Roadway	15-20%	15-20%
Severity	Moderate	Moderate
Striping/Reflector Condition		
Center	Fair	Fair
Sides	Fair	Fair
Other		
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 2009	3,928	(76) 1,621
Year 2035	4,423	4,159
% Trucks in ADT	15-20%	15-20%
Present Service Level	B	B
Present Peak Hour Volume	N/A	N/A
Peak Hour Capacity	1786	1571
Hour Volume/Hour Capacity	N/A	N/A

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

WHITLEY AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Whitley Avenue ties the 10th-10 ½ Avenue corridor with the Corcoran urban area in a 3.5 mile segment.

DISCUSSION:

At present, this road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No Projects Identified		

6TH AVENUE (North)

From: SR 198
To: Tulare County Line
Survey Date: 5/97

SEGMENT: Segment Length:	SR 198 to Fargo Ave. 2 mi.	Fargo Ave. to Chico Ave. 7 mi.	Chico Ave. to Benicia Ave. 1.5 mi.	Benicia Ave. to Tulare County .8 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/12'	2/12'	2/11'	2/10-11'
Paved Shoulder Width	0'	0'	0'	0'
Pavement Distress				
Type	Cracking	Cracking	Cracking	Cracking
Extent: % of Roadway	< 10%	< 10%	< 10%	< 10%
Severity	Slight	Slight	Slight	Slight
Striping/Reflector Condition				
Center	Good	Good	Good	Good
Sides	Good	Good	Good	Good
Other			Flooding	Alignment
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 1997	(01) 2,061	1,813	(84) 1,164	(84) 1,504
Year 2035	1,467	4,465	4,470	4,641
% Trucks in ADT	21%	8%	15-20%	15-20%
Present Service Level	B	B	B	C
Present Peak Hour Volume	123	184	108	146
Peak Hour Capacity	1,520	1,520	1,458	1,458
Hour Volume/Hour Capacity	.08	.12	.07	.10

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

6TH AVENUE (South)

From: Kern County Line
To: Plymouth Avenue
Survey Date: 5/97

SEGMENT: Segment Length:	Kern County to Virginia Ave. 7 mi.	Virginia Ave. to Utica Ave. 3 mi.	Utica Ave. to Redding Ave. 6 mi.	Redding Ave. to Plymouth Ave. 2.5 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/12'	2/12'	2/11'	2/11'
Paved Shoulder Width	1'	1'	2'	2'
Pavement Distress	None	None		
Type			Rutting	Cracking
Extent: % of Roadway			> 15%	< 25%
Severity			Moderate	Moderate
Striping/Reflector Condition				
Center	Good	Good	Fair	Fair
Sides	Good	Good	Fair	Fair
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 1992	299	335	(79) 4,613	(01) 3,490
Year 2035	1,365	3,582	3,447	3,394
% Trucks in ADT	25%	21%	15-20%	5-15%
Present Service Level	A	A	A	A
Present Peak Hour Volume	38	44	N/A	287
Peak Hour Capacity	1,471	1,520	1,571	1,672
Hour Volume/Hour Capacity	.03	.03	N/A	.17

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

6TH AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): 6th Avenue serves north-south movements in the northwestern portion of Kings County between SR 198 and the Tulare County Line, a distance of 11.3 miles. With the help of 5 ½ and Benicia Avenues, it bridges the Kings River and provides direct access to Kingsburg and SR 99 in Fresno County. South of Corcoran, 6th Avenue is a 18.5-mile farm-to-market route to SR 46 in Kern County.

DISCUSSION:

6th Avenue geometrics in the far northeastern portion of the county reflect conventional road construction techniques. Flooding, sight restrictions, and narrow lanes require drivers to exercise care. South of Corcoran, this road serves predominantly farm and truck traffic. Special attention is needed to maintain this road to serve those users.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Reconstruction:		
From SR 198 to Fargo Avenue	2012	\$523
From Utica Avenue to Racine Avenue	2020	\$1,438
Overlay:		
From Kern County Line to ½ Mile north	2022	\$286
From Fargo Avenue to Excelsior Avenue	2023	\$634
From Utica Avenue to Virginia Avenue	2030	\$569
From Virginia Avenue to Xavier Avenue	2030	\$645
From Kern County Line to Xavier Avenue	2031	\$739

10TH AVENUE

From: Kansas Avenue
To: Houston Avenue
Survey Date: 5/97

SEGMENT: Segment Length:	Kansas Ave. to Idaho Ave. 4 mi.	Idaho Ave. to Houston Ave. 2 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/12'	2/12'
Paved Shoulder Width	1-3'	4-8'
Pavement Distress		None
Type	Cracking	
Extent: % of Roadway	<25%	
Severity	Moderate	
Striping/Reflector Condition		
Center	Good	Good
Sides	Good	Good
Other		
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 1997	1,748	(96) 2,469
Year 2020	1,288	1,879
% Trucks in ADT	6%	<10%
Present Service Level	B	B
Present Peak Hour Volume	183	295
Peak Hour Capacity	1,735	1,778
Hour Volume/Hour Capacity	.11	.17

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

10 ½ AVENUE

From: Whitley Avenue
To: Kansas Avenue
Survey Date: 5/97

SEGMENT: Segment Length:	Utica Ave. to Whitley Ave. 11 mi.	Whitley Ave. to Nevada Ave. 2.7 mi.	Nevada Ave. to Kansas Ave. 5 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/11'	2/11'
Paved Shoulder Width	1'	0'	0'
Pavement Distress			
Type	Cracking	Cracking	Cracking
Extent: % of Roadway	10-25%	< 10%	< 10%
Severity	Moderate	Slight	Slight
Striping/Reflector Condition			
Center	Good	Fair	Good
Sides	Good	Poor	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2001	202	3,499	(09) 1,350
Year 2035	1,305	5,770	6,443
% Trucks in ADT	12%	5-15%	4%
Present Service Level	A	A	A
Present Peak Hour Volume	73	183	212
Peak Hour Capacity	1,642	1,672	1,868
Hour Volume/Hour Capacity	.04	.11	.11

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

10TH /10 ½ AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): 10th Avenue is an important thoroughfare for industrial, rural residential, and farm-related traffic. When linked with 10 ½ Avenue south of Kansas Avenue, it provides a 14.2-mile cross-county route to Whitley Avenue, the western entrance to Corcoran.

DISCUSSION:

This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Widen to 28 feet: From Kansas Avenue to Nevada Avenue (10 ½ Ave.)	2014	\$1,308
Overlay:		
From Idaho Avenue to Kansas Avenue	2015	\$1,262
From Nevada Avenue to Pueblo Avenue	2025	\$850
From Redding Avenue to Seattle Avenue	2026	\$645
From Pueblo Avenue to Redding Avenue	2026	\$850
From Idaho Avenue to Kansas Avenue	2015	\$1,262
Seal Coat:		
From Seattle Avenue to Utica Avenue	2026	\$654

12TH AVENUE

From: Grangeville Blvd.
To: Excelsior Avenue
Survey Date: 4/97

SEGMENT: Segment Length:	Grangeville Blvd. to Fargo Ave. 1 mi.	Fargo Ave. to Excelsior Ave. 3 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/12'	2/12'
Paved Shoulder Width	4'	3'
Pavement Distress		
Type	Cracking	Cracking
Extent: % of Roadway	<25%	<10%
Severity	Moderate	Slight
Striping/Reflector Condition		
Center	Good	Good
Sides	Good	Good
Other		
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 2004	(09) 4,282	3,690
Year 2035	18,794	5,485
% Trucks in ADT	4%	3%
Present Service Level	B	B
Present Peak Hour Volume	370	380
Peak Hour Capacity	1,949	1,851
Hour Volume/Hour Capacity	.19	.21

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

12 3/4 AVENUE

From: Excelsior Avenue
To: Fresno County Line
Survey Date: 4/97

SEGMENT: Segment Length:	Excelsior Ave. to Fresno County Line 1.8 mi.
<u>ROAD CONDITIONS</u>	
Lanes/Lane Width	2/11'
Paved Shoulder Width	0-1'
Pavement Distress	
Type	Cracking
Extent: % of Roadway	<10%
Severity	Moderate
Striping/Reflector Condition	
Center	Good
Sides	Fair
Other	
<u>TRAFFIC FACTORS*</u>	
Average Daily Travel	
Year 2004	1,038
Year 2020	8,033
% Trucks in ADT	7%
Present Service Level	B
Present Peak Hour Volume	312
Peak Hour Capacity	1,601
Hour Volume/Hour Capacity	.19

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

12TH / 12 3/4 AVENUES

SYSTEM CONTINUITY (Highway Sphere of Influence): 12th Avenue - 12 3/4 Avenue is a busy 5.8 mile inter-county corridor between Grangeville Boulevard and the community of Laton in Fresno County. Also known as the "Hanford-Laton-Fowler" road, it carries a substantial amount of farm-related travel, and is a well-known commuter route to SR 99 and the Fresno Area.

DISCUSSION:

At present, this road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Overlay: Liberty Street to Grangeville Boulevard	2012	\$281

14TH AVENUE

From: Excelsior Avenue
To: Hanford-Armona Road
Survey Date: 5/97

SEGMENT:	Excelsior Ave. to Flint Ave.	Flint Ave. to Grangeville Blvd.	Grangeville Blvd. to Lacey Blvd.	Lacey Blvd. to Hanford/Armona Rd.
Segment Length:	2 mi.	2 mi.	1 mi.	1 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/12'	2/12'	2/12'	2/11'
Paved Shoulder Width	2'	2'	2-6'	6'
Pavement Distress	None	None		
Type			Cracking	Cracking
Extent: % of Roadway			< 10%	< 10%
Severity				
Striping/Reflector Condition				
Center	Good	Good	Fair	Good
Sides	Good	Good	Good	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 2004	(08) 1,427	(08) 1,550	3,827	4,959
Year 2035	923	497	1,925	2,662
% Trucks in ADT	21%	12%	8%	4%
Present Service Level	A	A	A	A
Present Peak Hour Volume	175	132	326	470
Peak Hour Capacity	1,783	1,735	1,894	1,953
Hour Volume/Hour Capacity	.10	.08	.17	.24

Source: Kings County Public Works; KCAg

* See discussion under "Inventory of Countywide Regional Routes."

14TH AVENUE - Cont'd.

From: Hanford-Armona Road
To: Kansas Avenue
Survey Date: 5/97

SEGMENT: Segment Length:	Hanford Armona Rd. to Houston Ave. 1 mi.	Houston Ave. to Jackson Ave. 3 mi.	Jackson Ave. to Kansas Ave. 3 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/11'	2/11'
Paved Shoulder Width	0-8'	1'	1'
Pavement Distress	None		
Type		Cracking	Rutting
Extent: % of Roadway		< 10%	> 50%
Severity		Slight	Severe
Striping/Reflector Condition			
Center	Good	Fair	Fair
Sides	Good	Good	None
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2008	2,654	(03) 2,450	(00) 642
Year 2035	3,600	684	693
% Trucks in ADT	6%	7%	13%
Present Service Level	A	A	A
Present Peak Hour Volume	186	113	67
Peak Hour Capacity	1,912	1,601	1,516
Hour Volume/Hour Capacity	.25	.03	.03

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

14TH AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): 14th Avenue is a north/south thoroughfare linking the communities of Grangeville and Armona to State Route 198.

DISCUSSION:

This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Overlay:		
From Lacey Boulevard to School Street	2012	\$314
From School Street to Excelsior Avenue	2015	\$948
From Houston Avenue to Jersey Avenue	2021	\$850
From Jersey Avenue to Kansas Avenue	2026	\$445

18TH AVENUE

From: Flint Avenue
To: Lacey Boulevard
Survey Date: 4/97

SEGMENT: Segment Length:	Flint Ave. to Grangeville Blvd. 2 mi.	Grangeville Blvd. to Lacey Blvd. 1 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/12'	2/12'
Paved Shoulder Width	1-3'	1-3'
Pavement Distress		None
Type	Cracking	
Extent: % of Roadway	<10%	
Severity	Slight	
Striping/Reflector Condition		
Center	Good	Good
Sides	Good	Good
Other		
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 2001	660	2,649
Year 2035	262	3,785
% Trucks in ADT	2%	3%
Present Service Level	A	B
Present Peak Hour Volume	54	272
Peak Hour Capacity	1,905	1,887
Hour Volume/Hour Capacity	.03	.14

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

18TH AVENUE - Cont'd.

From: SR 198
To: Laurel Avenue
Survey Date: 5/97

SEGMENT: Segment Length:	SR 198 to Iona Ave. .5 mi.	Iona Ave. to Jackson Ave. 2 mi.	Jackson Ave. to Laurel Ave. 2 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	2/12'
Paved Shoulder Width	6'	3'	3'
Pavement Distress	None	None	None
Type			
Extent: % of Roadway			
Severity			
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2002	9,801	5,480	(03) 6,504
Year 2035	16,375	13,229	7,732
% Trucks in ADT	4%	6%	8%
Present Service Level	C	D	D
Present Peak Hour Volume	506	315	57
Peak Hour Capacity	1,971	1,833	1,799
Hour Volume/Hour Capacity	.26	.17	.03

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

18TH AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): 18th Avenue is an inter-county corridor between Flint and Nevada Avenues. It acts as the primary north/south arterial for Lemoore and channels traffic into the city from SR 198 and Lacey Boulevard.

DISCUSSION:

This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Signals and Approach Work: At Jersey Avenue	2012	\$375
Overlay: From SR 198 to Iona Avenue	2017	\$183
From Laurel Avenue to Kansas Avenue	2025	\$341
Install left turn lane: From Iona Avenue to Jersey Avenue	2023	\$1,491

22ND AVENUE

From: Grangeville Blvd.
To: Fresno County Line
Survey Date: 4/97

SEGMENT: Segment Length:	Grangeville Blvd. to Excelsior Ave. 4 mi.
<u>ROAD CONDITIONS</u>	
Lanes/Lane Width	2/12'
Paved Shoulder Width	0'
Pavement Distress	None
Type	
Extent: % of Roadway	
Severity	
Striping/Reflector Condition	
Center	Good
Sides	Good
Other	
<u>TRAFFIC FACTORS*</u>	
Average Daily Travel	
Year 2009	1,390
Year 2020	668
% Trucks in ADT	4%
Present Service Level	A
Present Peak Hour Volume	109
Peak Hour Capacity	1,768
Hour Volume/Hour Capacity	.06

Source: Kings County Public Works; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

22ND AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): 22nd Avenue crosses the Kings River and so links the "Island District" of Kings County with the Riverdale community in Fresno County. It runs 4 miles between Grangeville Boulevard and Excelsior Avenue.

DISCUSSION:

This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No Projects Identified		

APPENDIX I-C

REGIONAL ROUTES IN AVENAL

SR 33 (See Appendix I-A)
SR 269 (Skyline Boulevard)
Seventh Avenue
San Joaquin Street
Third Street
Kings Street
Hydril Road*
36th Avenue*

* Not Classified

(See Figures 4-2 and 4-3 for Rural Functional Classifications)

STATE ROUTE 269

From: SR 33
To: Fresno County Line
Survey Date: 5/97

SEGMENT: Segment Length:	SR 33 to Kings St. .25 mi.	Kings St. to Central Ave. .42 mi.	Central Ave. to South Hydril .38 mi.	Hydril Rd. to Fresno County 4.55 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/12' two-way left turn lane	2/12' two-way left turn lane	2/12' two-way left turn lane	4/12'
Paved Shoulder Width	2-5'	2-5'	2-5'	3-4'
Pavement Distress	None	None	None	None
Type				
Extent: % of Roadway				
Severity				
Striping/Reflector Condition				
Center	Good	Good	Good	Good
Sides	Good	Good	Good	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 2008	2,500	2,500	2,500	5,200
Year 2035	6,946	7,649	12,808	7,522
% Trucks in ADT	10%	10%	10%	10%
Present Service Level	A	A	A	A
Present Peak Hour Volume	250	250	250	510
Peak Hour Capacity	1,960	1,960	1,960	3,970
Hour Volume/Hour Capacity	.13	.13	.13	.13

Source: Caltrans: <http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/truck2008final.pdf>; KCAG;*
 See discussion under "Inventory of Countywide Regional Routes."

STATE ROUTE 269

SYSTEM CONTINUITY (Highway Sphere of Influence): State Route 269 crosses the Kettleman Hills and links SR 33 in the City of Avenal with I-5, SR 198, and SR 145 in Fresno County. In Avenal it is an arterial named Skyline Boulevard and provides access to the commercial district.

DISCUSSION:

SR 269 is Avenal's main thoroughfare. Within the City's urban area, the road was improved to provide two travel lanes, two parking lanes and a 15-foot two-way left turn lane. Traffic safety was also enhanced when intersections were reconfigured to form right angles or the intersections were eliminated by changing the intersections at minor streets into cul-de-sacs.

Where the road crosses the Kettleman Hills, poor drainage in the hilly areas leads to unsafe driving conditions during rainy periods.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No Projects Identified		

SEVENTH AVENUE

From: SR 33
To: Skyline Boulevard (SR 269)
Survey Date: 9/96

SEGMENT: Segment Length:	SR 33 to SR 269 .7 mi.
<u>ROAD CONDITIONS</u>	
Lanes/Lane Width	2/9-10'
Paved Shoulder Width	6'
Pavement Distress	
Type	Fatigue Cracking
Extent: % of Roadway	25-50%
Severity	Moderate
Striping/Reflector Condition	
Center	Fair
Sides	Fair
Other	
<u>TRAFFIC FACTORS*</u>	
Average Daily Travel	
Year 2003	1,190
Year 2035	2,687
% Trucks in ADT	10%
Present Service Level	B
Present Peak Hour Volume	330
Peak Hour Capacity	1,444
Hour Volume/Hour Capacity	.22

Source: City of Avenal, KCAG

* See discussion under "Inventory of Countywide Regional Routes."

SEVENTH AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): As a regional route, Seventh Avenue channels traffic between SR 269 and SR 33. Seventh Avenue provides the shortest route from SR 269 to the prison facility. This road is also part of a future bike path loop around the city. Proposed collector streets (Corcoran and 36th Avenues) between SR 33 and SR 269 are expected to reduce the volume of through traffic on Seventh Street.

DISCUSSION:

With growth associated with the prison south of Avenal, heavy traffic is expected along Seventh Avenue. Classified as an urban collector, this road now serves residential uses, and new subdivisions are expected to abut the full length of the road in the near future. To enhance the appearance of the neighborhoods, Seventh Street will include a landscaped median in the future.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No Projects Identified		

SAN JOAQUIN STREET

From: SR 33
To: Skyline Boulevard (SR 269)
Survey Date: 9/96

SEGMENT: Segment Length:	SR 33 to Seventh Ave. 1.0 mi.	Seventh Ave. to Union Ave. .4 mi.	Union Ave. to SR 269 .10 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	2/12'
Paved Shoulder Width	0'	0'	0'
Pavement Distress	Fatigue	Fatigue	Fatigue
Type	Cracking	Cracking	Cracking
Extent: % of Roadway	< 25%	< 25%	< 25%
Severity	Moderate	Moderate	Moderate
Striping/Reflector Condition			
Center	Poor	Good	Poor
Sides	Fair	Good	Fair
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2003	660	660	660
Year 2035	3,659	6,715	6,715
% Trucks in ADT	10%	N/A	10%
Present Service Level	A	A	A
Present Peak Hour Volume	85	143	347
Peak Hour Capacity	1,672	1,840	1,672
Hour Volume/Hour Capacity	.05	.07	.21

Source: City of Avenal, KCAG

* See discussion under "Inventory of Countywide Regional Routes."

SAN JOAQUIN STREET

SYSTEM CONTINUITY (Highway Sphere of Influence): San Joaquin Street delivers local and regional traffic through Avenal and connects SR 33 with SR 269. Additional traffic will be generated by proposed residential and commercial development west of Third Street. San Joaquin Street is part of a planned bike path loop around the city. San Joaquin Street is expected to become the busiest city street based on future land use projections. Proposed collector streets are expected to reduce the volume of through traffic on San Joaquin Street.

DISCUSSION:

A landscaped median is to be installed in the future to enhance the appearance of the neighborhoods. This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No Projects Identified		

THIRD AVENUE

From: SR 33
To: Alpine Street
Survey Date: 9/96

SEGMENT: Segment Length:	SR 33 to Merced St. .4 mi.	Merced St. to San Joaquin St. .1 mi.	San Joaquin St. to Alpine St. .4 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/9-10'	2/9-10'	2/9-10'
Paved Shoulder Width	0'	0'	0'
Pavement Distress	Fatigue	Fatigue	Fatigue
Type	Pitting and Raveling	Cracking	Cracking
Extent: % of Roadway	50%	< 10%	< 10%
Severity	Severe	Moderate	Moderate
Striping/Reflector Condition			
Center	Fair	Fair	Good
Sides	Fair	None	None
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2003	1,650	1,650	1,650
Year 2035	1,202	4,264	5,609
% Trucks in ADT	10%	N/A	N/A
Present Service Level	A	A	A
Present Peak Hour Volume	130	100	190
Peak Hour Capacity	1,425	1,567	1,567
Hour Volume/Hour Capacity	.09	.06	.12

Source: City of Avenal, KCAG

* See discussion under "Inventory of Countywide Regional Routes."

THIRD AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Third Avenue is a collector street providing access to the local system. It will provide a connection to the areas of new growth north of the Avenal District Hospital and Avenal High School and planned new roads.

DISCUSSION:

This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Overlay: San Joaquin Street to SR 33	2011-2012	495

KINGS STREET

From: SR 33
To: Skyline Boulevard (SR 269)
Survey Date: 9/96

SEGMENT: Segment Length:	SR 33 to Second Ave. .2 mi.	Second Ave. to SR 269 .2 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/11-12'	2/11-12'
Paved Shoulder Width	0' Diagonal Parking	0' Diagonal Parking
Pavement Distress		
Type	Fatigue	Fatigue
Extent: % of Roadway	< 25%	< 25%
Severity	Moderate	Moderate
Striping/Reflector Condition		
Center	Good	Good
Sides	None	None
Other		
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 2003	1,850	1,850
Year 2035	1,116	1,766
% Trucks in ADT	N/A	N/A
Present Service Level	A	A
Present Peak Hour Volume	30	300
Peak Hour Capacity	1,840	1,840
Hour Volume/Hour Capacity	.02	.16

Source: City of Avenal, KCAG

* See discussion under "Inventory of Countywide Regional Routes."

KINGS STREET

SYSTEM CONTINUITY (Highway Sphere of Influence): Kings Street is an east-west collector serving the central business district between SR 33 and Skyline Blvd. and Avenal Elementary School.

DISCUSSION:

This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No Projects Identified		

HYDRIL ROAD

From: SR 269
To: 36th Avenue
Survey Date: 9/96

SEGMENT: Segment Length:	SR 269 to 36th Ave. .7 mi.
<u>ROAD CONDITIONS</u>	
Lanes/Lane Width	1/14'
Paved Shoulder Width	0'
Pavement Distress	Surface and Base
Type	Failures
Extent: % of Roadway	100%
Severity	Severe
Striping/Reflector Condition	
Center	None
Sides	None
Other	
<u>TRAFFIC FACTORS*</u>	
Average Daily Travel	
Year 2003	N/A
Year 2035	1,993
% Trucks in ADT	N/A
Present Service Level	N/A
Present Peak Hour Volume	N/A
Peak Hour Capacity	N/A
Hour Volume/Hour Capacity	N/A

Source: City of Avenal, KCAG

* See discussion under "Inventory of Countywide Regional Routes."

HYDRIL ROAD

SYSTEM CONTINUITY (Highway Sphere of Influence): Hydril Road connects 36th Avenue with SR 269 at the north end of town. The proposed extension of Hydril Road will provide direct access to the current and proposed land uses in the northern portion of the community and relieve traffic from San Joaquin Street. The road will provide a direct commuter route to the prison beyond the southern edge of the city. Hydril Road is also to be part of a planned bike path loop around the city.

DISCUSSION:

City staff indicate that the road will be improved to include two 12' traffic lanes, 8' shoulders, and engineered drainage facilities. This road is expected to be brought up to collector standards to accommodate the traffic and will include a landscaped median to enhance the appearance of the neighborhoods.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No Projects Identified		

36TH AVENUE

From: Hydril Road
To: SR 33
Survey Date: 5/97

SEGMENT: Segment Length:	Hydril Rd. to SR 33 2.3 mi.
<u>ROAD CONDITIONS</u>	
Lanes/Lane Width	1/9'
Paved Shoulder Width	0'
Pavement Distress	
Type	Dirt Road/Paved
Extent: % of Roadway	
Severity	
Striping/Reflector Condition	
Center	None
Sides	None
Other	
<u>TRAFFIC FACTORS*</u>	
Average Daily Travel	
Year 2008	N/A
Year 2035	468
% Trucks in ADT	N/A
Present Service Level	N/A
Present Peak Hour Volume	N/A
Peak Hour Capacity	N/A
Hour Volume/Hour Capacity	N/A

Source: City of Avenal, KCAG

* See discussion under "Inventory of Countywide Regional Routes."

36TH AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): 36th Avenue is expected to become a regionally significant route in the Avenal area connecting new growth areas in the southeastern quadrant of the city (Along with Hydril Road). Though only half a mile of this road is paved, 36th Avenue will be brought up to collector status to reduce traffic volumes on Seventh Avenue. This road will also be part of a planned bike path loop around the city.

DISCUSSION:

City staff indicates the need for two 12 foot traffic lanes, 8 foot paved shoulders, and engineered drainage facilities. When constructed, 36th Avenue will include a landscaped median to enhance the appearance of the neighborhoods.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No Projects Identified		

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APPENDIX I-D

REGIONAL ROUTES IN CORCORAN

Dairy Avenue (6th Avenue)
King Avenue
Otis Avenue
Whitley Avenue

(See Figure 4-4 for Urban Functional Classifications)

DAIRY AVENUE

From: Plymouth Avenue
To: Orange Avenue
Survey Date: 9/97

SEGMENT: Segment Length:	Plymouth Ave. to Oregon Ave. 1 mi.	Oregon Ave. to Whitley Ave. .75 mi.	Whitley Ave. to Orange Ave. .75 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/11'	2/11-12' left turns to Bainum Ave.	2/12'
Paved Shoulder Width	1-2'	0-10'	9'
Pavement Distress	None		
Type		Cracking	Cracking
Extent: % of Roadway		<10%	<10%
Severity		Slight	Slight
Striping/Reflector Condition			
Center	Good	Good	Fair
Sides	Good	None	None
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2003	(85) 2,900	6,411	6,148
Year 2035	4,998	6,402	4,979
% Trucks in ADT	15-20%	15-20%	10-15%
Present Service Level	C	B	B
Present Peak Hour Volume	290	460	390
Peak Hour Capacity	1710	1760	1670
Hour Volume/Hour Capacity	.16	.26	.23

Source: KCAG

* See discussion under "Inventory of Countywide Regional Routes."

DAIRY AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): As a regional route, Dairy Avenue carries agricultural traffic to and from processing facilities in Corcoran. It also functions as an important thoroughfare for residential and service commercial traffic.

DISCUSSION:

At present, this road adequately serves its demands in the north Corcoran urban area. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No projects identified		

KING AVENUE

From: 6 ½ Avenue
To: SR 43
Survey Date: 9/97

SEGMENT: Segment Length:	Whitley Ave. to Bainum Ave. .6 mi.	Bainum Ave. to Pueblo Ave. .8 mi.	Pueblo Ave. to Paris Ave. 1.0 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	2/12'
Paved Shoulder Width	6-10'	6-10'	4-6'
Pavement Distress		None	None
Type	Cracking		
Extent: % of Roadway	<10%		
Severity	Slight		
<u>Striping/Reflector Condition</u>			
Center	Fair	Good	Good
Sides	None	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
<u>Average Daily Travel</u>			
Year 1995	3,000	3,000	3,000
Year 2020	8,494	7,416	10,090
% Trucks in ADT	N/A	N/A	N/A
Present Service Level	B	B	B
Present Peak Hour Volume	474	474	474
Peak Hour Capacity	2,090	2,090	2,090
Hour Volume/Hour Capacity	.22	.22	.22

Source: City of Corcoran; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

KING AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): King Avenue provides access to the Corcoran State Prison from SR 43 and Whitley Avenue.

DISCUSSION:

This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No projects identified		

OTIS AVENUE

From: Whitley Avenue
To: SR 43
Survey Date: 9/97

SEGMENT: Segment Length:	Whitley Ave. to Brokaw Ave. .3 mi.	Brokaw Ave. to North Ave. .3 mi.	North Ave. to SR 43 .5 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/11' two-way left turn lane	2/11'
Paved Shoulder Width	3'	6'	6'
Pavement Distress			None
Type	Cracking	Cracking	
Extent: % of Roadway	< 10%	< 25%	
Severity	Slight	Moderate	
Striping/Reflector Condition			
Center	Fair	Fair	Good
Sides	Fair	Fair	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 1984	6,000	7,300	(85) 6,100
Year 2035	6,445	7,998	10,837
% Trucks in ADT	15-20%	15-20%	15-20%
Present Service Level	B	C	B
Present Peak Hour Volume	730	730	610
Peak Hour Capacity	1654	1778	1672
Hour Volume/Hour Capacity	.44	.41	.36

Source: City of Corcoran; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

OTIS AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Otis Avenue is Corcoran's primary entrance from SR 43. A truck route, it provides direct access to intensive industrial uses located south of Whitley Avenue, as well as the central retail area.

DISCUSSION:

Because of Corcoran's heavy truck traffic and its effect on the road, the portion of Otis between North Avenue and SR 43 requires reconstruction. AC overlays between Brokaw and North Avenues are also needed to improve drainage and prevent further deterioration.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No projects identified		

WHITLEY AVENUE

From: 6 ½ Avenue
To: SR 43
Survey Date: 9/97

SEGMENT: Segment Length:	6 ½ Ave. to Dairy Ave. .5 mi.	Dairy Ave. to Chittenden Ave. .7 mi.	Chittenden Ave. to Pickerell Ave. .25 mi.	Pickerell Ave. to SR 43 .45 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	4/11-12'	4/12'	4/11'	2/12'
Paved Shoulder Width	3' Parking	9' Parking	9' Parking	1-2'
Pavement Distress		None	None	
Type	Cracking			Cracking
Extent: % of Roadway	< 25%			< 10%
Severity	Moderate			Slight
Striping/Reflector Condition				
Center	Fair	Good	Fair	Good
Sides	None	Good	None	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 1997	5,004	(95) 7,400	N/A	1,996
Year 2035	7,220	6,171	4,332	1,842
% Trucks in ADT	N/A	N/A	N/A	N/A
Present Service Level	B	C	C	C
Present Peak Hour Volume	530	890	1,060	550
Peak Hour Capacity	1,950	2,600	2,600	1,565
Hour Volume/Hour Capacity	.27	.34	.41	.35

Source: City of Corcoran; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

WHITLEY AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Whitley Avenue is Corcoran's main thoroughfare. It serves as a truck route and carries residential, retail, and school traffic.

DISCUSSION:

At present, This road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
From Otis Avenue to Pickerell Avenue (Streetscape, Traffic Calming and Street Improvements)	2011	\$206

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APPENDIX I-E

REGIONAL ROUTES IN HANFORD

Seventh Street/E. Lacey Boulevard
Sixth Street
10th Avenue
11th Avenue
12th Avenue
Douty Street
Fargo Avenue
Grangeville Boulevard
Hanford-Armona Road
Lacey Boulevard

(See Figure 4-5 for Urban Functional Classifications)

SEVENTH STREET/E. LACEY BOULEVARD

From: 11th Avenue
To: SR 43
Survey Date: 5/04

SEGMENT: Segment Length:	11th Ave. to Phillips St. .25 mi.	Phillips St. to Harris St. .35 mi.	Harris St. to 10th Ave. .4 mi.	10th Ave. to SR 43 2 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	4/12'	2/12'	4/11-12'	2/12' two-way left turn lane
Paved Shoulder Width	3-9'/Parking	16' Diag. Parking	9'/Parking	0-6'
Pavement Distress		None	None	None
Type	Cracking			
Extent: % of Roadway	50%			
Severity	Moderate			
<u>Striping/Reflector Condition</u>				
Center	Fair	Good	Good	Good
Sides	Fair	Good	Good	None
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 2002	9,200	9,200	9,975	5,437
Year 2035	7,331	4,557	6,021	13,908
% Trucks in ADT	8%	N/A	N/A	N/A
Present Service Level	B	C	A	A
Present Peak Hour Volume	957	1,828	844	465
Peak Hour Capacity	1,000	2,570	1,200	1,720
Hour Volume/Hour Capacity	.96	.71	.70	.27

Source: City of Hanford; KCAG; Kings County Public Works
 * See discussion under "Inventory of Countywide Regional Routes."

SEVENTH STREET/E. LACEY BLVD.

SYSTEM CONTINUITY (Highway Sphere of Influence): As a local route, Seventh Street serves as a direct connector between 10th and 11th Avenues. Due to angle parking, capacity is limited between Harris and Phillips Streets. As a regional route, E. Lacey Boulevard moves traffic between 10th Avenue and SR 43.

DISCUSSION:

Generally, this street adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
From 10th Avenue to SR 43 (Rehabilitate/overlay)	2013	\$1,100
From 12 ½ Avenue to 13th Avenue (Widen to 4 lanes w/ left turn lanes)	2015	\$1,500

SIXTH STREET

From: 11th Avenue
To: 10th Avenue
Survey Date: 5/04

SEGMENT: Segment Length:	11th Ave. to Douty St. .6 mi.	Douty St. to 10th Ave. .4 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/12'	2/12'
Paved Shoulder Width	3-9'/Parking	3-9'/Parking
Pavement Distress	None	None
Type		
Extent: % of Roadway		
Severity		
Striping/Reflector Condition		
Center	Good	Good
Sides	Good	Good
Other		
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 2002	3,501	5,556
Year 2020	1,088	2,256
% Trucks in ADT	N/A	N/A
Present Service Level	A	A
Present Peak Hour Volume	354	387
Peak Hour Capacity	1,240	1,240
Hour Volume/Hour Capacity	.29	.31

Source: City of Hanford; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

SIXTH STREET

SYSTEM CONTINUITY (Highway Sphere of Influence): As a local route, Sixth Street serves as a direct connector between 10th and 11th Avenues.

DISCUSSION:

At present, this road adequately serves its demand. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
No Projects Identified		

10TH AVENUE

From: Houston Avenue
To: Grangeville Blvd.
Survey Date: 4/04

SEGMENT: Segment Length:	Houston Ave. to Hanford-Armona Rd. 1 mi.	Hanford-Armona Rd. to SR 198 .75 mi.	SR 198 to Grangeville Blvd. 1.25 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	4/12'
Paved Shoulder Width	10'	1-3'	1-4'
Pavement Distress	None		
Type		Cracking	None
Extent: % of Roadway		25-50%	
Severity		Moderate	
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	Fair	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2000	7,100	9,086	16,012
Year 2035	4,717	8,730	25,788
% Trucks in ADT	15-20%	15-20%	15-20%
Present Service Level	A	C	D
Present Peak Hour Volume	710	784	1,574
Peak Hour Capacity	1,194	1,110	1,400
Hour Volume/Hour Capacity	.59	.70	1.12

Source: City of Hanford; KCAG; Kings County Public Works
 * See discussion under "Inventory of Countywide Regional Routes."

10TH AVENUE - Cont'd.

From: Grangeville Blvd.
To: SR 43
Survey Date: 4/04

SEGMENT: Segment Length:	Grangeville Blvd. to Terrace Ave. 1 mi.	Terrace Ave. to Greenwood Ave. .75 mi.	Greenwood Ave. to Fargo Ave. 1.25 mi.	Fargo Ave. to SR 43 .75 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	4/12' two-way left turn lane	4/12' two-way left turn lane	4/12' two-way left turn lane	2/12' two-way left turn lane
Paved Shoulder Width	2'	2-8'/Parking	2-8'/Parking	2-8'/Parking
Pavement Distress				
Type	Cracking	Cracking	Cracking	Cracking
Extent: % of Roadway	50%	50%	50%	<10%
Severity	Severe	Severe	Severe	Slight
Striping/Reflector Condition				
Center	Good	Good	Good	Good
Sides	Good	Good	Good	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 2000	17,305	11,904	(97) 7,880	7,400
Year 2020	23,942	24,238	20,971	12,721
% Trucks in ADT	10-15%	10-15%	10-15%	10%
Present Service Level	A	C	B	B
Present Peak Hour Volume	1,255	753	644	543
Peak Hour Capacity	1,850	1,990	11,500	11,400
Hour Volume/Hour Capacity	.67	.37	.06	.05

Source: City of Hanford; KCAG; Kings County Public Works
 * See discussion under "Inventory of Countywide Regional Routes."

10TH AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): North of Grangeville Boulevard, 10th Avenue feeds regional traffic to and from SR 43. South of the city, it mostly serves industrial and residential users, and provides an important connection to SR 198. The portion between Lacey and Grangeville Boulevards serves as a connecting link between the central business district and northerly and westerly residential areas.

DISCUSSION:

Between SR 198 and Orange Ave., 10th Avenue was widened in 2004 to 4 lanes with signals at the SR 198 interchange. Continue regular maintenance program on all sections of this portion.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
From Hanford-Armona Road to SR 198 (widen to 4 lanes with left turn lanes)	2012	\$2,000
From Hanford-Armona Road to Houston Avenue (widen from 2 lanes to 4 lanes)	2030	\$2,500

11TH AVENUE

From: Houston Avenue
To: Lacey Boulevard
Survey Date: 5/04

SEGMENT: Segment Length:	Houston Ave. to Hanford-Armona Rd. 1 mi.	Hanford-Armona Rd. to Davis St. .3 mi.	Davis St. to Lacey Blvd. .7 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	4/12' two-way left turn lane	4/12' median, left turn lanes
Paved Shoulder Width	6-25'/Parking	8-10'	9'/Parking
Pavement Distress		None	
Type	Cracking		Cracking
Extent: % of Roadway	< 15%		< 10%
Severity	Slight		Slight
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	None	None
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2002	7,600	(00) 14,455	15,717
Year 2020	11,440	13,923	19,422
% Trucks in ADT	N/A	N/A	N/A
Present Service Level	C	B	B
Present Peak Hour Volume	504	1,185	1,174
Peak Hour Capacity	1,400	2,940	2,940
Hour Volume/Hour Capacity	.36	.40	.39

Source: City of Hanford; KCAG; Kings County Public Works
 * See discussion under "Inventory of Countywide Regional Routes."

11TH AVENUE - Cont'd

From: Lacey Boulevard
To: Pepper Dr.
Survey Date: 5/04

SEGMENT: Segment Length:	Lacey Blvd. to Grangeville Blvd. 1 mi.	Grangeville Blvd. to Magnolia Ave. .75 mi.	Magnolia Ave. to Pepper Dr. .65 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	4/12'	2/12'	2/12'
Paved Shoulder Width	3-9'/Parking	10'/Parking	10'
Pavement Distress			None
Type	Cracking	Cracking	
Extent: % of Roadway	< 35%	<50%	
Severity	Slight	Slight	
Striping/Reflector Condition			
Center	Fair	Good	Good
Sides	None	None	Good/None
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2000	18,200	11,600	3,971
Year 2035	16,540	16,965	9,728
% Trucks in ADT	N/A	N/A	N/A
Present Service Level	C	C	A
Present Peak Hour Volume	1,400	1,142	510
Peak Hour Capacity	2,750	1,700	1,700
Hour Volume/Hour Capacity	.51	.67	.30

Source: City of Hanford; KCAG; Kings County Public Works
 * See discussion under "Inventory of Countywide Regional Routes."

11TH AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): 11th Avenue is Hanford's principal arterial. It carries automobile traffic to three important retail centers, and provides access to manufacturing areas south of Houston Avenue.

DISCUSSION:

Between SR 198 and Lacey Blvd., 11th Avenue operates at LOS C and is the busiest street in the city. The limited number of overcrossings / undercrossings of SR 198 add to the volume of traffic using this segment. This road adequately serves its demand otherwise. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Houston Avenue to Hume Avenue (widen to 4 lanes with median)	2010	\$1,500
Third Street to Ivy Street (rehab/overlay)	2010	\$955
Grangeville Boulevard to Fargo Avenue (widen to 4 lanes and overlay)	2012	\$600
Fargo Avenue to Flint Avenue (rehab/overlay)	2013	\$500
Ivy Street to Grangeville Boulevard(rehab/overlay)	2014	\$600
Idaho Avenue to Houston Avenue (widen to 4 lanes)	2033	\$3,500

12TH AVENUE

From: Hanford-Armona Road
To: Grangeville Boulevard
Survey Date: 2/04

SEGMENT: Segment Length:	Hanford-Armona Rd. to SR 198 .4 mi.	SR 198 to Lacey Blvd. .6 mi.	Lacey Blvd. to Grangeville Blvd. 1 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	4/12'	2/13'
Paved Shoulder Width	3'	4-8'	2-6'
Pavement Distress	None	None	
Type			Cracking
Extent: % of Roadway			25%
Severity			Moderate
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2000	8,900	13,606	11,817
Year 2035	14,139	26,598	34,054
% Trucks in ADT	5-10%	15-20%	15-20%
Present Service Level	B	B	B
Present Peak Hour Volume	565	1,331	1,119
Peak Hour Capacity	2,050	3,090	2,050
Hour Volume/Hour Capacity	.35	.43	.72

Source: Kings County Public Works; KCAG; City of Hanford
 * See discussion under "Inventory of Countywide Regional Routes."

12TH AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): In the Hanford Area 12th Avenue is the southern terminus of the well-known commuter route (12th/12 3/4 Avenues) to SR 99 in Fresno County.

DISCUSSION:

From SR 198, 12th Avenue provides access to the western edge of Hanford and to the Hanford Mall and other retail shopping centers. This road segment adequately serves its demands. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
From Lacey Boulevard to Grangeville Boulevard (widen to 6 lanes with median)	2010	\$2,500
From Grangeville Boulevard to Fargo Avenue (widen to 6 lanes with median)	2011	\$2,800
From Hanford-Armona Road to Mall Drive (widen to 6 lanes with median)	2012	\$21,000
From Mall Drive to Lacey Boulevard (widen to 6 lanes with median)	2015	\$800
From Houston Avenue to Hanford-Armona Road (widen to 4 lanes with median)	2016	\$3,000
From Fargo Avenue to Flint Avenue (widen to 4 lanes with median)	2018	\$3,000

DOUTY STREET

From: Flint Avenue
To: Hanford-Armona Road
Survey Date: 5/04

SEGMENT: Segment Length:	Flint Ave. to Fargo Ave. 1 mi.	Fargo Ave. to Grangeville Blvd. .75 mi.	Grangeville Blvd. to 6th St. 1.25 mi.	6th St. to Irwin St. .75 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/12'	2/12'	2-4/12'	2/12'
Paved Shoulder Width	0-10' Parking	0-10' Parking	10' Parking	Parking
Pavement Distress			None	
Type	Cracking	Cracking		Cracking
Extent: % of Roadway	25%	25%		< 15%
Severity	Moderate	Moderate		Slight
Striping/Reflector Condition				
Center	Good	Good	Good	Good
Sides	None	None	None	None
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 2000	(99) 3,470	(99) 5,390	7,961	3,017
Year 2035	6,684	10,364	7,127	10,674
% Trucks in ADT	N/A	N/A	N/A	N/A
Present Service Level	A	A	B	B
Present Peak Hour Volume	267	376	632	302
Peak Hour Capacity	1,240	1,240	1,200	1,240
Hour Volume/Hour Capacity	.22	.30	.53	.24

Source: City of Hanford; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

DOUTY STREET

SYSTEM CONTINUITY (Highway Sphere of Influence): Douty Street provides access to retail, governmental, and educational uses between Hanford-Armona Road and Flint Avenue and serves as a major connector to the Hanford central business district.

DISCUSSION:

With respect to traffic service, Douty Street adequately serves its demands. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
From Cortner Street to Flint Avenue (rehab/overlay)	2010	\$625

FARGO AVENUE

From: 11th Avenue
To: SR 43
Survey Date: 5/04

SEGMENT: Segment Length:	11th Ave. to Douty St. .5 mi.	Douty St. to 10th Ave. .5 mi.	10th Ave. to SR 43 1 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	2/12'
Paved Shoulder Width	10' Parking	10' Parking	0-10' Parking
Pavement Distress			
Type	Cracking	None	None
Extent: % of Roadway	10%		
Severity	Slight		
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	None	None	None
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2000	7,873	7,463	4,861
Year 2035	8,642	7,563	13,070
% Trucks in ADT	N/A	N/A	N/A
Present Service Level	D	D	A
Present Peak Hour Volume	267	677	302
Peak Hour Capacity	2,090	2,090	2,090
Hour Volume/Hour Capacity	.13	.32	.14

Source: City of Hanford; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

FARGO AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): Fargo Avenue provides access to residential uses between 10th and 12th Avenues in the growing area of northern Hanford.

DISCUSSION:

With respect to traffic service, Fargo Avenue adequately serves its demands. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
From 11th Avenue to 12th Avenue (widen to 4 lanes with left turn lanes)	2017	\$1,000
From 10th Avenue to SR 43 (construct left turn lanes)	2019	\$500
12th Avenue to 13th Avenue (widen from 2 lanes to 4 lanes with left turn lanes)	2022	\$3,000

GRANGEVILLE BOULEVARD

From: 12th Avenue
To: Douty Street
Survey Date: 4/04

SEGMENT: Segment Length:	12th Ave. to Rodgers Rd. .75 mi.	Rodgers Rd. to 11th Ave. .25 mi.	11th Ave. to Douty St. .5 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12' two-way left turn lane	2/12' two-way left turn lane	2/12' two-way left turn lane
Paved Shoulder Width	1-12'/Parking	6-9'/Parking	1-12'/Parking
Pavement Distress	None		
Type		Cracking	Cracking
Extent: % of Roadway		<10%	< 10%
Severity		Slight	Slight
Striping/Reflector Condition			
Center	Fair	Good	Good
Sides	None	None	None
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2000	9,858	11,270	14,595
Year 2035	20,783	21,064	20,197
% Trucks in ADT	5%	6%	6%
Present Service Level	C	C	C
Present Peak Hour Volume	907	1,088	1,292
Peak Hour Capacity	1,923	2,075	1,950
Hour Volume/Hour Capacity	.47	.52	.66

Source: Kings County Public Works; KCAG; City of Hanford
 * See discussion under "Inventory of Countywide Regional Routes."

GRANGEVILLE BOULEVARD - Cont'd

From: Douty Street
To: SR 43
Survey Date: 4/04

SEGMENT: Segment Length:	Douty St. to 10th Ave. .5 mi.	10th Ave. to 9 1/4 Ave. .75 mi.	9 1/4 Ave. to SR 43 1.25 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	2/12'
Paved Shoulder Width	10'	0-2'	0-12'
Pavement Distress			None
Type	Cracking	Cracking	
Extent: % of Roadway	<10%	25%	
Severity		Severe	
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Good	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 2000	15,306	4,463	5,103
Year 2035	19,784	20,105	9,481
% Trucks in ADT	N/A	N/A	2%
Present Service Level	C	C	B
Present Peak Hour Volume	1,272	647	335
Peak Hour Capacity	2,200	2,200	2,156
Hour Volume/Hour Capacity	.58	.43	.43

Source: City of Hanford; KCAG; Kings County Public Works
 * See discussion under "Inventory of Countywide Regional Routes."

GRANGEVILLE BOULEVARD

SYSTEM CONTINUITY (Highway Sphere of Influence): Grangeville Boulevard carries the bulk of North Hanford's east-west travel. It serves as an important traffic connector between northerly residential areas and service commercial areas between 10th and 11th Avenues.

DISCUSSION:

Grangeville Boulevard currently operates at LOS C between 11th Avenue and 10th Avenue, where Hanford High School significantly adds to the traffic.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
From 10th Avenue to 11th Avenue (rehab/overlay)	2014	\$700
From 11th Avenue to 12th Avenue (rehab/overlay)	2017	\$700
From 12th Avenue to 13th Avenue (rehab/overlay)	2020	\$3,000

HANFORD-ARMONA ROAD

From: 12th Avenue
To: 9th Avenue
Survey Date: 5/04

SEGMENT: Segment Length:	12th Ave. to 11th Ave. 1 mi.	11th Ave. to 10th Ave. 1 mi.	10th Ave. to 9th Ave. 1 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12' two-way left turn lane	2/12' two-way left turn lane	2/12' two-way left turn lane
Paved Shoulder Width	8' Parking	8' Parking	2'
Pavement Distress			
Type			Cracking
Extent: % of Roadway	None	None	< 10%
Severity			Slight
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	None	None	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 1999	8,335	9,608	2,542
Year 2035	12,536	8,138	1,768
% Trucks in ADT			
Present Service Level	B	C	A
Present Peak Hour Volume	623	820	255
Peak Hour Capacity	1,470	1,470	1,470
Hour Volume/Hour Capacity	.42	.55	.17

Source: City of Hanford; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

HANFORD-ARMONA ROAD

SYSTEM CONTINUITY (Highway Sphere of Influence): Hanford-Armona Road provides access to retail and residential uses between 10th and 12th Avenues. With the extension of the Hanford Municipal Airport's runway, Hanford Armona Road will be closed between 9th Ave. and 10th Ave. Through traffic from the east will be rerouted north from 9 ½ Ave. to E. Third St.

DISCUSSION:

With respect to traffic service, Hanford-Armona Road adequately serves its demands. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
From 11th Avenue to 12th Avenue (rehab/overlay)	2010	\$908
From 10th Avenue to 11th Avenue (rehab/overlay)	2018	\$600
From 12th Avenue to 13th Avenue (rehab/overlay)	2023	\$2,000

LACEY BOULEVARD

From: 12th Avenue
To: Irwin Street
Survey Date: 5/04

SEGMENT: Segment Length:	12th Ave. to Mall Drive .25 mi.	Mall Drive to Campus Dr. .25 mi.	Campus Dr. to 11th Ave. .50 mi.	11th Ave. to Irwin St. .40 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	4/12'	4/12'	4/12'	4/12'
Paved Shoulder Width	0'	9'/Parking	9'/Parking	2'
Pavement Distress				
Type	None	None	None	None
Extent: % of Roadway				
Severity				
Striping/Reflector Condition				
Center	Good	Good	Good	Good
Sides	None	None	None	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 2000	24,954	24,954	24,954	11,625
Year 2035	28,035	23,644	28,564	17,245
% Trucks in ADT				
Present Service Level	D	D	D	A
Present Peak Hour Volume	861	1,676	1,306	1,119
Peak Hour Capacity	2,520	2,520	2,520	2,520
Hour Volume/Hour Capacity	.34	.66	.52	.44

Source: City of Hanford; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

LACEY BOULEVARD

SYSTEM CONTINUITY (Highway Sphere of Influence): Lacey Boulevard provides access to retail, governmental, and educational uses between 11th and 12th Avenues, and serves as a major connector to the Hanford central business district.

DISCUSSION:

With respect to traffic service, Lacey Boulevard adequately serves its demands. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
From 10th Avenue to SR 43 (rehab/overlay)	2013	\$1,100
From 12 ½ Avenue to 13th Avenue (widen to 4 lanes with left turn lanes)	2015	\$1,500

APPENDIX I-F

REGIONAL ROUTES IN LEMOORE

(See Figure 4-6 for Urban Functional Classifications)

Bush Street
Cinnamon Drive
E. "D" Street
Hanford-Armona Road
18th /Lemoore Avenue
19th Avenue

BUSH STREET

From: SR 41
To: E. "D" Street
Survey Date: 9/03

SEGMENT:	SR 41 to 19th Ave. .5 mi.	19th Ave. to Olive St. .4 mi.	Olive St. to 18th Ave. .6 mi.	18th Ave. to E. "D" St. .75 mi.
Segment Length:				
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	2/11' left turn lanes	4/12'	4/10'	2/11-12'
Paved Shoulder Width	0-10'	9'/Parking	8'/Parking	0-9'/Parking
Pavement Distress	None	None	None	None
Type				
Extent: % of Roadway				
Severity				
Striping/Reflector Condition				
Center	Good	Good	Good	Good
Sides	Good	Good	Good	None
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 2000	(98) 2,800	(91) 6,498	(91) 7,473	(94) 1,720
Year 2035	17,592	8,097	11,085	7,083
% Trucks in ADT	2%	< 10%	< 10%	2%
Present Service Level	C	C	C	C
Present Peak Hour Volume	295	206	315	238
Peak Hour Capacity	1,450	2,672	2,672	1,450
Hour Volume/Hour Capacity	.20	.08	.12	.16

Source: City of Lemoore; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

BUSH STREET

SYSTEM CONTINUITY (Highway Sphere of Influence): Bush Street joins SR 41 with Houston Avenue (West "D" Street) and so carries commercial as well as residential traffic.

DISCUSSION:

With respect to traffic service, Bush Street adequately serves its demands. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Overlay:		
From 19 ½ Avenue to 19th Avenue	2019	\$100
From Lemoore Avenue to D Street	2028	\$165

CINNAMON DRIVE

From: SR 41
To: Fox Street
Survey Date: 9/03

SEGMENT: Segment Length:	SR 41 to Liberty Dr. .5 mi.	Liberty Dr. to Hill St. 1 mi.	Hill St. to Fox St. .1 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	2/12'
Paved Shoulder Width	1-3'	1-2'	1-2'
Pavement Distress			
Type	Base Failures	Base Failures	Base Failures
Extent: % of Roadway	< 50%	< 50%	<25%
Severity	Extreme	Moderate	Moderate
Striping/Reflector Condition			
Center	Fair	Good	Good
Sides	Fair	Fair	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 1994	(97) 2,461	(92) 3,527	2,160
Year 2035	7,117	6,686	5,894
% Trucks in ADT	4%	6%	4%
Present Service Level	B	B	B
Present Peak Hour Volume	288	238	351
Peak Hour Capacity	2,100	2,060	2,100
Hour Volume/Hour Capacity	.12	.12	.17

Source: City of Lemoore; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

CINNAMON DRIVE - Cont'd.

From: Fox Street
To: Hanford-Armona Road
Survey Date: 9/03

SEGMENT: Segment Length:	Fox St. to Lemoore Ave. .45 mi.	Lemoore Ave. to Carla Dr. .5 mi.	Carla Dr. to Hanford-Armona Rd. .4 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/12'	2/12'	2/12'
Paved Shoulder Width	1-2'	1-2'	Parking
Pavement Distress			
Type	Base Failures	None	Base Failures
Extent: % of Roadway	< 50%		75%
Severity	Moderate		Extreme
Striping/Reflector Condition			
Center	Fair	Fair	Fair
Sides	None	None	None
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 1994	2,375	(98) 1,432	(92) 1,787
Year 2035	4,385	3,898	2,880
% Trucks in ADT	4%	6%	1%
Present Service Level	A	A	A
Present Peak Hour Volume	222	160	178
Peak Hour Capacity	1,816	1,920	2,060
Hour Volume/Hour Capacity	.12	.08	.09

Source: City of Lemoore; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

CINNAMON DRIVE

SYSTEM CONTINUITY (Highway Sphere of Influence): Cinnamon Drive links 18th Avenue with State Route 41, and primarily serves residential and industrial traffic. This road was formerly named "Hume Avenue" between Lemoore Avenue and SR 41.

DISCUSSION:

This is the main east-west truck route serving Lemoore's industrial district. Efforts are needed to repair damaged areas of Cinnamon Drive in order to extend the life of this important thoroughfare. City staff anticipates increases in truck use over this road, especially by oversize trucks.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
AC Overlay: Basil Street to Daphne Lane	2021	\$120

EAST "D" STREET

From: 18th Avenue
To: 17th Avenue
Survey Date: 9/03

SEGMENT: Segment Length:	Lemoore Ave. to Smith Ave. .3 mi.	Smith Ave. to 17th Ave. .8 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	4/11' left turn lanes	2/12'
Paved Shoulder Width	9'/Parking	4'
Pavement Distress	None	None
Type		
Extent: % of Roadway		
Severity		
Striping/Reflector Condition		
Center	Good	Good
Sides	Good	Good
Other		
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 1996	5,790	(95) 5,231
Year 2010	7,789	10,427
% Trucks in ADT	< 10%	< 10%
Present Service Level	B	C
Present Peak Hour Volume	549	567
Peak Hour Capacity	1,900	1,843
Hour Volume/Hour Capacity	.29	.30

Source: City of Lemoore; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

EAST "D" STREET

SYSTEM CONTINUITY (Highway Sphere of Influence): East "D" Street channels automobile traffic between Lemoore's downtown retail area and Houston Avenue and SR 198. This road serves as the main westbound freeway exit from SR 198 to downtown Lemoore and is a designated truck route to E. Bush Street.

DISCUSSION:

With respect to traffic service, East "D" Street adequately serves its demands. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
AC Overlay: From Bush Street to Olive Street	2029	\$200

HANFORD-ARMONA ROAD

From: SR 41
To: 17th Avenue
Survey Date: 9/03

SEGMENT: Segment Length:	SR 41 to 19th Ave. .5 mi.	19th Ave. to 18th Ave. 1 mi.	18th Ave. to 17th Ave. 1 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	4/12'	4/12'	4/12'
Paved Shoulder Width	0-2'	0-2'	6'
Pavement Distress	Fatigue	Fatigue	Fatigue
Type	Cracking	Cracking	Cracking
Extent: % of Roadway	< 10%	< 25%	< 10%
Severity	Slight	Slight	Slight
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	Fair	Good	Good
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 1995	7,982	7,982	(91) 4,437
Year 2020	16,497	11,855	10,229
% Trucks in ADT	2%	2%	10%
Present Service Level	B	B	B
Present Peak Hour Volume	442	442	424
Peak Hour Capacity	1,860	1,860	1,672
Hour Volume/Hour Capacity	.24	.24	.25

Source: City of Lemoore; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

HANFORD-ARMONA ROAD

SYSTEM CONTINUITY (Highway Sphere of Influence): Hanford-Armona Road is generally a county-maintained collector linking Hanford, Armona and Lemoore. In the Lemoore urban area, this road serves residential and commercial traffic.

DISCUSSION:

At present, this road adequately serves its demands. As Lemoore continues to grow, this road has become a major east-west arterial recently widened to four lanes to accommodate traffic for new commercial and residential development. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Overlay:		
From Lemoore Avenue to Liberty Drive	2030	\$200
From Liberty Drive to 19th Avenue	2031	\$175
From 19th Avenue to SR 41	2032	\$200

18TH / LEMOORE AVENUE

From: SR 198
To: Glendale
Survey Date: 5/04

SEGMENT: Segment Length:	SR 198 to Bush St. .5 mi.	Bush St. to UPRR Xing .4 mi.	UPRR Xing to Club Dr. .5 mi.	Club Dr. to Glendale Ave. .6 mi.
<u>ROAD CONDITIONS</u>				
Lanes/Lane Width	4/12'	4/10'	4/12' left turn lanes	4/12'
Paved Shoulder Width	8'	8'/Parking	0-8'	8'/Parking
Pavement Distress	None		None	None
Type		Cracking		
Extent: % of Roadway		< 10%		
Severity		Slight		
Striping/Reflector Condition				
Center	Good	Fair	Good	Good
Sides	Good	Good	Good	Good
Other				
<u>TRAFFIC FACTORS*</u>				
Average Daily Travel				
Year 1991	6,632	(95) 8,465	12,400	(92) 11,383
Year 2035	23,820	15,642	15,939	7,495
% Trucks in ADT	10%	3%	10%	5%
Present Service Level	B	B	B	B
Present Peak Hour Volume	326	408	124	316
Peak Hour Capacity	2,470	2,470	2,940	2,470
Hour Volume/Hour Capacity	.13	.17	.04	.13

Source: City of Lemoore; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

18TH AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): 18th Avenue is Lemoore's principal arterial. It channels traffic into the city from SR 198 and Lacey Boulevard, and carries both automobile and truck traffic between Lemoore's high-use destinations.

DISCUSSION:

With respect to traffic service, 18th Ave. adequately serves its demands. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Overlay:		
From SR 198 to Bush Street	2034	\$200
From UPRR to Cinnamon Drive	2035	\$175

19TH AVENUE

From: SR 198
To: D Street
Survey Date: 9/03

SEGMENT: Segment Length:	SR 198 to Cedar Ln. .4 mi.	Cedar Ln. to Bush Ave. .3 mi.	Bush Ave. to "D" St. .2 mi.
<u>ROAD CONDITIONS</u>			
Lanes/Lane Width	2/11-12'	2/12'	2/9-10'
Paved Shoulder Width	0-12'/Parking	8'/Parking	0'
Pavement Distress	Fatigue	Fatigue	None
Type	Cracking	Cracking	
Extent: % of Roadway	< 25%	< 10%	
Severity	Moderate	Slight	
Striping/Reflector Condition			
Center	Good	Good	Good
Sides	None	None	None
Other			
<u>TRAFFIC FACTORS*</u>			
Average Daily Travel			
Year 1992	2,829	(98) 4,827	3,282
Year 2035	9,099	6,843	7,579
% Trucks in ADT	< 10%	4%	< 10%
Present Service Level	A	A	A
Present Peak Hour Volume	177	347	162
Peak Hour Capacity	1,786	1,980	1,425
Hour Volume/Hour Capacity	.10	.18	.11

Source: City of Lemoore; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

19TH AVENUE - Cont'd.

From: D Street
To: Hanford-Armona Road
Survey Date: 9/03

SEGMENT: Segment Length:	D St. to Cinnamon Dr. .3 mi.	Cinnamon Dr. to Hanford-Armona Rd. .5 mi.
<u>ROAD CONDITIONS</u>		
Lanes/Lane Width	2/12'	2/12'
Paved Shoulder Width	0'	0'
Pavement Distress	None	None
Type		
Extent: % of Roadway		
Severity		
Striping/Reflector Condition		
Center	Good	Good
Sides	None	None
Other		
<u>TRAFFIC FACTORS*</u>		
Average Daily Travel		
Year 1992	2,570	1,573
Year 2035	7,678	4,255
% Trucks in ADT	< 10%	< 10%
Present Service Level	A	A
Present Peak Hour Volume	123	139
Peak Hour Capacity	1,670	1,670
Hour Volume/Hour Capacity	.07	.08

Source: City of Lemoore; KCAG

* See discussion under "Inventory of Countywide Regional Routes."

19TH AVENUE

SYSTEM CONTINUITY (Highway Sphere of Influence): 19th Avenue is emerging as a major arterial in Lemoore. It serves a rapidly developing residential area south of Bush Street. New development along 19th Avenue including a highway commercial area, a regional shopping center, a large industrial area, and the Lemoore Campus of the West Hills Junior College has increased the amount of traffic on this facility. With plans for an interchange at SR 198, 19th Avenue may become Lemoore’s major access point for the southwestern part of the city.

DISCUSSION:

With respect to traffic service, 19th Ave. adequately serves its demands. Traffic worms were installed at the SR 198 and 19th Ave. intersection to reduce the number of accidents. Construction of an interchange at SR 198 is included in the STIP. Environmental and design work for the interchange has been completed. An alternative design requires a design exemption to meet the spacing between the SR 41 and SR 198 interchange. The preferred alternative includes the closure of the Vine St. intersection. Construction is scheduled to begin in 2011. Continue regular maintenance program.

CANDIDATE IMPROVEMENTS		
Description	Timing	Cost (\$1,000)
Overlay: From Bush Street to Cedar Lane	2018	\$100

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APPENDIX II
UNCONSTRAINED PROJECTS LISTS

CITY OF AVENAL
SUMMARY OF PROPOSED REGIONAL IMPROVEMENTS
 (Financially Unconstrained)

Route	Location/Limits	Project Description	Estimated Project Cost¹ (\$000)
Monterey Street	First Ave. to Seventh Ave.	Overlay	\$400
Stanislaus Street	C Ave. to Seventh Ave.	Overlay	\$572
Merced Street	San Joaquin St. to SR 33	Overlay	\$802
Madera Street	First Ave. to Sixth Ave.	Overlay	\$340

1 - FFY 2010-11 Dollars

CITY OF CORCORAN
SUMMARY OF PROPOSED REGIONAL IMPROVEMENTS
 (Financially Unconstrained)

Route	Location/Limits	Project Description	Estimated Project Cost¹ (\$000)
Various	Various	Pavement Maintenance	\$206
Various	Various	Pavement Maintenance	\$215
Various	Various	Pavement Maintenance	\$222
Various	Various	Pavement Maintenance	\$229
Various	Various	Pavement Maintenance	\$235
Various	Various	Pavement Maintenance	\$241
Various	Various	Pavement Maintenance	\$248
Various	Various	Pavement Maintenance	\$254
Various	Various	Pavement Maintenance	\$261
Various	Various	Pavement Maintenance	\$267
Various	Various	Pavement Maintenance	\$273
Various	Various	Pavement Maintenance	\$280
Various	Various	Pavement Maintenance	\$286

1 - FFY 2010-11 Dollars

**CITY OF HANFORD
SUMMARY OF PROPOSED REGIONAL IMPROVEMENTS
(Financially Unconstrained)**

Route	Location/Limits	Project Description	Estimated Project Cost¹ (\$000)
9th Avenue	Houston Ave. to Hanford-Armona Rd.	Construct 4 lanes, 2 new lanes	2,500
9th Avenue	Hanford-Armona Rd. to Lacey Blvd.	Construct 4-6 lanes w/median, 2 - 4 new lanes	3,000
9th Avenue	Lacey Blvd. to Grangeville Blvd.	Extend Roadway	10,000
10th Avenue	Houston Ave. to Idaho Ave.	Construct 4 lanes, 2 new lanes	5,000
12th Avenue	Iona Ave. to Houston Ave.	Construct 4 lanes, 2 new lanes	3,000
13th Avenue	Houston Ave. to Hanford Armona Rd.	Construct 4 lanes w/median, 2 new lanes	3,000
Lacey Boulevard	10th Ave. to SR 43	Construct 4 lanes w/lefts, 2 new lanes	6,000
Grangeville Blvd.	9-1/4 Ave. to SR 43	Construct 4 lanes w/median, 2 new lanes	3,500
Flint Avenue	11th Ave. to SR 43	Construct 4 lanes w/lefts, 2 new lanes	2,000
Flint Avenue	11th Ave. to 12th Ave.	Construct 4 lanes w/lefts, 2 new lanes	3,000
9th Avenue	At SR 198	Construct new interchange (part of CSMP)	40,000
SR 43	At SR 198	Modify existing interchange, capacity increasing (part of CSMP)	30,000
13th Avenue	At SR 198	Modify existing interchange, capacity increasing (part of CSMP)	30,000

1 - FFY 2010-11 Dollars

**CITY OF LEMOORE
SUMMARY OF PROPOSED REGIONAL IMPROVEMENTS
(Financially Unconstrained)**

Route	Location/Limits	Project Description	Estimated Project Cost¹ (\$000)
Purchase CNG Refuse Vehicle	N/A	Vehicle Purchase	300
Purchase CNG Refuse Vehicle	N/A	Vehicle Purchase	300
Purchase CNG Refuse Vehicle	N/A	Vehicle Purchase	300
Purchase CNG Refuse Vehicle	N/A	Vehicle Purchase	300
Purchase CNG Refuse Vehicle	N/A	Vehicle Purchase	300
Upgrade CNG Fueling Station	857 W. Iona Ave.	CNG Station Upgrades	500
Spring Lane	100 ft east of Beverly Dr.	Overlay	40
Oleander Avenue	Lemoore Ave. to Smith Ave.	Overlay	111
Alder Drive/Court	Beech Ln. to terminus	Overlay	118
Brooks Drive/Court	Beech Ln. to terminus	Overlay	155
Cedar Lane	Vine St. to east terminus	Overlay	71
Kenwood Drive	Cedar Ln. to Aspen Ln.	Overlay	37
Redwood Drive	Kenwood Dr. to Lum Dr.	Overlay	58
South 19th Street	Cedar Ln. to 1,000 ft North	Overlay	69
Sycamore Lane	Willow Dr. to Linda Ln.	Overlay	12
Carmel Drive	Silverado St. to San Simeon Dr.	Overlay	56
Montecito Court	Silverado Dr. to terminus	Overlay	34
Cambria Court	Silverado Dr. to terminus	Overlay	34
Spring Lane	Beverly Dr. to Ashland Dr.	Overlay	55
Cambridge Drive	N. Olive to W. Bush St.	Overlay	73
Frontage Road	E. end of City park to Cinnamon Dr.	Overlay	135
Grand Street	Bush St. to Oleander Ave.	Overlay	77
Linda Lee Circle	Cinnamon Dr. to terminus	Overlay	35
Newbridge Drive	Royal Ln. to terminus	Overlay	49
Orangewood Drive	Cedar Ln. to Mike Ct.	Overlay	31

CITY OF LEMOORE
SUMMARY OF PROPOSED REGIONAL IMPROVEMENTS
 (Financially Unconstrained)

Route	Location/Limits	Project Description	Estimated Project Cost¹ (\$000)
Powell Avenue	Bush St. to Oleander Ave.	Overlay	77
Skaggs Street	Lemoore Ave. to Lombardi Ln.	Overlay	60
Smith Avenue	Walnut St. to Mongolia Ave.	Overlay	44
Toomey Street	Lemoore Ave. to Champion St.	Overlay	60
Walnut Street	Smith Ave. to Locust St.	Overlay	56
Washington Drive	Lemoore Ave. to B St.	Overlay	50
Magnolia Street	Lemoore Ave. to Smith Ave.	Overlay	165
Davis Place	Sara Dr. to terminus	Overlay	44
Claudia Drive	Dublin Dr. to Cinnamon Dr.	Overlay	29
Club Drive	Lemoore Ave. to Murphy Dr.	Overlay	80
Armstrong Street	C St. to G St.	Overlay	39
G Street	Fox St. to Hill St.	Overlay	44
Hamlet Street	Bush St. to Larish St.	Overlay	157
Vine Street	500 ft North of Iona Ave. to 100 ft South of Iona Ave.	Overlay	39
Locust Street	Bush St. to Oleander Ave.	Overlay	77
Cedar Lane	Brooks Dr. to Lemoore Ave.	Construction/Overlay	1,158
19th Avenue	SR 198 to South City limits	Overlay	750
Lemoore Avenue	SR 198 to South City Limits	Overlay	1,800
Lemoore Avenue (18th Ave)	Iona Ave. to SR 198	Widen to 5 lanes, add 2 lanes w/ a continuous left turn lane	5,000

1 - FFY 2010-11 Dollars

KINGS COUNTY
SUMMARY OF PROPOSED REGIONAL IMPROVEMENTS
(Financially Unconstrained)

Route	Location/Limits	Project Description	Estimated Project Cost¹ (\$000)
Major roads	240 miles of major roads	Overlay of various thicknesses. Some shoulder work and dig-out and patch prior to overlay	\$56,191
Minor roads	500 miles of minor roads	Overlay of various thicknesses. Some shoulder work and dig-out and patch prior to overlay	\$62,500

1 - FFY 2010-11 Dollars

APPENDIX III
ENVIRONMENTAL DOCUMENTATION

The Final Environmental Impact Report (EIR) is hereby included as part of the Kings County Association of Governments 2011 Regional Transportation Plan (RTP) by reference.

The following pages are provided as a summary discussion of the mitigation measures proposed by the Final EIR.

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Environmental Mitigation Strategy

As a regional planning document, the RTP, and its associated EIR, allow for early consideration of broad mitigation strategies. The EIR serves as the first tier of environmental review for identified transportation improvement projects. It programmatically evaluates the environmental impacts of the 2011 RTP. The 2011 Kings County Regional Transportation Plan EIR identified several potential environmental impacts that require implementation of mitigation measures to reduce impacts below threshold levels. The mitigation measures identified in the EIR programmatically apply to individual transportation projects based on a review of general project parameters and locations. Transportation project sponsors are responsible for more in-depth project-level environmental analysis and mitigation. However, where applicable, the RTP can provide a framework for mitigation at a regional level.

Appendix E of the 2011 Kings County Regional Transportation Plan EIR contains a Mitigation Monitoring and Reporting Program (MMRP) that is intended to ensure that the mitigation measures identified in the EIR are effectively implemented by the applicable jurisdictions. For each required mitigation measure, the MMRP identifies the specific action or actions required, when monitoring of the measure is required, how often implementation of the measure should occur, and the entity responsible for monitoring implementation.

Table ES-1 of the EIR includes a brief description of the identified environmental impacts, proposed mitigation measures, and the level of significance after mitigation. Specific RTP projects that may contribute to the impacts described below are listed in the tables at the end of individual impact sections (4.1 through 4.15 of the EIR).

Impacts are categorized by classes. Class I impacts are defined as significant, unavoidable adverse impacts which require a statement of overriding considerations to be issued per Section 15093 of the *State CEQA Guidelines* if the project is approved. Class II impacts are significant adverse impacts that can be feasibly mitigated to less than significant levels and which require findings to be made under Section 15091 of the *State CEQA Guidelines*. Class III impacts are less than significant impacts.

Projects that involve relatively large amounts of ground disturbance, such as new roads, road widenings and extensions, may result in environmental impacts related to aesthetics, agricultural resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use conflicts, and noise. Accordingly, the local jurisdictions in which such projects are located would be required to implement and monitor several mitigation measures to reduce these impacts below threshold levels. The environmental mitigation approach for such projects follows.

Aesthetics

The EIR identified mitigation measures to reduce potential impacts on scenic views. These include: ensuring that regarding or recontouring provides smooth transitions when landforms are modified; use of landscaping materials that enhance landform variation, provide erosion control, and blend with the natural environment; avoiding the removal of mature trees and replacement in cases of such removal; minimizing lighting intensity and adhering to height limits for such lighting; designing ancillary facilities in accordance with architectural review requirements of the appropriate local jurisdiction; and incorporating design elements in sound walls and similar structures to limit monotony and avoid view impairment.

Air Quality

Impacts to air quality were determined to be less than significant, such that no mitigation measures were required.

Agricultural Resources

The EIR identified mitigation measures to reduce potential impacts from conversion of agricultural lands. These include: consideration of alternative alignments in project review that reduce or avoid impacts to agricultural lands; adherence to property lines to the extent feasible for roadway alignments and compensation for loss of agricultural productivity; and consideration of use of agricultural conservation easements to compensate for loss of agricultural lands.

Biological Resources

The EIR noted that while compliance with existing regulations would adequately reduce impacts to biological resources, such impacts would be further reduced through inclusion of project-specific biological resource mitigation measures and consideration of alternative alignments that avoid or minimize biological impacts.

Cultural Resources

The EIR identified mitigation measures to reduce potential impacts to known and previously undiscovered cultural resources. These include: preparation of project-specific Phase I (and Phase II, if deemed appropriate) studies, and Phase III measures, when appropriate; retention of an archaeological monitor for projects with potential impacts on subsurface resources; proper treatment and curation of recovered resources; and avoidance measures as appropriate including realignment of project right-of-way, capping of sites, addressing structural remains in accordance with NRHP guidelines, creation of interpretive facilities, and/or development of measures to prevent vandalism.

Geology and Soils

For projects in areas with potential liquefaction risks, expansive soils, and landslide hazards, the EIR identified the following mitigation measures: ensuring that the project is designed based upon appropriate geology, soils, and earthquake engineering studies with use of deep foundations, removal of liquefiable materials, and dewatering if recommended; use of stabilization measures such as buttresses, retaining walls, and soldier piles where slope stability is an issue; and adherence to geotechnical recommendations to address potential expansive soil hazards.

Greenhouse Gas Emissions

Impacts to greenhouse gas emissions were determined to be less than significant, such that no mitigation measures were required.

Hazards and Hazardous Materials

The EIR noted that the extension of roadways and widening of existing facilities would facilitate emergency response but that lane and road closures during construction of projects would result in temporary impacts on emergency response and potential operational impacts on hazardous materials transport. The EIR identified the following mitigation measures: the posting of advance warning signs for temporary lane or road closures and indication of detour routes; the provision of written notice to emergency responders with specifics on location and timing of planned construction; and design considerations for improvements along designated hazardous materials transfer routes, including wider "slow" lanes, longer approach ramps and merger lanes, and more gradually inclined interchanges.

Hydrology and Water Quality

The EIR identified mitigation measures to reduce potential impacts on water demand and surface and ground water quality. These include: installation of low water use landscaping; use of reclaimed water for dust suppression and landscaping irrigation where feasible; incorporation of porous pavement materials where appropriate and feasible; preparation of and implementation of fertilizer/pesticide application plans; use of subsurface percolation basins and traps for removal of pollutants; and implementation of Best Management Practices (BMPs) in a SWPPP for projects that would disturb one or more acres.

Land Use Conflicts

The EIR identified mitigation measures to reduce potential land use conflicts with existing sensitive uses. These include: incorporation of setbacks, fences, and other appropriate means to separate transportation facilities from adjacent sensitive uses; use of adequate striping, signs, and signalization to reduce safety and noise impacts; and use of minimum necessary street lighting adjacent to sensitive uses.

Noise

The EIR identified mitigation measures to reduce potential construction and operational phase noise impacts. These include: use of noise shielding measures and adhering to restrictions on pile driving and construction timing for construction projects within 1,600 feet of noise sensitive uses; incorporation of recommended measures set forth in project-specific noise studies for the operation phase of projects within 1,000 feet of sensitive noise receptors; and use of sound attenuating building design, sound barriers, and other noise attenuation measures where new or expanded roadways would expose receptors to noise that exceeds normally acceptable levels.

Other Mitigation Measures

In addition, measures to increase energy efficiency, though not required to reduce impacts to a less than significant level, were recommended to further reduce energy use impacts. Such measures include: use of alternatively fueled construction equipment, recycling construction waste materials and use of recycled construction materials, incorporating energy efficient lighting and equipment and water efficient landscaping into construction projects. These energy efficient measures would also reduce Greenhouse Gas emissions.

Mitigation measures to reduce transportation and circulation impacts, for roadway segments that remained below LOS D with implementation of the 2011 RTP were also recommended. These include: the completion of 9th Ave. from Lacey Blvd. to Grangeville Blvd. in the City of Hanford, the widening of 18th Ave. from Iona Ave. to SR 198 in the City of Lemoore, and the reevaluation of improvements to SR 43 at SR 198 to provide for acceptable levels of service.

APPENDIX IV
VALLEY-WIDE CHAPTER

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San Joaquin Valley Regional Transportation Overview

1. Executive Summary

This chapter provides an interregional perspective to transportation planning within the San Joaquin Valley of California, consisting of the counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, Kings, and the San Joaquin Valley portion of Kern County. This chapter addresses several issues of regional and interregional importance including air quality, highways, streets and roads, aviation, rail, goods movement and bicycle efforts. The purpose of this chapter is to provide a broad overview of issues that cross jurisdictional boundaries.

Valleywide Planning

The recently approved Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users (SAFETEA-LU) replaced the TEA-21 as the funding for major infrastructure investment for transportation improvements. SAFETEA-LU funds are directed toward projects and programs for a broad variety of highway and transit work through several funding components including: Surface Transportation Program, Congestion Mitigation and Air Quality, Transportation Enhancements, Safety Program, Rail Program and Emergency Relief Programs. Previous federal legislation included the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21). Transportation planning efforts are directed to be coordinated in geographically defined air basins. The eight counties mentioned above do share an air basin and have many attributes in common. There are also significant differences in the context of transportation planning. 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) entered into a memorandum of understanding (MOU) to ensure a coordinated regional approach to transportation and air quality planning efforts. The MOU was revisited in 2006 to update and solidify the partnership. 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 an already close working relationship between the eight Valley RTPAs and the representatives of the California Department of Transportation (Caltrans), California Air Resources Board, State Office of Planning and Research, San Joaquin Valley Air Pollution Control District (SJVAPCD) and the Federal Highway Administration.

Each of the areas addressed in the Valleywide MOU have been assigned to a specific RTPA to serve as a lead in the coordination of planning activities. Representatives of each of the eight agencies have been meeting regularly to coordinate the preparation of Regional Transportation Plans (RTPs), Regional Transportation Improvement Programs (RTIPs), and an aviation systems plan that involves not only the eight Valley counties but the Sacramento region as well. These cooperative efforts include both staff and financial assistance from Caltrans, California Air Resources Board (CARB), the Environmental Protection Agency and the SJVAPCD. These efforts have taken place as a voluntary response to the new issues, challenges and requirements facing the transportation planning community. The San Joaquin Valley Regional Transportation Overview represents the cooperative effort between the eight counties and their coordination in the Regional Transportation Plans.

2. San Joaquin Valley Profile

Geography

The San Joaquin Valley (Valley) is the southern portion of the Great Central Valley of California [Exhibit 1-1]. 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.

**Exhibit 1-1
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.

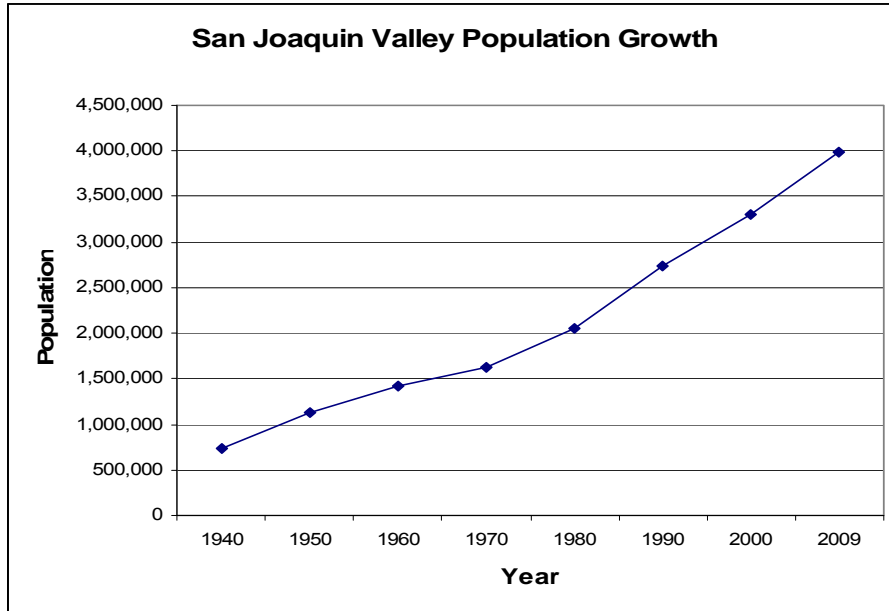
On the Valley floor, the topography is generally flat to rolling, and the climate is characterized by long, very warm summers, and short, cool winters. Precipitation is related to latitude and elevation, with the northern portions of the valley receiving approximately 12-14 inches of rain a year, while 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, 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 state of Oregon). 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) [Exhibit 1-2]. Population growth has been sustained and significant [Figure 1-1]. In 1970, the eight San Joaquin Valley counties had a population of just over 1.6 million. By 2000, the population had over doubled to nearly 3.4 million. 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 10.4% of California's total population in 2009.

Figure 1-1



Sources: US Census 1940-2000, California Department of Finance 2009

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 exceed 6.5 million by the year 2030, using growth projections from the California State Department of Finance (DOF) [Table 1-1].

Table 1-1
San Joaquin Valley Population Growth

	1960	1970	1980	1990	2000	2009	2020	2030	2040
Fresno	365,945	413,329	514,621	667,490	799,407	942,298	1,201,792	1,429,228	1,670,542
Kern	291,984	330,234	403,089	544,981	661,645	827,173	1,086,113	1,352,627	1,707,239
Kings	49,954	66,717	73,728	101,469	129,461	154,743	205,707	250,516	299,770
Madera	40,468	41,519	63,116	88,090	123,109	152,331	212,874	273,456	344,455
Merced	90,446	104,629	134,560	178,403	210,554	256,450	348,690	439,905	541,161
San Joaquin	249,989	291,073	347,342	480,628	563,598	689,480	965,094	1,205,198	1,477,473
Stanislaus	157,294	194,506	265,900	370,522	446,997	526,383	699,144	857,893	1,014,365
Tulare	168,403	188,322	245,738	311,921	368,021	441,481	599,117	742,969	879,480
TOTAL	1,414,483	1,630,329	2,048,094	2,743,504	3,302,792	3,990,339	5,318,531	6,551,792	7,934,485

Sources: US Census 1960-2000, DOF estimates 2009, DOF projections 2020-2040

San Joaquin Valley



Economy

The San Joaquin Valley is famous for agricultural production. Nearly ideal growing conditions, reservoirs, and water distribution projects, such as the federal Central Valley Project and the State Water Project have resulted in seven of the top ten agricultural counties in the nation being in the San Joaquin Valley [Table 1-2]. In addition, if the Valley were a state, it would be the top agricultural producing state in the country [Table 1-3]. 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).

**Table 1-2
Top United States Ag Producing Counties**

Rank	County	Production*
1	Fresno, CA	\$5,662,895
2	Tulare, CA	\$5,018,023
3	Kern, CA	\$4,033,312
4	Monterey, CA	\$3,826,791
5	Merced, CA	\$2,999,701
6	Stanislaus, CA	\$2,473,843
7	San Joaquin, CA	\$2,129,725
8	Kings, CA	\$1,760,168
9	Imperial, CA	\$1,684,522
10	Ventura, CA	\$1,613,247

Source: USDA, NASS, California Field Office, 2008

* In thousands

**Table 1-3
Top Agricultural States**

Rank	State	Production*
1	San Joaquin Valley	\$25,388,542
2	Iowa	\$24,752,867
3	Texas	\$19,172,500
4	Nebraska	\$17,315,688
5	Illinois	\$16,356,790
6	Minnesota	\$15,838,094
7	Kansas	\$13,967,496
8	California (remainder)	\$10,798,193
9	Indiana	\$9,961,850
10	Wisconsin	\$9,885,557

Source: USDA Economic Research Service, 2008

* In thousands

While in terms of economic productivity, agriculture is by far the Valley's leading industry, the leading industries in terms of employment are Education, Health and Social Services and Retail Trade. Agriculture along with these two other sectors account for over 40% of the jobs in the Valley. Statewide, Education, Health and Social Services is also the leading sector while Professional jobs are second and Retail third.

**Table 1-4
Employment by Industry**

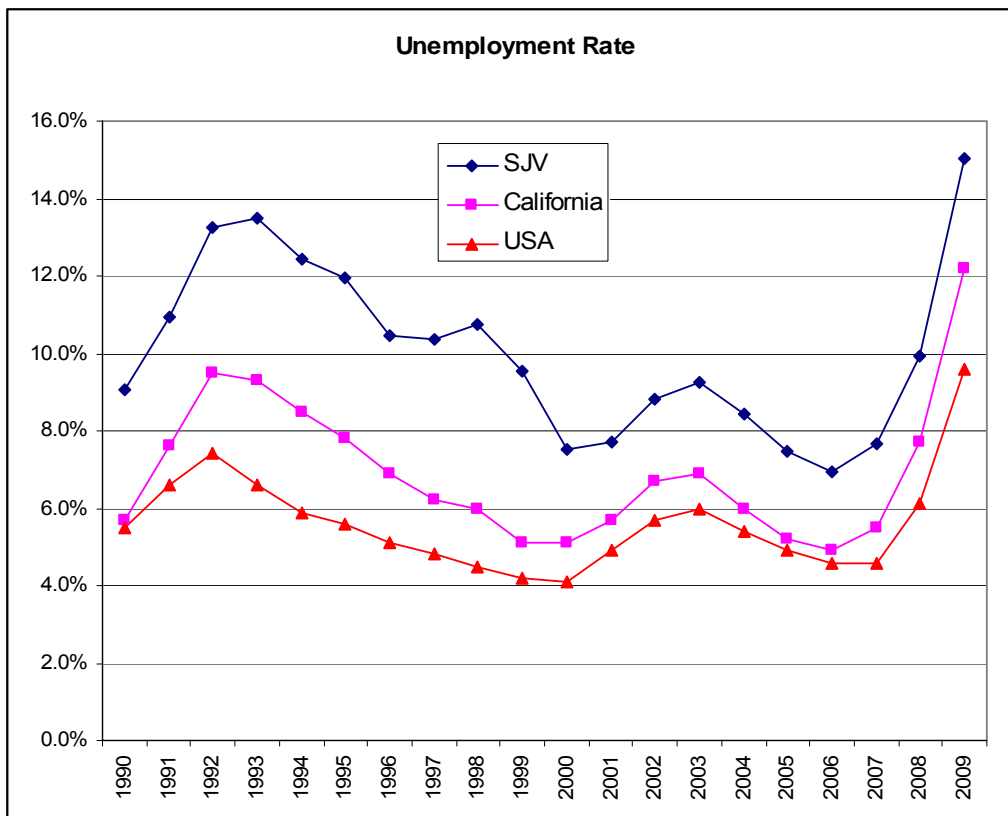
	Valley		California	
Agriculture, forestry, fishing and hunting, and mining	162,059	10.4%	355,362	2.1%
Construction	113,730	7.3%	1,222,364	7.1%
Manufacturing	128,910	8.3%	1,796,323	10.5%
Wholesale trade	58,456	3.7%	567,729	3.3%
Retail trade	179,859	11.5%	1,913,970	11.2%
Transportation and warehousing, and utilities	84,475	5.4%	837,208	4.9%
Information	24,132	1.5%	519,244	3.0%
Finance and insurance, and real estate and rental and leasing	65,863	4.2%	1,140,246	6.7%
Professional, scientific, and management, and administrative and waste management services	120,414	7.7%	2,056,620	12.0%
Educational services, and health care and social assistance	325,878	20.9%	3,438,701	20.1%
Arts, entertainment, and recreation, and accommodation and food services	124,330	8.0%	1,614,171	9.4%
Other services, except public administration	75,035	4.8%	900,254	5.3%
Public administration	97,245	6.2%	762,326	4.5%
Civilian employed population 16 years and over	1,560,386	100.0%	17,124,518	100.0%

Source: 2008 American Community Survey, U.S. Census Bureau

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 [Figure 1-2]. Over time, the Valley has consistently had unemployment rates 2.5% to 4% above the state unemployment rate and 3% to 6% above the national unemployment rate. While there is some variance with the unemployment rate in the Valley, unemployment in all Valley counties has been consistently higher than state and federal averages [Table 1-5].

Figure 1-2



Source: Bureau of Labor Statistics (not seasonally adjusted, data points are for August of each year)

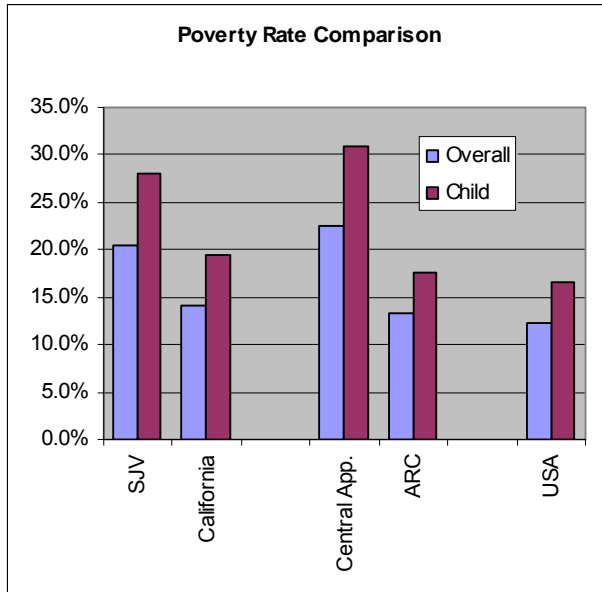
**Table 1-5
Unemployment Rate – San Joaquin Valley Counties**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Fresno	8.6	8.5	9.5	9.7	8.5	7.6	6.9	7.4	9.7	14.6
Kern	7.2	7.2	8.5	9.1	8.6	7.4	6.6	7.5	9.3	14.4
Kings	8.3	8.5	9.6	9.8	9.2	7.7	7.0	7.4	9.7	14.2
Madera	7.0	7.3	8.7	8.5	7.3	6.7	6.0	6.6	8.7	13.3
Merced	7.6	7.6	8.6	9.2	8.7	8.2	8.0	8.6	11.4	16.6
San Joaquin	6.1	6.6	8.0	8.6	7.9	7.2	6.9	7.7	10.2	15.7
Stanislaus	6.4	6.6	8.0	8.4	7.5	7.1	7.0	7.9	10.4	15.7
Tulare	8.9	9.8	10.1	10.6	10.2	8.2	7.5	8.2	10.3	15.2
Valley	7.5	7.7	8.8	9.3	8.5	7.5	7.0	7.6	9.9	15.0
California	5.1	5.7	6.7	6.9	6.0	5.2	4.9	5.5	7.7	12.2
United States	4.1	4.9	5.7	6.0	5.4	4.9	4.6	4.6	6.1	9.6

Source: Bureau of Labor Statistics (not seasonally adjusted, data points are for August of each year)

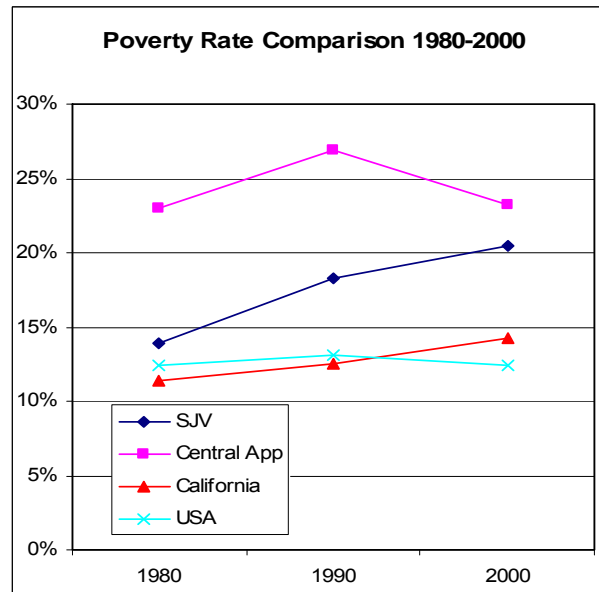
The economic plight of the San Joaquin Valley is starting to be recognized at a national level. The Congressional Research Service (CRS) completed a study in 2005 (California's San Joaquin Valley: A Region in Transition) comparing the economic conditions of the San Joaquin Valley to the Central Appalachian 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 [Figures 1-3 and 1-4].

Figure 1-3



Source: US Census Bureau 2000 via CRS

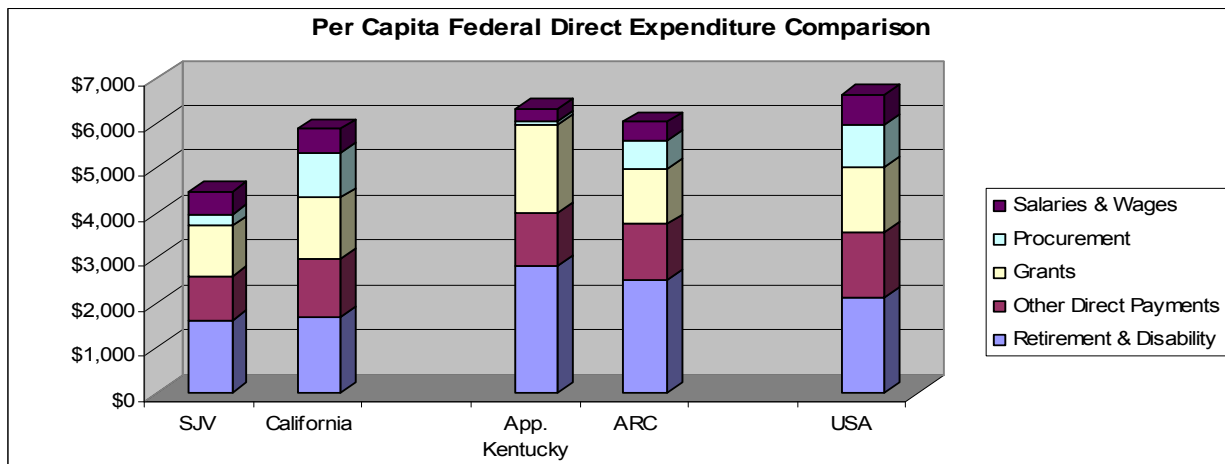
Figure 1-4



Source: US Census Bureau via CRS

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 1-5].

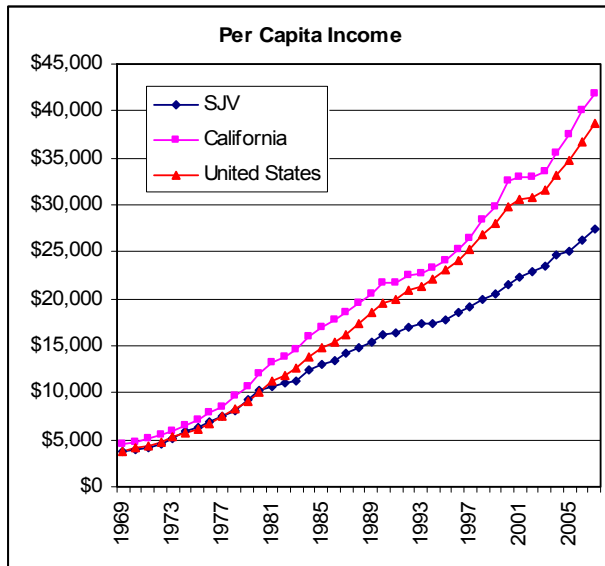
Figure 1-5



Source: CRS

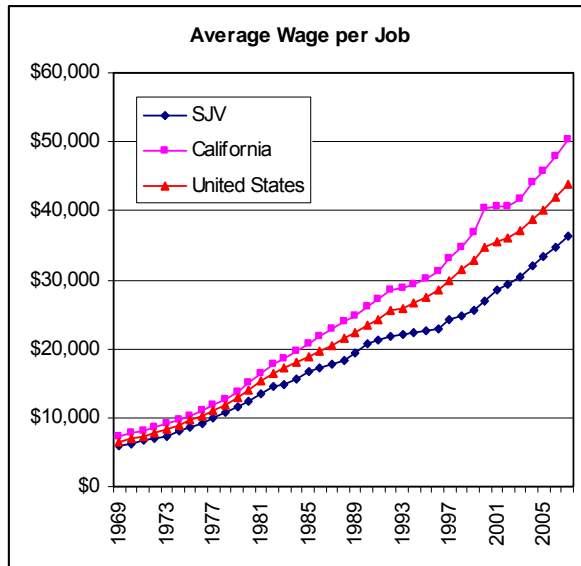
The per capita income for residents in the Valley was \$27,379 in 2007 compared to \$41,805 in California and \$38,615 in the United States. The average wage per job in the Valley was also significantly lower than California and the United States at \$36,309 in 2007 compared to \$50,182 and \$43,889 respectively. The disparity in income and wages between the Valley and the rest of the state and country has only increased over time [Figures 1-7 & 1-8].

Figure 1-7



Source: Bureau of Economic Analysis

Figure 1-8

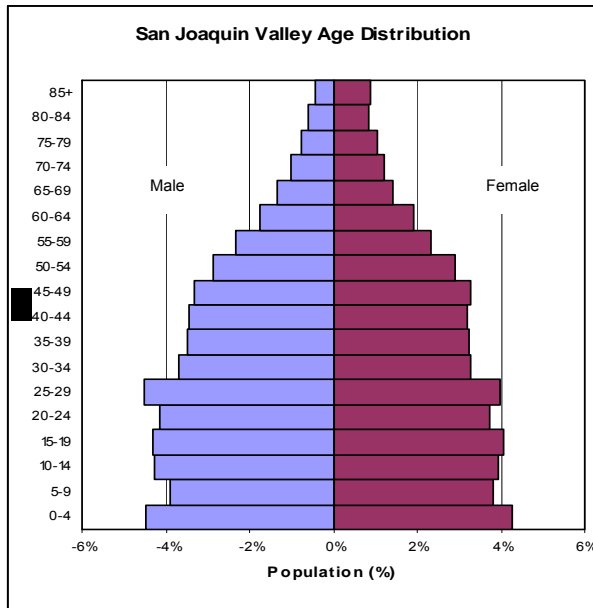


Source: Bureau of Economic Analysis

Demographics

The Valley has a younger population than California as a whole and the United States [Figures 1-8 & 1-9]. In 2008, 33.1% of Valley residents were under the age of 20 compared to 28.7% for California and 27.3% for the United States. Figures 1-10 and 1-11 compare the racial/ethnic breakdown of Valley residents to the United States as a whole.

Figure 1-7



Source: 2008 American Community Survey, U.S. Census Bureau

Figure 1-8

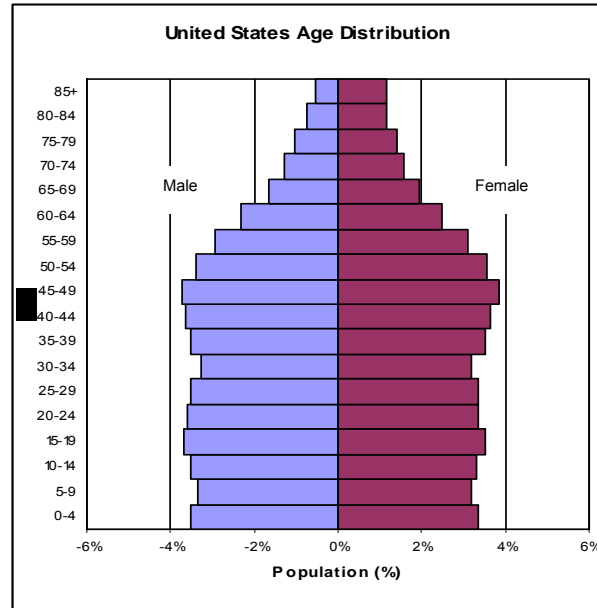


Figure 1-10

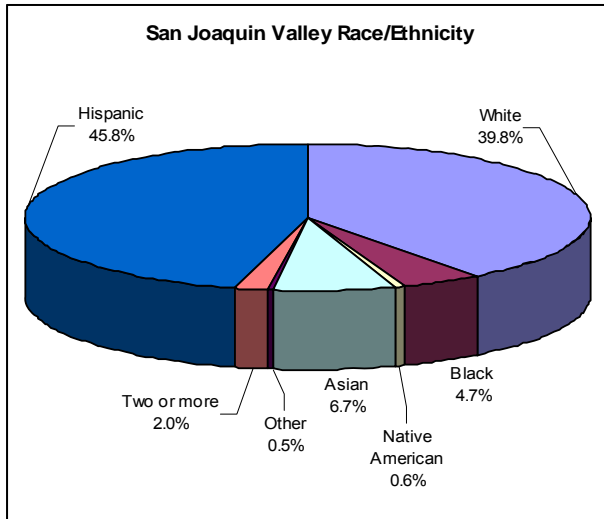
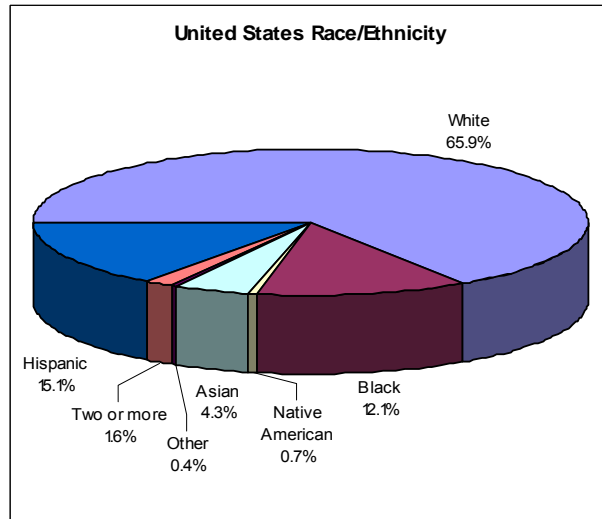


Figure 1-11



Source: 2008 American Community Survey, U.S. Census Bureau

Education levels in the San Joaquin Valley lag behind California as a whole and the United States [Table 1-6]. Nearly 28% of Valley residents 25 years and older are not high school graduates compared to 20% across the state and 15.5% across the country. Only 15.4% of Valley residents (25+ years old) have a Bachelor's degree or higher compared to 29.4% across California and 27.4% in the United States.

Table 1-6
Educational Attainment of Persons 25 Years of Age and Older

Education Level	San Joaquin Valley		California		United States	
Less than 9th grade	349,850	15.5%	2,463,199	10.6%	12,658,853	6.4%
9th to 12th grade, no diploma	278,680	12.4%	2,137,871	9.2%	17,999,306	9.1%
High school graduate	605,515	26.9%	5,205,251	22.4%	58,547,194	29.6%
Some college, no degree	506,788	22.5%	4,833,447	20.8%	39,756,710	20.1%
Associate's degree	163,074	7.2%	1,766,067	7.6%	14,636,799	7.4%
Bachelor's degree	240,598	10.7%	4,368,693	18.8%	34,218,462	17.3%
Graduate or professional degree	106,903	4.7%	2,463,199	10.6%	19,977,252	10.1%

Source: 2008 American Community Survey, U.S. Census Bureau

Trends And Assumptions

Changes in population, housing and employment alter travel demand and patterns that affect transportation facilities and services. By anticipating the magnitude and distribution of growth and change within the San Joaquin Valley, present-day decisions can be made to capitalize on the positive aspects of the anticipated growth while minimizing the adverse consequences.

Population

Population growth within the San Joaquin Valley will continue into the foreseeable future. The driving force for the increasing population is the availability of land, the availability of water, the proximity of the urban centers of Stockton, Modesto, Fresno and Bakersfield to the large urban areas of Los Angeles and San Francisco, and the relatively low cost of land in the San Joaquin Valley.

Housing

Housing growth is generally a function of population growth. Housing is anticipated to grow at a rate similar to population growth.

Employment

Employment opportunities within the Valley will change over the time span of this plan. Agricultural employment will drop as a percentage of total employment as agricultural activities become more and more automated, requiring less human labor to accomplish more production. Services, wholesale trade and retail trade activities are anticipated to increase in importance in the future employment pattern of the Valley.

Other Trends and Assumptions

Cost of Travel

The cost of travel will increase for all modes as the price of fuel, equipment, labor, and service continue to rise.

Automobile Use

The private automobile will continue to be the dominant and preferred method of travel within the region. Travel demand management programs may lessen the percentage of trips made by private automobile.

Transit Use

Public transit use, including passenger rail, will keep pace with the rise in population and additional incentives, such as voluntary employer trip reduction programs, will be initiated to encourage additional transit use.

Aviation Activity

General and commercial aviation activity will increase as the regional population and economy expand.

Air Quality

Increases in hydrocarbons, oxides of nitrogen, carbon monoxide, particulate matter and greenhouse gases may result as population increases. Efforts will be made to reduce the number of vehicle miles traveled (VMT). VMT reduction efforts will take several forms, including compensatory and possible compulsory ridesharing, flex time work scheduling, and non-motorized commuting. Jobs-to-housing balance in local land use decision-making will become more important. Introduction of newer, cleaner fuels and more efficient internal combustion engines are also anticipated.

Railroad Activity

The California High-Speed Rail Authority is working toward the development and implementation of an inter-city high-speed rail system. Current activity focuses on evaluating alternative Central Valley alignments connecting the Los Angeles Basin with the San Francisco Bay area. Amtrak will continue its successful San Joaquin trains between Bakersfield and Oakland/Sacramento, with bus feeder lines to southern California and other areas.

Land Use

It is anticipated that agricultural land will continue to be converted at an increasingly rapid pace to residential, commercial, and industrial uses.

3. Valley Policy Element

3a. Memorandums of Understanding (MOUs)

San Joaquin Valley Regional Planning Agencies MOU

In September of 1992, the eight Valley Regional Transportation Planning Agencies (RTPAs) entered into a memorandum of understanding (MOU) to ensure a coordinated regional approach to transportation and air quality planning efforts. The MOU was revisited in 2006 to update and solidify the partnership. One major addition to the 2006 MOU was the creation of the San Joaquin Valley Policy Council. 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 an already close working relationship between the eight Valley RTPAs and the representatives of the California Department of Transportation (Caltrans), California Air Resources Board, State Office of Planning and Research, San Joaquin Valley Air Pollution Control District (SJVAPCD) and the Federal Highway Administration.

Each of the areas addressed in the Valleywide MOU have been assigned to a specific RTPA to serve as a lead in the coordination of planning activities. These cooperative efforts include both staff and financial assistance from Caltrans, the California Air Resources Board (ARB), the Environmental Protection Agency and the SJVAPCD. These efforts have taken place as a voluntary response to the new issues, challenges and requirements facing the transportation planning community.

MOU Contents

The MOU covers many different items. Examples of items where San Joaquin Valley Regional Planning Agencies coordinate under this MOU are below, but this list is not all-inclusive:

- Preparation of multi-modal transportation plans
- Preparation of Regional Transportation Plans
- Coordination with the San Joaquin Valley Air Pollution Control District and Caltrans District Offices
- Coordinate on rail issues
- Coordinate planning efforts with state and federal agencies
- Coordinate on various technical issues

Addition of Regional Policy Council

The Valley RTPA's updated MOU, signed in 2006, created the San Joaquin Valley Regional Planning Agencies' Policy Council. The membership of the Policy Council consists of two elected officials and one elected alternate appointed from each RTPA Board, and one representative of the San Joaquin Valley Air Pollution Control District (added in 2009). The Policy Council is meets at least twice each year, and is authorized to represent the Valley RTPAs in multiple forums, including before the California Transportation Commission (CTC) and state and federal legislative bodies.

MOU Between and Among the SJV RTPAs and the San Joaquin Valley Air Pollution Control District (Air District)

In 1992 the eight Valley RTPAs entered into an MOU with the Air District to ensure a coordinated transportation and air quality planning approach. This MOU was updated in 2009 to reflect the increase in membership to the Valley Policy Council. The MOU acknowledges that cooperation between the agencies is key to complying with the Federal Clean Air Act, keeping current with the Transportation Conformity Rule, and to address state and federal agencies with joint or consistent policy positions when necessary.

4. Modal Discussion

4a. Highways

The regional highway system in the San Joaquin Valley plays a critical role in the movement of both people and goods. The Valley's highway network provides east-west and north-south connections to major metropolitan markets in California and beyond. Given the San Joaquin Valley's north-south geographical layout, the most important truck routes in the Valley are State Route 99 and Interstate 5, which together account for 24 of the 25 highest volume truck routes in the system. State Route 99 also serves a dual purpose as the San Joaquin Valley's "Main Street" (i.e. connecting the majority of cities within the Valley) and as the primary goods movement corridor for goods moving from southern/northern California as well as goods that are moving along the 1,400 mile West Coast Corridor from British Columbia on the north to Baja California in the south.

Both facilities carry a mix of different types of traffic, although Interstate 5 appears to carry mostly longer haul interregional traffic, while SR 99 carries both interregional and intro-valley traffic. SR 99 serves as the primary highway providing goods to the vast majority of San Joaquin Valley residents. In fact, the majority (71%) of the Valley's population is located within five miles of State Route 99.

The \$1 billion for State Route 99 included in Proposition 1B makes 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 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.

Arguably, the most neglected of the Valley's goods movement street and highway facilities are the east to west highways that serve as our primary farm-to-market connectors. These facilities carry California produce to domestic and international markets. Highways like State Routes 205, 132, 152, 180, 198, and the 46 are being asked to serve a wider range of purposes today and in the future. In order to accommodate the projected growth in population and goods movement, additional investment in these facilities will be required.

Truck traffic in the Valley is growing at an amazing rate. The following statistics reflect this trend.

Truck traffic accounts for anywhere from 19% of the traffic in Stanislaus County to 27% in Kern County, while the statewide average for truck volumes is 9% by segment.

In 1992, truck VMT in the Valley accounted for 18.7% of all statewide truck VMT. In 2007 it had grown to 28% and is still climbing.

Over a six-year period from 1997 to 2003, truck traffic grew 33% while the state as a whole grew about 8%.

It is estimated that between 25% and 30% of all truck movements in the San Joaquin Valley are through trips not generated or ending in the Valley.

On Interstate 5 it is estimated that up to 30% of the traffic is trucks, depending on the location. Truck traffic on SR 99 is two to three times (18% to 27%) the average for the state.

Large trucks (5+ axles) play a very important role in the region's trucking system, constituting over 20% of total Annual Average Daily Traffic in some locations on SR 99. Surface Transportation Assistance Act (STAA) trucks are the largest trucks (STAA trucks are defined as tractor-trailer combinations more than 65 feet in length or with a kingpin to rear axle length greater than 40 feet) allowed to operate on California's highways and are restricted to a designated STAA roadway network. Unfortunately, the geometry of many of the Valley's interchanges does not easily accommodate these longer trucks which now make up about 70% of the truck fleet. In order to address this situation, additional STAA truck signing and geometric improvements to various interchanges will be required. Additionally, necessary expansion of our roadside rest system is required to deal with truck safety and to reduce the impact of on-street parking by trucks in communities along freeways.

As we look forward, several trends are clear. Among them are:

- The Valley's agricultural industry's reliance on local routes and state highways to move goods from farm-to-market will continue to increase as the Valley's farms production continues to grow in order to meet a growing planet's needs for food and fiber.
- The Valley's centralized location lends itself to the location of distribution centers, which in turn leads to more heavy-duty diesel trucks utilizing our street and highway system, thereby creating more "wear and tear" on the facilities and generating additional emissions.
- Forecasted congestion on east-west routes connecting the Bay Area to Stockton and Modesto will continue to worsen as goods movement increases and Bay Area employees continue to seek affordable housing in the Valley.
- Investments that improve access to intermodal transfer points will need to be taken into consideration and funding sought as "Just-in-Time" delivery continues to become the primary business model for many goods movement companies.
- The Port of Stockton has emerged as the fourth (effectively tied with the Port of San Diego) largest port in California, but continues to be growth constrained due to access issues on neighborhood surface streets.
- At-grade intersections between vehicular traffic and trains are quite numerous in the Valley and present a safety hazard. Future growth in population and goods movement will only worsen the situation.
- Problematic access to large activity centers for large STAA trucks and doubles will increase due to ramp and roadway geometrics as will safety and road maintenance issues associated with truck traffic.

4b. Transit

Existing Operations

For the San Joaquin Valley (SJV), there exist jurisdiction-by-jurisdiction transit services with limited inter-county transit operations throughout the SJV. These transit services include:

- Vanpool services: Kings Area Rural Transit / Agricultural Industries Transportation Services (KART/AITS), San Joaquin County Commute Connection
- Passenger rail service: Altamont Commuter Express (ACE)
- Bus services: Greyhound, San Joaquin Commuter routes, Modesto Area Express connections to ACE and BART, East Kern Express route, Yosemite Area Regional Transportation System (YARTS), Stanislaus Regional Transit routes, Merced County "The Bus" routes, KART, Tulare County Area Transit routes

However, there is not an integrated transit system that offers extensive inter-county transit and connectivity to other modes such as Bay Area Rapid Transit (BART), Altamont Commuter Express (ACE), and Amtrak.

Improvements to inter-county transit services will be needed to accommodate the projected future demands of inter-county commuters with viable modal choices.

Transit Improvements

The San Joaquin Valley (SJV) Express Transit Study was a sponsored effort of all eight valley COGs/MPOs, which make up the San Joaquin Valley Regional Transportation Planning Agencies (SJVTPA). The consultant, Nelson/Nygaard Consulting Associates, commenced this study in February 2008.

The SJV Express Transit Study is valley wide and comprehensive in its documentation of existing inter- and intra-valley transit services. The study further projects future transit demand both within the Valley and to Sacramento, Bay Area, and Southern California destinations. The study proposes service options throughout the San Joaquin Valley and by various modes ranging from rideshare/TDM, vanpool, commuter express bus, and commuter rail. The study has been coordinated with local transit providers in each of our counties, vanpool programs, and the San Joaquin Regional Rail Commission (ACE).

The study identifies four feasible inter-county commute corridors.

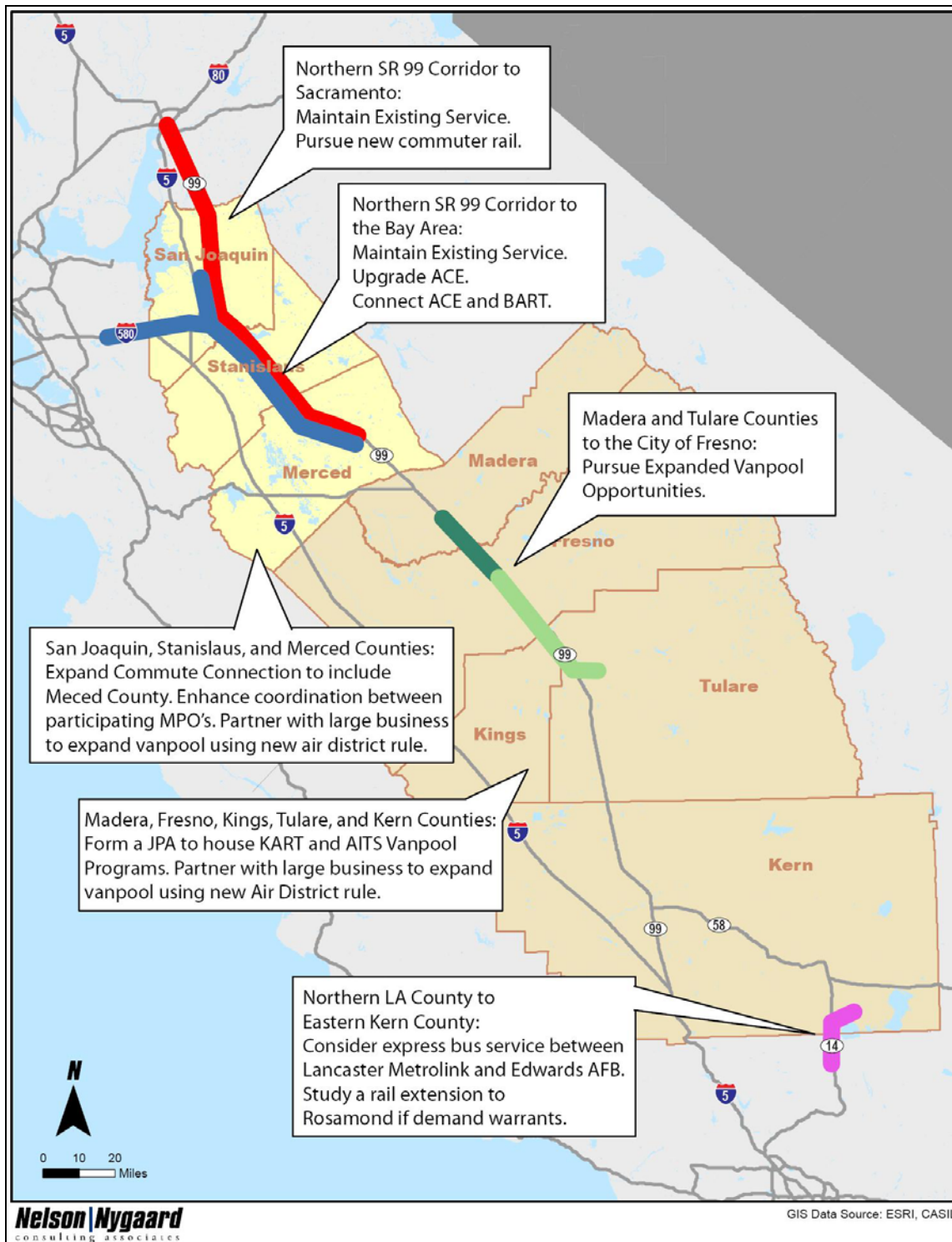
Key Travel Corridors	Description
Northern SR 99 corridor to Sacramento	Nearly 10,000 daily trips heading towards Sacramento by 2030
Northern SR 99 corridor to Bay Area	More than 50,000 daily commute trips by 2030
Madera and Visalia to Fresno	Substantial growth in commute trips to Fresno jobs
Northern LA Co. to Eastern Kern Co.	More than 20,000 people work at Edwards Air Force Base

The study summarizes the proposed services by key corridor to best serve the SJV’s inter-county commuters.

- Invest in ridesharing, which is the most cost-effective strategy for the region
- Focus on expanding vanpool offerings
- Consider expanding subscription bus service from Stockton to Sacramento and the Bay Area
- Consider implementing bus service between Lancaster Metrolink station and Edwards Air Force Base in Eastern Kern County in partnership with the base
- Consider upgrades to commuter rail service to northern SR 99 corridors which includes capitalizing on California High Speed Rail investments

Key Travel Corridors	Rideshare	Vanpool	Commuter Express Bus	Commuter Rail Improvements
Northern SR 99 corridor to Sacramento	X	X	X	X
Northern SR 99 corridor to Bay Area	X	X	X	X
Madera and Visalia to Fresno	X	X		
Northern LA Co. to Eastern Kern Co.	X	X		

The map depicts the study's proposed services for the SJV region.



The SJV Express Transit Study, from a procedural and geographic perspective, serves as a model for modal studies for the San Joaquin Valley.

Recommendations

Ridesharing/Vanpool

Recognizing that lower-density land use patterns will continue to dominate most of the San Joaquin Valley for the foreseeable future, the expansion of the ridesharing and vanpool opportunities should be the primary investment to increase transportation choices for inter-county commuters in most of the SJV region. Recommendations for expanding access to ridesharing and vanpool services are:

- Continue with plans to form a Joint Powers Authority in the Southern portion of the Valley to operate KART and AITS Vanpool
- Expand Commute Connection's service area to include Merced County, and enhance coordination between the participating MPO's
- Commute Connection should consider pilot testing lease-purchasing vanpool vehicles
- Prioritize vanpooling to Fresno
- Provide a single valley-wide ride-matching and vanpool website
- Invest in more marketing of vanpool to choice riders
- Expand park-and-ride opportunities
- Offer Guaranteed Ride Home throughout the Valley
- Seek to influence the development of the new Air District trip reduction rule, so that it can fund and promote ridesharing to large employers

Inter-county Express Bus

Three key corridors (Northern SR 99 corridor to Sacramento; Northern SR 99 corridor to Bay Area; Northern LA County to Edwards Air Force Base in Eastern Kern County), which were identified through this study, have potential for commuter express transit services. Recommendations for express bus services include:

- Maintain existing inter-county commuter service
- Enhance San Joaquin Regional Transit District subscription routes to Sacramento and the San Francisco Bay Area as funding becomes available
- Study express bus service between Lancaster Metrolink and Edwards Air Force Base

Commuter Rail

Nearly half of the San Joaquin Valley's inter-county commuters travel between the Valley and the neighboring San Francisco Bay Area and Sacramento areas. High trip densities, congested roads, and the opportunity to connect to dense downtowns and high quality local rail service on the destination end makes these corridors good candidates for commuter rail service. Expanding and improving passenger rail service in these rail corridors may be the best way to serve SJV commuters in the coming decades. Recommendations for commuter rail are:

- Develop a coordinated regional advocacy plan for enhanced state and federal investments in commuter rail
- Work cohesively as Valley Counties to upgrade ACE
- Work cohesively as Valley Counties for a direct ACE/BART connection
- Work toward expansion of commuter rail service between Merced and Sacramento
- Invest in great station area planning

4c. High Speed Rail

Background

The California High-Speed Train (HST) system will approximately be an 800-mile system that will serve Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, the Inland Empire, Orange County and San Diego. By 2030, High-Speed Rail (HSR) will potentially be carrying 93 million passengers annually at operating speeds of up to 220 miles per hour. At such high speeds, the expected trip time from San Francisco to Los Angeles will be just over 2 ½ hours.

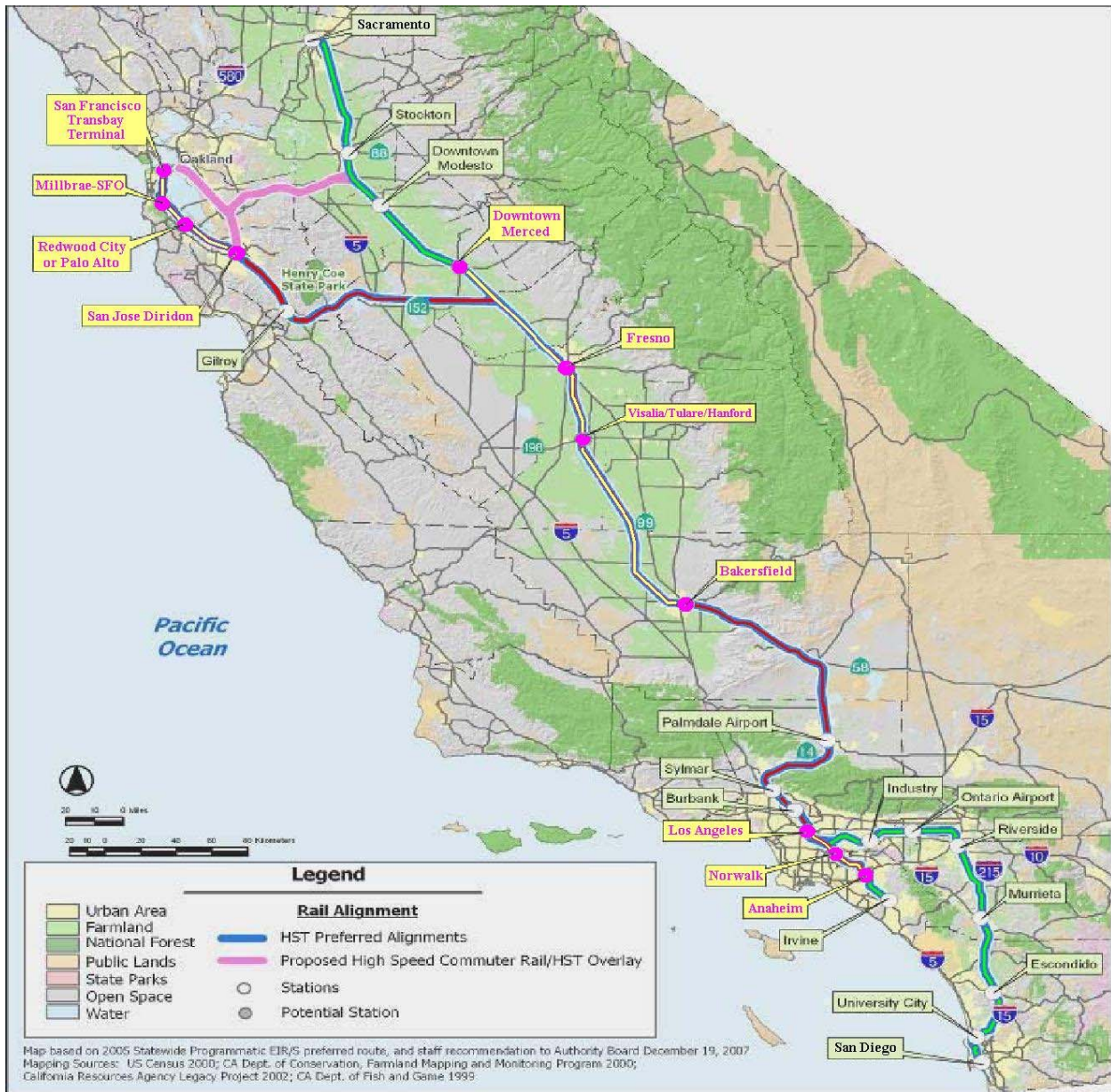
In 1996, the California High-Speed Rail Authority (CHSRA) was created to plan for the development, financing, construction and operation of the HST system. The CHSRA is made up of a nine-member policy board and a small core staff.

In 2000, CHSRA adopted the Business Plan, which described the economic viability of the HST system. This Final Business Plan included investment-grade forecasts of ridership, revenue, cost and benefits of the HST system.

In 2005, CHSRA, in cooperation with Federal Railroad Administration (FRA), completed the final program-level Environmental Impact Report / Environmental Impact Statement (EIR/EIS) that looked at the entire proposed statewide HST system. This was the first phase of a tiered environmental review process.

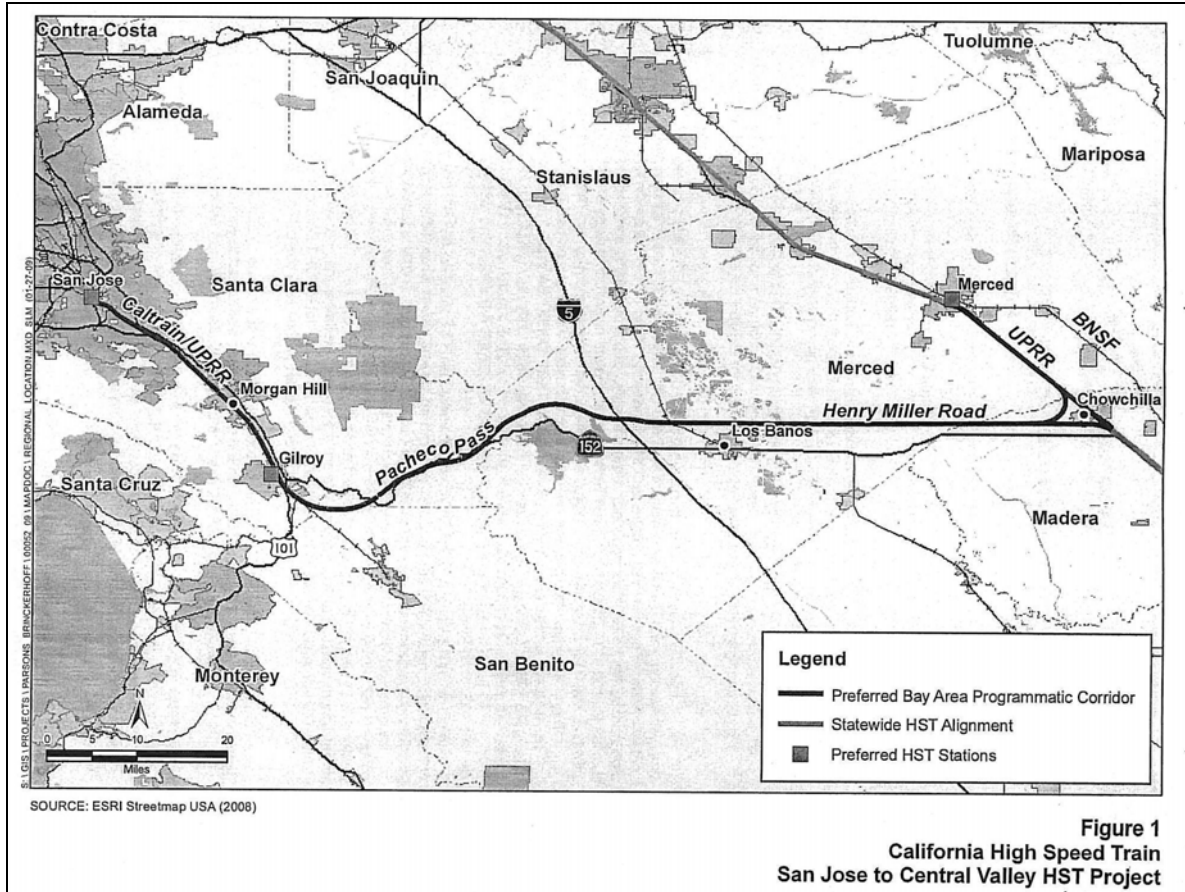
In 2007, CHSRA adopted a Phasing Plan and laid out the Preliminary Financial Plan. Factors and conditions for adopting Phase I (San Francisco to Central Valley to Anaheim) of the Phasing Plan included the following:

- Early utilization of some segments
- Local and regional funding participation in construction
- Service to several regions
- Significant operating surplus to attract private sector financing
- Timely construction



In 2007, CHSRA also laid out the Preliminary Financial Plan, which was later updated in 2008.

In 2008, CHSRA, in cooperation with FRA, completed another program-level EIR/EIS, specifically for the Bay Area to Central Valley corridor. This program-level EIR/EIS finalization resulted in the CHSRA selecting Pacheco Pass (over Altamont Pass) as the preferred alignment.



Also, in 2008, the CHSRA released an updated Business Plan with updated ridership and revenue forecasts. The 2008 Financial Plan updated the financing strategy for Phase I.

Funding Sources	Cost (2008 dollars)
State (2006 Bond - \$9.95 billion)	\$10 billion
Federal grants	\$12-16 billion
Local partnerships	\$2-3 billion
Public-private partnerships	\$6.5-7.5 billion
Estimated cost (SF to Anaheim)	\$33.6 billion

In 2008, California voters approved \$9.95 billion in state bonds for California’s HSR.

Current Work

In 2009, with the state bond money, the CHSRA and the FRA have initiated the project-level EIR/EIS for the entire HST system. The CHSRA has invited local and transportation agencies to actively participate in the process in determining final alignments, station locations, and site for the central heavy maintenance facility. Endorsed by the SJV, the CHSRA are looking at station locations in Merced, Fresno, Bakersfield, and Hanford, and the central heavy maintenance facility somewhere within the SJV.

The CHSRA and the San Joaquin Regional Rail Commission (SJRR) entered into a Memorandum of Understanding for the joint planning and development of the Altamont Corridor Rail Project between the northern SJV and the Bay Area. The Altamont Corridor Rail Project will be a dedicated, grade-separated, electric regional rail corridor, which will support intercity and commuter rail passenger services. The project would transform the existing Altamont Commuter Express (ACE) service into the new Altamont Corridor Express by accommodating more trains per day, reducing travel times with high speed travel (150 mph or higher), and eliminating freight railroad delays by providing separate passenger tracks. The Altamont Corridor Express would possibly provide connections to potential bus links, BART, CalTrain, and the Valley Transportation Authority (VTA) light rail network. The Altamont Corridor Express will service large riderships (with proposed stations in San Jose, Milpitas, Fremont/Union City, Pleasanton, Livermore, Tracy, Stockton, and Modesto), and also serve as a feeder to the statewide HST system (with considered connections at stations located in San Jose, Stockton, and Modesto). Additionally, the San Joaquin Valley supports the Altamont Corridor Rail Project to connect to Merced in order to tie in to Phase I of the statewide HST system. By ending in Modesto and not extending to Merced, there will be a gap (disconnect) between this Altamont Corridor Rail Project service and the statewide HST system.



Following the completion of the project-level EIR/EIS for California's HST system, the CHSRA will be finalizing design and acquiring right-of-way.

The CHSRA will be working on acquiring Federal funding needed for California's HST system. CHSRA has already applied for more than \$4.7 billion in funding from the Federal Economic Stimulus' High Speed Rail Program. This \$4.7 billion application includes:

- \$2.19 billion for Los Angeles to Anaheim
- \$980 million for San Francisco to San Jose
- \$466 million for Merced to Fresno
- \$819.5 million for Fresno to Bakersfield
- \$276.5 million for preliminary engineering and environmental work in all segments including Los Angeles to San Diego via the Inland Empire, Los Angeles to Palmdale and Bakersfield, Sacramento to Merced, and the Altamont Rail Corridor

This \$4.7 billion, coupled with non-Federal dollar-for-dollar match will total a nearly-\$10 billion investment. This level of investment is expected to create nearly 130,000 new jobs throughout the state.

With more Federal funding prospectively available in the next Federal Surface Transportation Act, the CHSRA may have the opportunity to acquire more monies to complete the remaining segments of Phase I (Merced to San Jose; Bakersfield to Palmdale; Palmdale to Los Angeles).

With the completion of Phase I, the HST ridership is expected to generate profits. These profits will attract private partnerships to help pay (possibly match further Federal funding support) for the construction of the remaining segments (Merced to Sacramento; Altamont Corridor; Los Angeles to San Diego) of the envisioned HSR system, which would be progressing towards final EIR/EIS.

Recommendations

The California High-Speed Train (HST) System is very important to the San Joaquin Valley (SJV). By connecting the SJV to other major metropolitan areas, high-speed rail will contribute to significant economic development opportunities, less vehicular congestion, safer highways, and improved air quality. Construction of the HST will also directly create jobs. For these reasons, the recommendations are:

- The San Joaquin Valley will continue to support the activities, including the pursuit of available future funds, of the California High Speed Rail Authority and the development of a HST network across our valley and throughout the state.
- The San Joaquin Valley supports the station locations in the cities of Merced, Fresno, Bakersfield, and Hanford.
- The San Joaquin Valley supports the heavy maintenance facility location somewhere within the Valley.
- The San Joaquin Valley supports the Altamont Corridor Rail Project service improvements including connection to Merced, which will tie in to Phase I of the statewide HST system.

4d. Goods Movement

4d-1. Freight and Passenger Rail

Introduction

In general, rail facilities are privately owned. Passenger service is provided by the National Rail Passenger Corporation, referred to as Amtrak. The Altamont Commuter Express (ACE) also provides passenger service between the bay area and the San Joaquin County. Private rail corporations, primarily the Union Pacific (UP) Railroad and the Burlington Northern Santa Fe (BNSF) Railroad provide freight service. In recent years, regional transportation planning agencies in the eight Valley counties have had an enhanced role in the planning of Interregional passenger rail service and rail freight movement.

Existing Interregional Rail Facilities

Rail facilities are located throughout the San Joaquin Valley. Many of these facilities provide for long distance movement of goods. In particular, several facilities owned by UP and BNSF stretch for significant lengths north-south through the Valley. These are connected at locations up and down the Valley by several shorter lines, owned, leased, and/or operated by a number of different companies, such as the San Joaquin Valley Railroad.

Valley passenger rail service is provided by Amtrak's *San Joaquins* service route. The *San Joaquins* is the fourth busiest route in the Amtrak national system outside the Northeast Corridor, with ridership annual ridership approaching 1 million as of October 2009. At present, there are six daily round trips provided from Oakland or Sacramento to Bakersfield. Connecting bus service has been significantly expanded over the years to now offer service points to the South Bay Area, as far north as Eureka, and as far south as Palm Springs and San Diego. The *San Joaquins* also provides connecting services to long-distance nationwide trains. Service stops along the route include the Valley cities of Lodi, Stockton, Modesto, Turlock/Denair, Merced, Madera, Fresno, Hanford, Corcoran, Wasco, and Bakersfield.

Interregional Issues

Passenger Rail

In 1987, members of the Caltrans San Joaquin Task Force formed a committee to take a more active role in developing suggestions for improving the Amtrak *San Joaquins* service. This committee, known as the San Joaquin Valley Rail Committee is comprised of representatives from each of the counties served by the trains, and representatives of interested counties served by the connecting bus network. The committee serves as an advisory body to Caltrans and Amtrak on issues pertaining to the *San Joaquins* service.

Efforts of the San Joaquin Valley Rail Committee included the adoption of an annual Business Plan for the San Joaquin Corridor. This report becomes a significant resource to the Caltrans Rail Program in their work efforts to update a business plan for the *San Joaquins* rail corridor.

In recent years Committee work has focused on:

Operations

Intercity Rail Connectivity

- Promote expansion of Transit Transfer Pass with local agencies; investigate further options for direct connectivity with other rail systems.

Amtrak Bus Operations

- Evaluate the bus program for opportunities for cost-effective expansions or to restructure or discontinue bus routes that are not cost effective.

- Initiate new service in Fall 2008 between Bakersfield and Los Angeles International Airport via west Los Angeles.

Food Service

- Continue evaluation of menu items; add new menu items as appropriate.
- Pursue mobile food-service cart implementation.

On Board Amenities

- Implement mid-route cleaning of restrooms.
- Evaluate and testing of potential for on-board wireless service.

Ticketing and Fares

- Implement on-board, automated ticket sales and validation, if pilot program on the Capitol Corridor is successful.
- Evaluate market reaction to Spring 2008 fare reductions and adjust accordingly. Fare increases will be considered to offset increased operating expenses from higher diesel locomotive fuel costs.
- Continue to install Quik-Trak ticket machines.

Marketing

Advertising, Public Relations and Partnerships

- The Department will promote the recent addition of Amtrak bus connections from Merced to the eastern Sierra and a new route between Bakersfield and Los Angeles International Airport through west Los Angeles.
- The Department will sponsor the ceremony opening the new Madera train station in the winter of 2008-09.
- The Department, Amtrak and California Operation Lifesaver will provide bilingual staff for information booths at the annual 2008 National Council of La Raza.
- Continue contract with Glass McClure for advertising services.

Passenger Information

- The Amtrak California website will be revised for easier navigation. It will provide more content, and a comment and suggestion feature.
- The Fall/Winter On-Line Timetable in 2008-09 will include an enhanced Amtrak
- California System Map which will allow users to "point and click" the icons for specific trains, stations or bus routes as well as view all relevant timetables and amenities.
- A combined San Joaquin / Capitol Corridor timetable will be introduced in Fall 2008.

Rail Safety

- California Operation Lifesaver will continue to actively promote rail safety educational and media campaigns in Central California.

Capital Plan

Track and Signal projects

- Construct siding track and signals at Emeryville.
- Construct track and signal improvements at Kings Park in Kings County.
- Complete Merced Crossover Project.

Station Projects

- Complete construction of new Madera station and associated track work.
- Construct bus terminal and parking structure at Emeryville.
- Complete Fresno station shelters, parking lot and traffic circulation project.

Equipment

- Continue rebuilding of 66 rail cars.

Homeland Security

- Utilize Homeland Security funding for the development of security projects in the corridor

Long-range planning was last performed for the San Joaquins in 2001 as part of the California Passenger Rail System 20-Year Improvement Plan. That plan shows an increase from 6 to 10 trains per day, and discusses the co-benefits that capital improvements along the corridor have for both freight and passenger service. Since 1987 the State of California has invested over \$380 million on the BNSF San Joaquin Valley corridor for rail, siding and signal improvements.

The Amtrak San Joaquins and HSR

The recently funded High Speed Rail (HSR) service, at a minimum, will provide the expanded capacity anticipated by Caltrans 20-Year Passenger Rail System Plan. In the interim, the San Joaquins will play an important role, providing rail service for missing segments of the HSR as each segment is completed, and as a feeder service for the HSR.

Federal stimulus funding is anticipated for the HSR test track to be built in the San Joaquin Valley to connect Merced/Fresno – “the doorstep of Yosemite and the Sierras,” with Bakersfield – “the gateway of Southern California.” Existing San Joaquin Amtrak train sets could begin operating on this test track at speeds up to 120 MPH, cutting travel times in half, and ushering in one of the first segments of the HSR in California. Construction could begin in 2012.

Long term service after the HSR system is completed between Bakersfield and Merced needs further study to evaluate: 1) Amtrak San Joaquins as a feeder system for highspeed rail, and 2) addition of suburban commuter stops in outlying Fresno and Bakersfield and adjacent communities/counties. In the near-term some stops along the system may need to be serviced by connector buses, until population and ridership warrant commuter/HSR feeder train service. Development of connector buses and community transit centers should be coordinated with potential future commuter rail corridors that provide service from outlying communities and counties to the HSR stations within the valley. Preservation and expansion of freight service along future commuter rail corridors is an important strategy to preserving potential future commuter rail corridors to the Valley’s HSR stations.

Inter-County Commuter Rail

In 2009 the San Joaquin Valley Transportation Planning Agencies completed the San Joaquin Valley Express Transit Study. The study looks at a hierarchy of transit services which include commuter passenger rail service. The study made the following recommendations on passenger commuter rail.

1. Develop a coordinated regional advocacy plan for enhanced state and federal investments in commuter rail.
2. Upgrade ACE.

Short Range ACE Corridor Improvements:

- Increase service to at least 12 trains (from current 8)
- Upgraded signaling
- Dispatching Improvements
- Altamont Slide Repairs
- Niles Canyon Drainage Improvements
- BNSF Crossing Improvements
- Increase Speed in curves as possible
- Additional sidings/passing tracks to speed operations and allow increase in service
- Purchase rolling stock to support expanded service

Mid Range ACE Corridor Improvements

- Purchase new rolling stock to support expanded and higher speed service
- Provide additional dedicated ACE track on Fresno Subdivision and Purchase Tracy Subdivision to create a dedicated corridor from Stockton to Lathrop.
- Double-track existing ROW where possible to separate freight and passenger rail

- service including operating on ACE owned track parallel to UP track from East Livermore to Hearst.
- Construct track in former SP Right of way owned by Alameda County between Midway and East Livermore, and relocate service to that trackway.
- Grade separations
- Station Improvements to support increased service frequency.

Longer Range ACE Corridor Improvements

- Increase service to 20 minute bi-directional peak hour service, plus regular midday service up to every half hour.
- Operate a dedicated ACE/Regional Rail corridor throughout the length of ACE
- Service through additional right of way acquisitions and new trackage.
 - Evaluate options including purchase of right of way/tunneling, and signalization
- as necessary to create a more direct, level alignment through Niles Canyon to support increased service
 - Evaluate options including purchase of right of way/tunneling, and signalization
- as necessary to create a more direct, level alignment through Altamont Pass to support increased service.
 - Evaluate options including purchase of UP Warm Springs Subdivision to support increased service from Niles to Diridon Station
- Complete other improvements as necessary to support high speed equipment operating on regional rail corridor, including electrification.
- Purchase additional rolling stock compatible with high speed service.
- Make additional station improvements as needed to support higher frequency higher speed service.

3. Lobby for a direct ACE/BART connection.

4. Work toward expansion of commuter rail service between Merced and Sacramento.

5. Consider express bus service or LA Metrolink expansion towards Edwards Air Force Base.

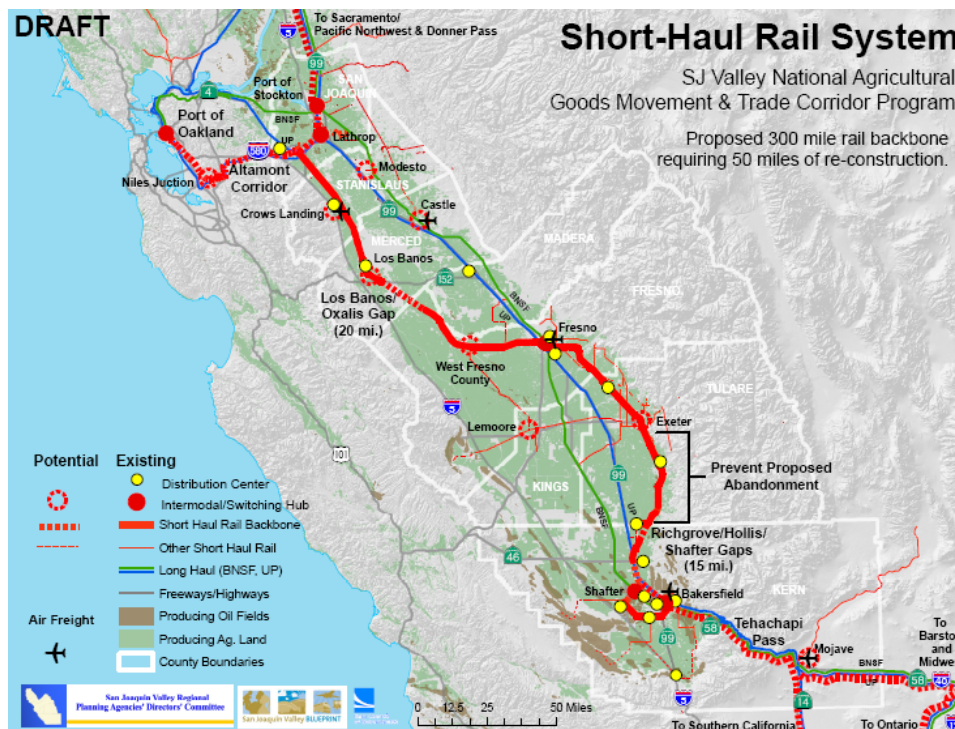
6. Invest in great station area planning.

The study focused on inter-county commuter rail. The study noted the potential for commuter rail service within a county. Future studies of intra-county commuter rail service may be needed to augment this study. Fresno and Kern COG have both funded long range transit studies that will look at future potential for light-rail, and bus rapid transit systems that could serve as feeder systems for the highspeed rail stations in those regions.

Freight Rail

Central California is a major corridor for freight/goods movement. The highway system, and in particular State Route 99, is at times overwhelmed with truck traffic. In 1992, Caltrans District 6 prepared a report titled *Freight Movement in the San Joaquin Valley*. The report identifies key issues relating to goods movement and concludes "...modifying truck traffic demand over state highways by encouraging alternatives to highway freight movement. A logical alternative especially to long haul freight through the San Joaquin Valley would be to take advantage of available capacity on rail mainlines."

In 2000, the counties of the San Joaquin Valley in conjunction with Caltrans, hired the consulting firm Cambridge Systematics, to conduct the “San Joaquin Valley Goods Movement Study”. This study noted that trucking is the dominant mode for moving freight, while rail accounted for 11% of the total tonnage. Rail was also found to be important for long-haul shipments of certain key commodities. Less than 25% of shippers surveyed currently use rail services and only one third of those indicated that their rail usage was likely to grow. The decline in rail shipments since 1993 may have been attributable to rail network mergers and acquisitions. Many rail shippers looked for alternative shipping options during this time and found it difficult to locate enough boxcars to meet their needs. Both the Cities of Fresno and Bakersfield have looked at consolidation and relocation of rail yards in their downtowns during this period.



In 2006, the CIRIS study was completed by SJCOG, looking at rail service between the San Joaquin Valley and the port of Oakland. The study concluded that a pilot project was needed to demonstrate the feasibility of such a service. The study looked at the potential for Service from Lathrop, Crows Landing, Fresno and Shafter to Oakland.

Draft Rail Concept Report

In 2008, the 8-valley COGs prepared a draft report on *The Altamont/San Joaquin Valley Corridor: Optimizing Goods Movement for Exports and the Environment* synthesizing 12 years worth goods movement reports in the region. The concept report divided rail goods movement in the San Joaquin Valley into two types: 1) National Goods Movement Corridor For Long-Haul Rail, and 2) Regional Goods Movement Corridor For Short-Haul Rail. Nationally, the San Joaquin Valley serves a critical corridor between the rapidly growing Southern half of the nation, with the port of Oakland, and between Southern California and the Pacific Northwest. This national goods movement is primarily pass-through traffic, and accounts for the majority of trains on the mainline system.

Tehachapi Pass

A critical bottleneck in the national rail freight system is the Tehachapi Pass at the Southern end of the Valley. The State and BNSF are investing over \$100M to increase capacity over the pass by as much as 70-percent. This project primarily benefits national goods movement without any federal funding. Because of this project national rail traffic is displacing short-haul rail capacity. The state and federal government needs to mitigate the potential environmental impacts of reduced short-haul rail capacity in the 8-county region.

Regional Goods Movement

Regional goods movement is characterized by shipments to and from the 8-county region to out-of-state destinations. There is currently no intra-state rail travel from the San Joaquin Valley. Goods currently traveling between the valley and the southern California or the Bay Area are shipped almost entirely by truck. This is especially true of containerized freight. Historically, the national rail companies will not ship less than 700 miles (the length of California).

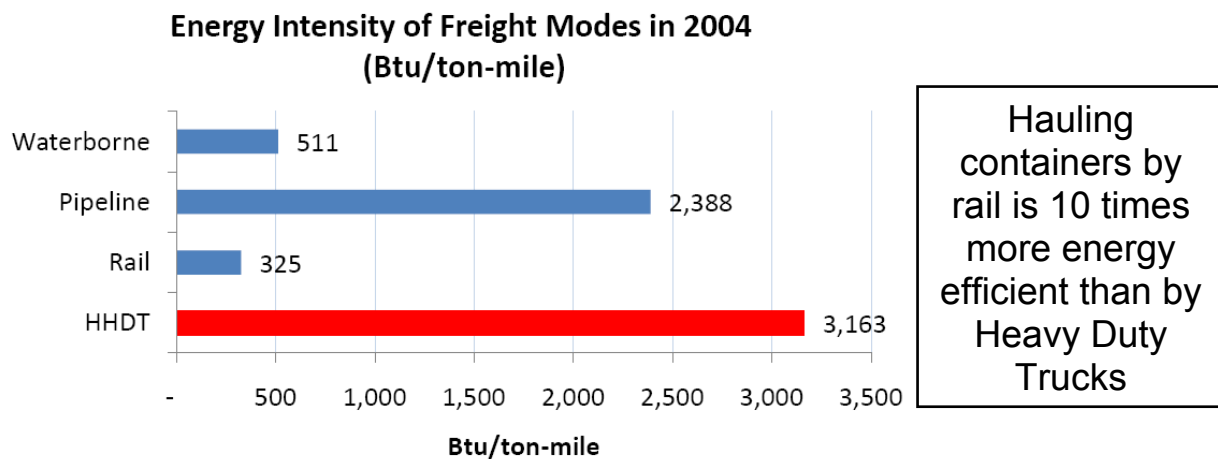
One example of out-of-state shipments include the Rail-Ex facility in Delano. This facility ships refrigerated box cars of perishable produce from the valley non-stop to Albany, NY in 5 days.

The rail concept report also pointed out the role that short haul rail can play in persevering rail infrastructure for future passenger service, and the potential for hauling un-subsidized freight on conventional passenger corridors to help off-set the cost of subsidized passenger service.

Oakland to Shafter Inland Port Pilot Project

Building on the 2006 CIRIS study, the *Altamont/San Joaquin Valley Corridor* concept report reviewed efforts to create a rail freight shuttle between the Port of Oakland and the Valley. It proposed a phasing for the acquisition and refurbishment of the old Southern Pacific line. Phase I included a short-haul rail connection between Tulare to the rail yard in Fresno, for shipping goods out-of-state. Phase II was a proposed shuttle between the port of Oakland and Crows Landing in Stanislaus County. Phase III was completion of gaps in Los Banos and northern Kern County to complete the system to the Port of Oakland. Before the completion of such a project, a pilot effort on the BNSF or UP lines was needed.

In 2009, the Paramount Farming Company and the City of Shafter completed the Oakland-Shafter Inland Port (OSIP) position paper. The paper recommended that policy makers create long-term, sustained efforts to develop and maintain short haul rail with-in the state of California. This was critical to both economic and environmental goals for the state and nation.



ICFI, "Greenhouse Gas Emissions from Freight Trucks," Intl. Emissions Inventory Conf., 5/16/07

The OSIP paper concluded that a Midwest grain transloading facility could provide the backbone traffic necessary to make such a service from the Valley to Oakland economically viable, because the port of Oakland lacked the space necessary for such a facility. Once the service was established, other products from the valley could be containerized and shipped by rail to the ports such as almonds, nuts, cotton and other products, currently trucked to the port. By the end of 2009 a pilot shipment of grain from the Midwest had been successfully transloaded from bulk carriers to containers and then shipped to the port of Oakland. Shafter had also completed a "will-serve" agreement with the UP to provide the service, a prerequisite for state bond funding of an intermodal facility in Shafter.

Rail Abandonment Issues

In an effort to preserve a rail corridor that was threatened with abandonment, funding for the rehabilitation of the Union Pacific Coalinga branchline between Huron and Visalia was obtained from various sources. Rehabilitation of the tracks improved freight service operated by the San Joaquin Valley Railroad and reduced the amount of truck traffic on regional roads and state highways. Funding for the \$15 million project was provided with the Governor's Traffic Congestion Relief Program, federal Economic Development Initiative grant, Congestion Mitigation and Air Quality funds from Fresno, Kings and Tulare Counties, the cities of Huron, Lemoore and Visalia, private agencies and the San Joaquin Valley Railroad. Rehabilitation work was completed in early 2004 and passenger service along this corridor could be revisited again as part of a HSR feeder service.

In 2006, the San Joaquin Valley Railroad (SJVR) applied to the Federal Surface Transportation Board to abandon portions of the former Southern Pacific mainline between Richgrove and Exeter. Tulare CAG is working with the Central California Rail Shippers/Receivers Association and the SJVR to preserve the corridor and has identified funding from a local transportation sales tax measure for possible acquisition of the corridor.

Short Range Action Plan

Federal Government

- Fund HSR to complete service between Los Angeles and the Bay Area with stops in the Valley – the doorstep to Yosemite and the Sierras.
- Continue to fund Amtrak service as an interim gap service during HSR construction and future feeder system/back-up service for HSR
- Coordinate Amtrak with ACE and other future commuter services serving as feeder networks for HSR
- Provide matching funding for Tehachapi Pass, to mitigate short-haul rail displacement impacts of increased national goods movement through the San Joaquin Valley region by funding short-haul rail service infrastructure between the SJV shippers, class I rail yards, and the ports.

State of California

- Fund HSR to complete service between Los Angeles and the Bay Area with stops in the Valley – the doorstep to Yosemite and the Sierras.
- Establish the HSR Heavy Maintenance facility in the San Joaquin Valley.
- Continue financial support of Amtrak service as an interim gap service during HSR construction and future feeder system/back-up service for HSR.
- Coordinate Amtrak with ACE and other future commuter services serving as feeder networks for HSR
- Revise the California State Rail Plan 2005-06 to 2015-16 to consider HSR, the San Joaquin Valley Express Study and Valley short-haul rail needs.
- Implement the *San Joaquins Route Business Plan* Continue cooperative planning and coordination with recommendations of the San Joaquin Valley Rail Committee.

Regional Transportation Planning Agencies

- Participate in the San Joaquin Valley Rail Committee and support the committee recommendations.
- Monitor the planning and analysis work of the California High Speed Rail Authority and participate in the planning effort to ensure that Valley interests are appropriately reflected.
- Support state and federal actions that would increase accessibility to passenger rail service. The Central Valley passenger rail system should be designed to fully integrate the larger intermodal passenger transportation network including multimodal stations that provide convenient and direct access to all appropriate state, regional, and local modes, including, where applicable, urban commuter, inter-city and high speed rail service, regional and local bus service, airport shuttle services, and other feeder services that provide intermodal linkage.
- Work to coordinate passenger and freight rail activities to maximize co-benefits

Long-Range Action Plan

Federal Government

- Fund the re-configuration of Amtrak as a commuter/feeder rail system for the HSR
- Help fund the creation of a short-haul rail system for the SJV to provide more capacity on the national system.

State of California

- Fund the re-configuration of Amtrak as a commuter/feeder rail system for the HSR
- Fund the creation and maintenance of a short-haul rail system for the SJV to promote the use of more efficient rail modes over trucks.

Regional Transportation Planning Agencies

- Work to fund the creation of a HSR passenger feeder rail and transit service for the SJV
- Work to fund the creation of a short haul rail backbone to the port of Oakland and the BNSF and UP rail yards in the valley.
- Work to coordinate passenger and freight rail activities to maximize co-benefits

4d-2. Airports

Fresno

Introduction

- Number of public use / general aviation airports in the region and elaborate on the different types of uses (e.g. recreational, private uses, commercial passenger service, and air cargo): There are eight public use / general aviation airports in the Fresno County region: Coalinga Municipal Airport, Firebaugh Airport, Chandler Executive Airport (classified a Regional General Aviation Airport in the California Aviation system Plan), Harris Ranch Airport (classified a Limited Use Airport in the California Aviation System Plan), Mendota Airport, Reedley Municipal Airport, Selma Aerodrome, and Sierra Sky Park. Fresno Yosemite International Airport (FYI) is designated a Primary Commercial Service Hub Airport in the California Aviation System Plan and also accommodates general aviation.

Fresno County's general aviation airports provide a variety of important services to the communities within which they are located and to surrounding areas. Fresno County airports provide for recreational, business, and charter air travel; police and sheriff helicopter patrols at FYI; air cargo flights; fire suppression (air tankers), and flight and aircraft mechanical instruction.

- Does the COG act as the Airport Land Use Commission (ALUC)? If not, what body acts as the ALUC? The Fresno COG does operate as the ALUC for Fresno County.
 - Statement about the value of general aviation airports to the valley (e.g. economic, goods movement, supporting agriculture, recreational, supporting business travel). The general aviation airports are vitally important to the communities within which they are located and to all of Fresno County for all of the reasons listed. With regard to FYI in particular, it has long been recognized there is a need to better quantify and promote the economic significance of the airport to Fresno and the entire San Joaquin Valley in order to better develop and sustain ongoing support. Caltrans Division of Aeronautics completed a Final Report in June 2003 that provided a comprehensive evaluation of the economic benefits of aviation and airports to California communities and the overall State economy. The report, prepared by Economics Research Associates, noted that aviation's overall contribution to the California economy (including direct, indirect and induced impacts) amounts to nearly 9 percent of both total state employment and total state output.
- 2) Valley-wide map of public airport locations: Please see attached map of the Fresno County Regional Airports.
- 3) Major Airports Operations
- Number of passenger airlines: 8.
 - Summary of destinations: Dallas/Ft. Worth, Denver, Las Vegas, Los Angeles, Phoenix, Portland, Salt Lake City, San Francisco, Seattle, Guadalajara (Mexico).
 - Passengers per year served (incoming/out-going): For calendar year 2008 there were a total of 1,252,751 passengers, of which 627,343 were enplanements and 625,408 were deplanements.
 - Number of arrivals and departures per year: Approximately 15,330 departures and approximately the same number of arrivals per year.

- Itinerant operations (number of visiting aircraft, flight training, and recreational flights): Total operations at FYI are estimated to be approximately 280,000, including air carrier/commuter/charter, general aviation, and military operations but not including air freight operations.
- Range of aircraft that the airport can support: The airport can accommodate the full range of commercial and military aviation aircraft (including Air Force One and the USAF C-5A Galaxy Transport).
- Number of runways / runway lengths: FYI has two runways, a principle runway (11L/29R) 9,222 feet long and 150 feet wide and a parallel general aviation runway (11R/29L) 7,206 feet long and 100 feet wide. This two-runway system is supported by full-length parallel taxiways on both the north and south.
- Types of Air Cargo operations: Air cargo services and flights are provided by UPS, Federal Express and Ameriflight.
- Types of goods exported / imported: The terms exported / imported implies foreign shipments of which there are no direct cargo flights into or out of FYI. Generally air cargo shipments consist of small packages, not bulk items.
- Quantify goods movement (e.g. worth, weight): Unknown, except that the weight of enplaned cargo is down considerably from just two years ago. The value of enplaned cargo is, therefore, also thought to be down considerably.
- Summary of air cargo destinations (e.g. Interstate, U.S., International): Direct flights only to Ontario and Oakland in California, where cargo is sorted and put on planes for national and international distribution.
- Does airport support military operations? Yes, the Air National Guard's 144th Fighter Wing.

4) Future Operations of Major Airports

- Summarizes the expansion of futures operations: The growth or expansion of future operations at general aviation airports in Fresno County will likely be reflective of growth in the entire general aviation industry. However, the potential growth of future operations and airport development at Chandler Executive Airport is considerable greater. The development of nearby business parks, downtown redevelopment, and the completion of the planned freeway system in the vicinity all will reinforce the role of Chandler as a reliever airport to FYI and as an executive airport suitable for business aircraft.

The FYI service area consists of six counties including Fresno, Kings, Madera, Mariposa, Merced and Tulare. As population within this six county area increases it is likely that operations at FYI will increase. It has become clear that passenger usage of FYI is underutilized due to market forces generated by air fares, the automobile and alternative airports in the Bay Area, Sacramento, and Los Angeles. Total market leakage may be as high as 300,000 passengers a year or more. Reduction of this market leakage through better airline service, including additional international service, is a primary challenge at FYI. The extent to which this challenge is addressed will determine, in part, the growth in future operations at the airport.

5) Short and long-term benefits:

- What are the congestion relief, air quality, economic benefits the airports bring to your region? Quantify as best as possible. These various benefits, while not quantified, are nevertheless real. As noted above, there is an ongoing need to better quantify and promote the economic significance of FYI, in particular, to Fresno and the entire San Joaquin Valley in order to better develop and sustain ongoing support. Again, as noted, Caltrans Division of Aeronautics generated a report that noted aviation's overall contribution to the California economy (including direct, indirect and induced impacts) amounts to nearly 9 percent of both total state employment and total state output.

Of increasing economic significance to FYI is the role and value of air cargo, notwithstanding recent declines due to state and national economic challenges. In this regard, major airports in both Southern and Northern California are experiencing significant air cargo constraints that include both facilities and operations capacity, thereby presenting an opportunity for the Fresno region.

5. Intelligent Transportation Systems

Background

Intelligent Transportation Systems represent a means of applying new technological breakthroughs in detection, communications, computing and control technologies to improve the 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 Traveler Information Systems (ATIS), Advanced Public Transportation Systems (APTS), 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 transit fares and 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, as well as use onboard systems to detect and avoid collisions.

Within the San Joaquin Valley, utilizing a federal planning grant, the eight counties formed an ITS committee focused on solving transportation problems within the region. The ITS vision for the San Joaquin Valley Strategic Deployment Plan is to enhance the quality of life, mobility, and the environment through coordination, communication, and integration of ITS technology into the Valley's transportation systems. The ITS plan for this corridor includes major local elements developed by the eight counties. The plan coordinates architecture, standards and institutional issues and also provides the framework for deploying an integrated ITS.

The overall strategy for the deployment of ITS includes a number of components and user services:

- Completion of advanced traffic management of the region's freeways and certain arterial corridors, through traffic operations centers, signal synchronization, visual detection and deployment of incident management systems.
- Advanced Traveler Information Systems will provide real-time information to system users on traffic conditions, incidents, accidents, events, weather and alternative routes and modes.

- Advanced Public Transportation Systems will provide some of the technology to implement improved dispatching of transit vehicles and will enable vastly improved demand-responsive transit services.
- Improved Commercial Vehicle Operations will take place by deploying technologies that track vehicles through the Valley, providing them with improved traveler information and safety warnings.

General Opportunities

- Build upon the existing Caltrans District 6 and District 10 Traffic Management Systems to fill gaps and complete coverage on major facilities, including expansion of their highway closures and restrictions database to include other agencies.
- Capitalize upon the extensive ITS technology testing and standards development conducted by Caltrans by using, where appropriate, Caltrans approaches for local traffic management systems.
- Build upon lessons learned from past and current transit ITS deployment experience (Fresno Area Express, Golden Empire Transit District, San Joaquin Regional Transit).
- Build upon Caltrans District 6 and District 10 experience with co-location and coordination between traffic management and Highway Patrol staff.
- Build upon the momentum and stakeholder coalition generated through the San Joaquin Valley Goods Movement Study to pursue ITS commercial vehicle projects.
- Investigate how to provide traveler information for commercial vehicle operators at truck rest stop locations.
- Investigate how ITS can support efforts to improve east-west travel between the inland areas and the coast.
- Improve visibility and access to existing Caltrans Valleywide alternate route plans.
- Use momentum from the Valleywide ITS planning effort in conjunction with federal rules (ITS architecture and standards conformity and statewide and metropolitan planning) to expand ITS action.

Fresno County Opportunities

- Maintain momentum generated by recent ITS strategic deployment planning process, taking advantage of the level of awareness and precedent for joint action established through the previous planning effort.
- Continue efforts to improve coordination between the Caltrans District 6 and Fresno metro area traffic management centers, taking advantage of the current District 6 and Fresno fiber optic implementation projects. Utilize the Fresno-District 6 coordination efforts as a demonstration of the benefits of improved coordination between Caltrans and local traffic management centers.
- Encourage other local entities (in addition to City of Fresno) to investigate opportunities to coordinate with Caltrans District 6 fiber optic system with City of Clovis and County of Fresno.

- Support and expand upon the projects identified in the Fresno County ITS Strategic Deployment Plan that are intended to develop a regional transportation user information system (project 4.1), connections to a Valleywide or statewide information system (project 4.2), and development of common or standard electronic maps to support applications such as automatic vehicle location.

Kern County Opportunities

- Coordinate Bakersfield area Transportation Management Center (TMC) with Caltrans' District 6 TMC via satellite.
- Look for ways to integrate the ITS capabilities being implemented at Golden Empire Transit (GET) with Bakersfield's traffic management system, including sharing information between the two centers during emergencies.
- Facilitate the transfer of lessons learned from the Golden Empire Transit (GET) ITS deployment, to other area transit operators, and look for opportunities for those agencies to better coordinate with GET using GET's ITS capabilities.
- Expand the accident reduction campaigns on Kern's rural highways.

Kings County Opportunities

- Provide improved safety and mobility along east-west highways such as SR-198 using CMS and other ITS applications.
- Build on City of Hanford's traffic management capabilities, including coordination with Caltrans.
- Continue to develop the AVL system for Kings Area Rural Transit (KART).
- Improve safety at rural railroad crossings using ITS applications.
- Provide commercial vehicles with improved information in the I-5 corridor related to routes, facilities and parking within the County.
- Enhance the safety and capacity of Highway 43 as an alternate route to SR-99/I-5 using ITS applications.

Madera County Opportunities

- Evaluate surveillance and automated red-light running at high accident locations in Madera
- Enhancements to emergency vehicle dispatching systems for rural areas, including improved evacuation plans for Yosemite Park that build on the additional roadway connections that are being constructed (i.e., elimination of "dead ends").
- Traveler information and/or other ITS applications that would support needed park and ride lots along Highway 99.
- Develop traveler information strategies to support the relocated Amtrak station.
- Investigate options for utilizing ITS in support of upcoming restructuring/optimization of rural demand-responsive transit service.
- Develop analysis tools for traffic accidents, such as a geographic information system, for the City of Madera.

Merced County Opportunities

- ITS traveler information and traffic management in support of the University of California facility, red-light running enforcement and train warning and information system applications in Merced.
- Consideration of ITS traffic signal applications in support of Merced's major interchange improvements.
- Develop traveler information and other transit management strategies to improve coordination of the regional bus service ("the Bus") with the intermodal transportation center in downtown Merced.
- Investigate options for supplemental railroad crossing warning and information systems at high-volume train crossings where delays are frequent and long.

San Joaquin County Opportunities

- Utilize ITS to support the coordination of local transit services with the new commuter rail service to the Bay Area.
- Investigate methods to further improve coordination between San Joaquin Regional Transit and Stockton and/or Caltrans District 10 TMCs.
- Build upon next bus arrival signs and automated phone system traveler information strategies at San Joaquin Regional Transit, possibly to include kiosks and Internet information.

Stanislaus County Opportunities

- Expand on the City of Modesto/Ceres Traffic Management System (TMS) to develop an integrated Urban ATMS for the County.
- Improve interjurisdictional signal coordination.
- Build upon ITS transit applications in Stockton, Fresno and Bakersfield to provide Modesto Area Express (MAX) and local transit services with a means to improve operations and management.
- Improve safety and mobility on the Counties east-west rural highways including Highway 132 between the I-5 and SR-99 corridors using ITS applications such as Road Weather Information Systems (RWIS).
- Utilize intermodal freight facilities to provide improved information to commercial vehicles.
- Improve mobility, coordination and information between the urbanized areas of Stockton and Modesto along the SR-99 corridor.

Tulare County Opportunities

- Implement red-light running enforcement in Visalia.
- Build upon the current traffic signal system efforts to develop an urban ATMS in the areas of Visalia, Tulare and Goshen.
- Provide safe areas along rural routes to the National Parks system including improved traveler information.

- Development of an improved communication link between the Visalia/Tulare urbanized area and Caltrans – District 6 to address coordination efforts along the SR-99 and SR-198 corridors.

Short Range/Long Range Action Plan

Federal Highway Administration

- Continue to provide funding for projects that will maintain and expand interregional routes, regional routes, and local routes.

State of California - Department of Transportation and California Transportation Commission

- Continue to program projects that will enhance interregional routes and access to interregional routes.
- Maintain and preserve interregional routes and routes that provide access to interregional routes.
- Identify and implement operational improvements on interregional routes and routes that provide access to interregional routes.

Metropolitan Planning Organizations/Regional Transportation Planning Agencies

- Continue to coordinate planning of interregional transportation facilities to the extent necessary and feasible.
- Continue to support efforts by state and federal agencies to program priority projects that enhance interregional transportation.
- Support and participate with Caltrans in corridor studies on State Route 99.
- Support new funding sources to fund local street and road maintenance needs.

Local Agencies - Cities and Counties

- Continue to maintain and improve local facilities.
- Support new funding sources to fund local street and road maintenance needs.
- Participate in the planning of regional and interregional facilities.

6. Regional Planning

6a. Air Quality and Conformity

Background

The San Joaquin Valley (SJV) is one of the largest and most challenging air quality nonattainment areas in the United States. The San Joaquin Valley 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 is essential for both State Implementation Plan (SIP) development and conformity determinations.

Coordination

On-going coordination with interagency consultation partners has been, is, and will continue to be critical to the development of positive conformity determinations, as well as the conformity budgets and transportation control measures included in air quality plan updates. As one of the few multi-jurisdictional areas in the country, the individual decisions and actions of each of the San Joaquin Valley Regional Planning Agencies (SJV RPAs) have the potential to affect the entire nonattainment area. At this time, it is unclear when the RPAs within the San Joaquin Valley nonattainment area will become independent of each other with regard to air quality. The interagency consultation process is critical to completing regional conformity demonstrations, processing TIP/RTP amendments, project-level hot-spot assessments/analyses and conformity determinations, as well as other processes required by the federal transportation conformity regulation.

Involvement in SIP development, including transportation conformity budgets is essential to the receipt of federal transportation funding. SIP failures, as well as non-conformance, jeopardize not only the receipt of federal transportation funding, but also the ability for locally funded (regionally significant) transportation projects to proceed. The SJV RPAs are also involved in the air quality modeling to provide assurances that the final conformity budgets can be met. In addition, the SJV RPAs participate in air quality plan development by coordinating the local government transportation control measure process that is required by the Clean Air Act.

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, and 2007 TIP/RTP. In addition, FHWA has determined that the SJV RPA planning processes substantially meet the SAFETEA-LU planning requirements. TIP/RTP Amendments, including coordinated amendment cycles and development of valley-wide process for PM_{2.5} multi-jurisdictional areas until conformity budgets are established, continue to be federally approved. The SJV RPAs have also completed Timely Implementation documentation of local government commitments beginning with the 2006 TIP; two TCM substitutions have been processed and approved. Project-level assessments, including valley-wide procedures, have also been developed.

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.

Modeling

Air quality model development progress is monitored to ensure that appropriate assumptions are being used in new air quality model updates. Modeling data, including defaults, emissions inventories, speeds, vehicle miles traveled, and control measure assumptions will be coordinated with the Air District and the Air Resource Board to promote accuracy of modeling output. Early communication of potential modeling problems or issues is a high priority and is presented to the appropriate modeling staff to be addressed and resolved in a timely manner.

The SJV RPAs have coordinated transportation model updates, as well as worked with both the Air District and Air Resources Board on the development of conformity budgets and EMFAC updates (i.e., EMFAC 2005 development with updated transportation data and EMFAC 2007 development, including technical comments on model updates (e.g., re-distribution of heavy-duty truck travel). These efforts have included ongoing tracking of compliance with latest planning assumptions and collaborating with the Air District and Air Resources Board on the applicable conformity budget methodology and corresponding SIP documentation. Coordination efforts will continue with Caltrans and ARB on statewide transportation models and/or networks as appropriate.

Every three to four years, ARB begins an update to the EMFAC model. EMFAC 2010 efforts will likely begin by the end of 2009. Model changes without corresponding SIP updates can result in the inability of the RPAs to demonstrate conformity. Coordination of model updates and corresponding SIP updates will continue to be vital to the SJV RPAs to assure continued conformity compliance. Protocols and programs are continually developed to facilitate the use of transportation data in air quality modeling.

Public Policy

The SJV RPAs monitor proposed legislation, new regulations, court case decisions, and filed court cases related to air quality issues and evaluate the implications of these to the Valley RPAs. Unified positions are developed as needed.

As new federal, state, and/or local regulations are developed, they are evaluated for their impact on the SJV RPAs. If necessary, draft comments are prepared on behalf of the RPAs. Once regulations are finalized, summaries are prepared for the SJV RPAs regarding requirements and impacts. Over the past four years, quarterly updates on legal challenges and new air quality standards and requirements have been provided to the RPA Directors' Committee. Recent examples include analysis of draft SAFETEA-LU legislation, drafting of RPA comments, RPA workshops and continued assistance in achieving SAFETEA-LU compliance.

Summary of Future Efforts:

- Continued coordination of interagency consultation;
- Development of Conformity SIP;
- Transportation conformity for the 2011 Transportation Improvement Program (TIP) & Regional Transportation Plan (RTP);
- EMFAC 2010 and corresponding conformity budgets;
- Ozone and PM_{2.5} air quality plan updates; and
- Continued public policy assessment.

6b. San Joaquin Valley Blueprint

The San Joaquin Valley has been identified by Governor Schwarzenegger's California Partnership for the San Joaquin Valley as "... one of the most vital, yet challenged regions of the state."

Rising to meet the San Joaquin Valley's most pressing issues, the eight Regional Transportation Planning Agencies representing the eight counties within the San Joaquin Valley came together in 2005 to initiate the San Joaquin Valley Regional Blueprint planning process.

The goal of the San Joaquin Valley (SJV) Regional Blueprint planning process is to address critical issues facing the vitality of the San Joaquin Valley (as well as the State of California and the nation) in planning for the future of the world's foremost agricultural region. The SJV Regional Blueprint will guide the future of infrastructure development, and in turn accommodate the exploding population and economic growth in the region to the year 2050.

In 2006, the SJV Regional Blueprint planning process developed the foundation for the Blueprint by creating an institutional framework and citizen outreach plan. In addition, this joint venture initiated the development of the SJV Regional Blueprint Vision. In 2007 overall goals, objectives, and performance measures were developed that will be used to evaluate the effectiveness of the Blueprint. In 2008, the Blueprint process continued to make progress with this historic and collaborative planning effort among the eight San Joaquin Valley Regional Transportation Planning Agencies (Valley COGs) and their working partners. Throughout the process, the SJV Blueprint developed many relationships and reached numerous milestones. In early 2009, the Valleywide Blueprint Summit attracted over 600 attendees. At the event, the Valleywide alternative scenarios were presented to the public at large. The event was intended to solicit input on the scenarios, which would assist the San Joaquin Valley Regional Policy Council in adopting a preferred growth scenario for the San Joaquin Valley. On April 1, 2009, the Policy Council reviewed the Valley COGs' collaborative work on the Blueprint and took the following actions:

- Adopted a list of Smart Growth Principles to be used as the basis for Blueprint Planning the San Joaquin Valley; and
- Adopted Scenario B+ as the Preferred Blueprint Growth Scenario for the San Joaquin Valley to the year 2050. This preferred scenario will serve as guidance for the Valley's local jurisdictions with land use authority as they update their general plans.

Upcoming tasks include the integration of the Valley Blueprint into local city and county general plans within the Valley, which will ultimately result in a healthier, more vibrant economy, an improved transportation system through reduced congestion and viable transit options, improved air quality, and will accommodate the housing infrastructure needs of the Valley's growing population. Overall, implementation of the Valley Blueprint at the local level will create sustainable communities and make the Valley a more desirable place to live.

Setting the Stage: The San Joaquin Valley – A Region in Need

The Region

The San Joaquin Valley is located in the geographic center of the State of California and is the agricultural heart of millions of acres of the world's most fertile farmland. The Valley is rich in natural resources and is integral to the economic well being of California, with annual agricultural sales in excess of \$20 billion dollars. As the Secretary of Food and Agriculture points out, if the San Joaquin Valley were a state, it would be ranked first in the nation in agricultural production.

The Valley is a long, narrow, and flat terrain (300 miles long and 100 miles wide) that is rimmed by mountains on the south, east and west that create a large "bowl". It occupies over 27,000 square miles of land across eight counties and serves as the primary trade corridor for the largest metropolitan areas in California - San Francisco to the north and Los Angeles to the south.

The Population

The San Joaquin Valley is home to a culturally diverse population of 4 million residents. Once a largely rural region, the eight counties of the San Joaquin Valley, linked by Highway 99, are now home to large metropolitan areas (Stockton, Fresno, Bakersfield) and growing cities and towns of every size.

Almost 60 percent of the Valley's growth since 2000 has been due to migration, yet there are important distinctions between the north SJV and the south SJV. In the north, migration has accounted for almost two-thirds of the growth. Seventy percent of those migrants are from other parts of the United States and California (primarily the Bay Area).

In the southern part of the Valley, however, natural increase accounts for almost half of the growth, and international migration is about equal in size to domestic migration. Most of the international migrants are from Mexico, are young, and tend to have more children than other residents.

From 2000 to 2008, the SJV region experienced an 18.9% population increase, the largest increase in the state (California Regional Progress Report). Over the next four decades, demographers project that the bulk of California's relentless population growth will occur within this expansive region, leaving it younger and more diverse than any other part of the state. In 2050 the San Joaquin Valley is projected to be home to 9.5 million people, an increase of 139% over today's population.

An Aging Population

In 2008 the San Joaquin Valley region's elderly population (aged 60 and over) was 530,410 and will grow in size to 1.9 million by 2050, an increase of 239 %. At the same time, the San Joaquin Valley's oldest population (aged 85 or older) is 48,825 and will grow to 288,339, an increase of 491%. While the 2050 population of the SJV region is anticipated to be two and a half times that of 2008, the population of those 85 years and older in 2050 will be six times that of 2008.

Population Growth Pressures

The key questions about the future quality of life in the San Joaquin Valley Region are:

- How will the region accommodate the anticipated population growth?
- Will growth be accommodated through expansion of current cities or the development of new ones?
- What kind of housing will be needed to address the changing demographic?
- How will intraregional and interregional transportation facilitate commuters, travelers, and goods movement?
- How will the balance be maintained between the development of new infrastructure and the need to preserve the region's most important natural resources?

Urban Pressure

As a desirable and relatively affordable place to live, the San Joaquin Valley is under tremendous population growth pressure from the central coast and other metropolitan areas to the north and south. In the southern San Joaquin Valley, Kern County is under growth pressure from Los Angeles. In the north valley, the counties of San Joaquin, Stanislaus, and Merced have become bedroom communities for people seeking less expensive, owner-occupied housing within commuting range of the Bay and Sacramento areas.

Air Quality

Unfortunately, the San Joaquin Valley is leading the state in another way – poor air quality. In fact, the San Joaquin Valley is home to three of the top ten cities with the worst air quality in the nation. With the San Joaquin Valley's unique "bowl like" geographical landscape and weather patterns, pollution becomes trapped in the Valley for extended periods of time. This unique topography creates a greater "air pollution carrying capacity" for the SJV than other regions in California.

SJV residents, especially children and the elderly feel the effects of air pollution the most. In fact, children in the SJV have one of the highest asthma rates in the nation.

Although the San Joaquin Valley Air Pollution Control District (a SJV Regional Blueprint partner) has made great strides in improving the Valley's air quality in recent years with innovative rules and programs, additional work is still needed.

Past Neglect – Hope for the Future

For many decades the San Joaquin Valley region has been neglected by both federal and state governments and has not received its fair share of revenue. That situation is now changing with federal and state policymakers recognizing the extraordinary challenges facing the San Joaquin Valley. Through executive orders issued by two presidents, the Federal Interagency Task Force for the Economic Development of the San Joaquin Valley was formed to help coordinate federal efforts within the region. Through the Interagency Task Force, multiple initiatives have been created (Regional Jobs Initiative, Financial Education Initiative, Rural Infrastructure Initiative, Operation Clean Air, Affordable Communities Initiative: Housing Trust Fund, Clean Energy Organization) which have directed much needed attention to the quality of life in the San Joaquin Valley region.

Many of the Valley's critical issues have no political or geographic boundaries, and are often made worse through parochial practices. Often, freeway congestion in one area transports air quality impacts throughout the Valley, just as land use and development policies in one area may create reactionary development in other areas. Regional collaboration is needed to address these kinds of situations.

State Remedies

Interface of the Blueprint and the Partnership

In response to these and other issues, Governor Schwarzenegger signed an executive order in 2005 creating the *California Partnership for the San Joaquin Valley (Partnership)* a state effort to direct resources to the San Joaquin Valley region. Through the Blueprint process, regional leaders are assessing regional issues jointly with the Partnership. Collaboration with the SJV Partnership will enable pooling of statewide resources, along with enhancing the multi-agency, multi-layer momentum to create a regional voice for the San Joaquin Valley.

In November 2006, the Partnership completed the Strategic Action Plan, which detailed its goals to achieve a Prosperous Economy, Quality Environment, and Social Equity through six major initiatives and the recommendations of its ten working groups. The Partnership's ten-year Strategic Action Plan references the efforts of the Valley's COGs to enhance quality of life concerns and specifically identifies the SJV Blueprint as the implementation strategy within two of its working group lists of recommendations: Transportation and Land Use and Agriculture and Housing. The interface of the Partnership and the Blueprint planning processes will allow the Valley to improve the quality of life for all residents through integrated and collaborative planning strategies.

Summary of Accomplishments to Date

Working in concert over the past three years, the eight COGs in the San Joaquin Valley have accomplished many goals that enabled the process to the benchmark of reaching consensus on a Valleywide preferred growth scenario. The adoption of this scenario and the associated smart growth principles by the SJV Regional Policy Council on April 1, 2009 was a major milestone. These accomplishments are even more noteworthy when one considers that each step along the way required approval or endorsement by eight separate and distinct policy boards. The sixty-two cities, eight counties and eight councils of governments are proud of the collaborative effort they have made to reach this point in the process and are committed to build upon the progress already made in the future.

In general, the major tasks undertaken can be summarized as follows:

Institutional Framework, Project Management and Community Outreach: In order to reach the daunting goal of coordinating eight counties in an effort to reach a unified vision for growth, the SJV Blueprint process created a program management team comprised of a program manager from the lead agency and project managers representing each of the other seven COGs. This team is responsible for coordinating local efforts as well as maintaining the regional connection. During the initial phases, activities were conducted at both the county and the regional levels. Extensive local community outreach touched thousands of community members and stakeholder groups throughout the Valley. Three major Valleywide events were conducted: the Blueprint Kickoff Workshop in June of 2006, the Blueprint Executive Forum (aimed primarily at the Valley's elected officials) in April of 2008 and a Valleywide Summit in January 2009 (where the Valleywide alternative scenarios were presented to the public at large). The adoption of an integrated Valley Vision in April of 2009 moved the process from planning to implementation.

Land Use, Transportation and Air Quality Modeling: The San Joaquin Valley Blueprint Project Modeling Steering Committee worked closely with UC Davis's Department of Environmental Science and Policy and the Information Center for the Environment to become familiar with the UPlan modeling software and to collect GIS and demographic data. Extensive communication was required to assemble general plan information from all 70 jurisdictions involved. Status Quo scenarios were developed in each county to provide a base case for comparison. Alternatives scenarios were also created. All county level scenarios were analyzed using land use, traffic and air quality models in order to compare the scenarios based on performance measures. A preferred concept was submitted to U.C. Davis by each county for Valleywide analysis and ultimately the selection of a preferred growth scenario for the Valley.

Individual County Planning Process: As mentioned above, each of the eight Valley COGs conducted the Blueprint process at their local level, which included convening roundtable stakeholder groups, engaging their member agencies, and conducting outreach activities with community groups and the general public. Much time was invested in working with local agency planners in order to gain their trust and commitment so that the ultimate Blueprint will be integrated at the local level.

Valley Planning Process: The Valley planning process has been ongoing since the SJV Blueprint grant was first awarded in 2006. The eight COGs have been collaborating on a Valleywide basis as part of the project management team and through partnering with the Great Valley Center and their staffing of the Blueprint Regional Advisory Committee (BRAC). The SJV Air Pollution Control District has also been an active partner both financially and through in-kind contributions during the planning process. In addition, the individual COGs have worked closely with Caltrans and UC Davis on many of the technical activities.

Document Creation, Implementation Strategy, and Blueprint Certification Process: The SJV Blueprint has produced a variety of communication materials including websites, videos, brochures, print and electronic media advertising, and extensive project reports. Mapping exercises have produced a multitude of excellent graphic depictions which help member agencies, stakeholder groups and the general public to understand the sometimes complex concepts that are being portrayed. In fact, Fresno COG was recognized by the Central Section of the Cal Chapter of the American Planning Association with a "1st Place Outstanding Planning Award/Best Practices" award for their extensive marketing campaign and public outreach efforts in the development of the San Joaquin Valley Regional Blueprint Plan. Fresno COG developed an ambitious marketing campaign, including many innovative strategies, to reach out and include community stakeholders in the Blueprint visioning process to foster greater participation in Fresno County.

Ultimately, the Blueprint must be integrated into local general planning processes in order to ensure implementation. Now, with the legal requirements of AB 32 and SB 375, some type of certification process will need to be established so that the planning principles defined in the Blueprint will be implemented throughout the Valley. The Blueprint will also need to show compliance with AB 32.

Modeling: It is widely known that the traditional four-step traffic model is not sensitive to the benefits of smart growth development such as Density, Diversity, Destination & Design (often referred to as 4-D). There have been efforts to integrate a 4-D process into the traffic model to compensate for the trip/vehicle miles traveled (VMT) reduction that smart growth can create through the SJV Blueprint process. The results were encouraging, and reinforced support of smart growth planning practices in the Valley. As the San Joaquin Valley Blueprint marches into the planning implementation stage, more smart growth projects are projected to be built. The scenario-based 4-D process, which was developed during the scenario planning stage, would not be applicable in the planning implementation stage. A project-based 4-D tool will be needed to measure the travel reduction benefits of smaller scale or even individual projects.

During the scenario planning stage of the Valley Blueprint process, UPlan, a scenario modeling tool developed by UC Davis, has been used by all eight Valley COGs. It was mostly run at the county level. Since each Valley COG's traffic model uses different socio-economic categories, individual efforts were taken by each COG to translate the UPlan land use categories into the categories in each of the eight traffic models in the Valley. Then the traffic model output was input into the Emission FACTors (EMFAC) model to measure the emissions from on-road mobile exhaust. In the planning implementation stage, when Blueprint principles will be incorporated into local projects, more fine-grained software choices will be explored for community, neighborhood, or even project-level planning.

Traditionally, socio-economic data projection for the traffic model has been performed manually through an agency review process, which has taken up to six months to complete. With the emergence of land use models, land use forecasting could be generated by computers. However, the rule-based land use models could direct future land use to improbable locations without human intervention. The consequence would be misrepresented traffic distribution if it is run through the traffic model. Therefore, inputs from local land use experts become critical in the land use modeling process. Throughout the scenario planning stage in the Valley Blueprint process, several iterations of UPlan model runs were conducted for each scenario with inputs from local planners and stakeholders. This "feedback" process is critical if we are to plan for realistic development patterns in the Valley Blueprint and this process will continue to be a central part of the planning implementation stage of the Valley Blueprint.

Visualization Tool Development and Scenario Planning Tools: The San Joaquin Valley Blueprint Process has been and will continue to be conducted through a "bottom-up" approach to securing local government and community support. Computer generated maps showcasing and explaining the local and Valleywide Blueprint options will be generated by UC Davis/Valley COGs and circulated to the Valley communities through public outreach efforts orchestrated by the Great Valley Center, and by each individual planning agency. Public meetings with interactive voting technology have and will be used to obtain feedback from the public and elected officials. Other technologies in use are interactive websites, media outlets for radio, television and print media, emailed updates and newsletters to established and growing distribution lists. The Valley COGs also work with a variety of community, business and government agencies throughout the region to disseminate information via presentations at their pre-scheduled meetings, posting articles in their newsletters, and online publications and by mailing printed documents.

Health and Obesity Awareness: According to the Prevention Institute, the built environment is the designated use, layout, and design of a community's physical structures - including its housing, businesses, transportation systems, and recreational resources, all of which affect patterns of living that influence health. Smart growth strategies can transform the built environment to encourage physical activity by making a community more walkable/bikeable and can provide greater access to healthy food options, thus contributing to healthier eating. To bridge land use, transportation, community design efforts and public health, a comprehensive approach to planning can be implemented that focuses on identifying priority areas where public health strategies can be incorporated within the local planning process. In the short-term, these planning efforts will help create healthier lifestyles; in the long-term, these efforts can have a measurable impact upon chronic health conditions such as obesity, diabetes, stroke and heart disease. The SJV Blueprint process will coordinate with the Central California Regional Obesity Program (CCROP) on these issues. One of the land buffer tools discussed in the Farmland Conservation study being conducted in the Valley is that of locally grown food farm at the edge of urban areas. These areas would both preserve urban boundaries and supply healthy, locally grown food.

Other Tasks Completed

1. GIS Data Inventory / GIS Standards — A Model Steering Committee was convened by the SJV Blueprint project managers and has worked collaboratively to gather GIS data that represents the current geography and urbanization of the region. This data has been converted for use in the UC Davis developed UPlan modeling software for development of all the scenarios.
2. Status Quo Scenario Development – Working with the local planners of each county and the UPlan program, a growth scenario assuming existing trends was developed called the Status Quo Scenario. If growth continues as it has over the last 5-10 years, the UPlan forecasts that approximately 533,000 acres of land will be converted to urban uses.
3. Vision / Value Development and Outreach - During 2006, the eight SJV COGs implemented their local Citizen Participant Plan in the Blueprint Value / Vision Outreach component. Each of the SJV counties conducted public outreach to identify local values and how these values translate into a Vision for the San Joaquin Valley region to the year 2050.
4. Local Visioning Results - To no one's surprise, there were more common values identified across the eight-county region, than unique values of any specific county:
 - Preserve agricultural land
 - Create an effective transportation system
 - Improve access to quality educational opportunities
 - Create a dynamic economy with quality local jobs
 - Provide a variety of quality affordable housing choices
 - Treasure our bountiful environment with reasonable protection
5. Goals and Performance Measures - With the help of the San Joaquin Valley Local Agency Planners Working Group, SJV Goals and Performance Measures have been developed and will be used throughout each component of the Blueprint process. All performance measures used by other Blueprint processes were reviewed, evaluated and selected based on the current data available and the current forecasting capabilities. While there are additional Performance Measures that could be valuable in evaluating the Scenarios, the Valley COGs currently lack the enhanced modeling capability necessary to generate them.
6. Engage Environmental Justice Communities, Tribal Governments, and Resource Agencies. The SJV COGs held a workshop in early 2007 with the purpose of engaging Environmental Justice Communities, Tribal Governments (both federally recognized and non-recognized tribes of Native Americans), and Resource Agencies in the SJV Regional Blueprint process. The workshop was a great success with good attendance of the targeted stakeholders. As a result of the inaugural workshop, the following has been implemented:

- Spanish Language Workshops -SJV Region Blueprint Public Outreach Visioning workshops sessions have been conducted in Spanish to engage residents who speak Spanish as their primary language. These workshops have been well attended.
 - Tribal Governments - As a result of the inaugural workshop, ongoing engagement has been formalized with Tribal representatives. Numerous meetings have been held with Native American participants, including: Santa Rosa tribe, Tubatulabals, Chumash, Tejon Indians, and Tule River tribe.
 - Kern COG received an Environmental Justice Grant (Central Valley Tribal Collaboration Transportation Planning) to expand outreach to Tribal Governments throughout the SJV during the upcoming years. This effort is enhancing existing efforts to engage traditionally underserved communities in the Blueprint process.
 - State Resource Agencies - State Resource Agency representatives continue to be engaged in the SJV Region Blueprint Process.
7. State and Federal Level Coordination
- At the state level, the Governor's Office of Planning and Research, Caltrans, the Business Transportation and Housing Agency, and the California Department of Fish & Game have been actively participating in the SJV Blueprint planning process. At the federal level, the Federal Highway Administration and the Federal Transit Agency have been reviewing the SJV Blueprint Planning process and providing feedback through the annual certification of the eight Valley COG's Overall Work Programs.
8. Interregional / Intraregional / Local Partnerships & Interregional Coordination
- Blueprint Learning Network (BLN) – The SJV COGs and their local BLN team members participate in the statewide conferences to learn from other Blueprint efforts in California. Although each of the conferences provides valuable information it is difficult to apply Blueprint practices across individual regions due to their own unique makeup.
 - Local Government Commission – Blueprint representatives worked closely with the Local Government Commission (LGC) on the development the 2007 Water Workshop - *Linking Water and Land Use in the Southern Central Valley Region*. In the 2008-09 the COGs have again worked with LGC to develop a Community Image Survey that will be used to help community members and local agencies overcome any inherent fear of increasing residential densities.
 - Other regional partners:
 - California Association of Councils of Governments (CALCOG)
 - California State Association of Counties (CSAC)
 - League of California Cities
 - Great Valley Center
 - SJV Air Pollution Control District
 - American Planning Association (APA)
 - San Joaquin Valley Regional Association of Counties
 - Intraregional Coordination:
 - COG Directors Association- Each of the eight Valley COG Directors is a member of the COG Directors Association helping manage the Blueprint efforts.
 - BRAC - The creation and engagement of the San Joaquin Valley stakeholders in the Blueprint Regional Advisory Committee (BRAC) to:
 - Become a champion of the final SJV Regional Blueprint Vision;
 - Advocate implementation of the SJV Regional Blueprint products to the local jurisdictions; and
 - Promote the SJV Regional Blueprint strategies at the state and federal levels.

- San Joaquin Valley Local Agency Planners Working Group - Having identified a need to engage the Planning Directors of the region with a regional focus, John Wright, recently retired planning director from the City of Clovis, in conjunction with the Blueprint project managers, convened 40 plus planning directors and/or their key staff to help with the Blueprint development. While thinking regionally, this committee is acting as a professional advisor in order to assure successful implementation of the Blueprint at the local level. This committee is also ensuring that the Blueprint is useful and helpful to them in implementing good planning practices. This is a win-win relationship as these are the planners that handle the development requests and will make a difference in what moves forward.
 - San Joaquin Valley Regional Policy Council -Two elected representatives from each of the eight Councils of Governments are commissioners on the San Joaquin Valley Regional Policy Council and they are charged with making Blueprint related recommendations/decisions on behalf of the entire San Joaquin Valley.
 - California Partnership for the San Joaquin Valley (Partnership) - Blueprint project managers from each of the SJV COGs attend many of the ten working group and quarterly Partnership Board meetings to maintain the critical link between both efforts. The Partnership has a scope of work, and resources well beyond that of the SJV Blueprint process. At this time the Blueprint process is primarily focused on three of the Partnership work groups: (1) Transportation (2) Land Use, Agriculture & Housing, and (3) Air Quality.
 - Elected Congress Summit - Blueprint project managers and the Great Valley Center developed a Blueprint Congress Summit targeted at elected officials that was convened in April, 2008. The focus of this Summit was to engage elected officials in the evaluation of the SJV Status Quo UPlan Modeling and discuss the fact that we cannot continue business as usual planning practices in the SJV and expect different results that affect every aspect of the quality of life in our Valley. A follow-up event is being planned for 2010.
 - San Joaquin Valley Affordable Communities Initiative - Under the San Joaquin Valley Affordable Communities Initiative, the Department of Housing and Urban Development has worked in concert with the Partnership and the Blueprint process to create the San Joaquin Valley Affordable Housing Trust. The purpose of this Trust is to:
 - Link housing policies with land use, transportation, jobs, economic development, and workforce development;
 - Establish a multi-million dollar Trust as a dedicated stream of flexible seed funding for affordable housing;
 - Create a regional organization with expertise to administer the fund, promote, guide, and assist affordable community planning and development; and
 - Support projects that demonstrate the three strategic SJV Affordable Communities Initiatives elements.
9. Local Coordination:
- Local Roundtable focus groups
 - Each of the SJV COGs has established its own Roundtable group (focus groups, planners, economic development, etc.) for the following reasons:
 - Share information and learn from local experts,
 - Educate on Blueprint process,
 - Engage in each component of the Blueprint process,
 - Gather information on best practices for the Blueprint development,
 - Review Blueprint products as they are developed,
 - Create new collaborative relationships, and
 - Enhance existing relationships
 - Local Municipal Advisory Councils (MACs) - SJV Blueprint efforts have included outreach to the MACs that represent the unincorporated areas of the counties.

- Local Planning Commissions - The Planning Commissioners of the cities have been engaged at various levels in the Blueprint process. In some counties, Planning Commissioner Summits are being scheduled to encourage regional thinking when making local decisions.
 - Local Elected Officials - Each of the local Councils, Boards of Supervisors, and local COG Boards has been encouraged to be actively engaged in the Blueprint Process.
10. Address Goods Movement - The San Joaquin Valley Goods Movement Action Plan (SJV GMAP) is a collaborative effort between the eight COGs of the San Joaquin Valley and their working partners. The SJV GMAP focuses on removing choke points of goods movement into and out of the Valley to increase statewide throughput in an effort to provide outlets for the \$20 billion of agricultural products headed to national and international markets in a timely manner.
11. Developed strategies to effectively engage local government land use decision makers -The SJV Regional Blueprint process utilizes every opportunity available to inform local land use decision makers on the process and why change is needed for the future. The SJV Regional Blueprint Process Decision Making Chart highlights the iterative nature of the process with the engagement of local and regional stakeholders in every step of the process.
12. Strategies for higher density housing - Compact land uses in the Valley are evolving because of increased housing and land costs. Planners are using this as an opportunity to encourage higher densities, mixed uses and more compact design. The Blueprint is an opportunity for all involved in local planning and decision making to encourage elected officials to embrace the local and regional benefits of more compact development. A strong desire in the Valley to preserve agricultural land is also creating land use policies to use land more efficiently.
13. Greenhouse Gas (GHG) Emissions / Energy / Environmental Considerations Greenhouse Gas Emissions – GHG emission reductions, specifically Carbon Dioxide (CO₂), is an emerging area of Climate Change that will be addressed in response to AB 32 (2006) and SB 375 (2008) requirements. The California Air Resources Board (CARB) has adopted the 1990 emissions inventory that is the basis for the development of CARB's Climate Change Scoping Plan. The Climate Change Scoping Plan has been developed and specific requirements are delineated for all sectors in California, including local governments and metropolitan planning regions. The SJV Blueprint will address GHG integration. The California Transportation Commission has also adopted new Regional Transportation Planning Agency Guidelines that COGs will use to integrate GHG analysis in future Regional Transportation Plans. SB 375 has been chaptered into state law and the adopted Valleywide Blueprint will likely provide valuable concepts for the "Sustainable Communities Strategies" required by SB 375. Ideally, when the SCS is integrated with the planned regional transportation networks and the housing elements in local general plans, it will attempt to achieve the GHG emission reduction goals in AB 32 through reduction in vehicle miles traveled. SB 375 encourages regional cooperation among the eight counties in the SJV by allowing that two or more counties work together to develop a multiregional sustainable communities strategy. This will complement the existing efforts for the implementation of the Valley Blueprint.
- Energy - The Partnership's Energy work group has created the San Joaquin Clean Energy Organization with the mission of leading a regional effort to develop, plan, and implement energy efficiencies and clean energy throughout the eight-county SJV region.
 - Environmental Considerations – Model Farmland Conservation Program. In 2007, Fresno COG was awarded Partnership seed grant funds to create a Model Farmland Conservation Program. As the process develops with data development and analysis and achieves stakeholder buy-in, the SJV Regional Blueprint Planning process will look to integrate this information.

14. Local General Plan Development Coordination - At a time when many of the San Joaquin Valley counties and cities are feeling tremendous pressures of population growth and urbanization, local agencies have initiated updating their local General Plan documents. Wherever it has been possible the local COG's Blueprint effort has coordinated with the local general plan update process. In fact, some of the SJV COGs have been able to coordinate general plan development and Blueprint public outreach efforts to engage the public.
15. Funds and Resource Leveraging - Funds have been leveraged from private sources via private contributions and from the SJV Air District for the local match. While in-kind contributions of time and effort by all the parties involved cannot be precisely measured, they are certainly invaluable. The following planning processes are being coordinated and leveraged to further improve the Blueprint process:
 - General Plans
As stated above, General Plan updates are being coordinated with the Blueprint process. Blueprint funds are being leveraged with the integration of outreach efforts that results in a cost savings for the Blueprint.
 - RHNA (Regional Housing Needs Assessment)
The SJV COGs have recently updated their local Regional Housing Needs Assessment (RHNA) Plans. With the advent of SB375, this process will be coordinated with the Regional Transportation Plan process, with updates due on an 8 year schedule. While the existing process has sometimes created conflicts in goals and policies, the evolving RHNA process will hopefully integrate with the sustainable communities strategy in an approach that will resolve potential conflicts.

Over the past three and a half years, representative stakeholders from public health, education, local government, resource and regulatory agencies, developers, economists, business and commercial interests, and many, many more have come to the table to address future challenges and reach consensus on a smart growth vision for the San Joaquin Valley. In January 2009, the Great Valley Center's Blueprint Summit marked the culmination of developing the Valleywide preferred growth scenario. The Summit attracted over 600 attendees from the public and private sectors to discuss the alternative growth scenarios developed through the Blueprint process and to seek their invaluable input on a desired growth scenario for the Valley. The alternative growth scenarios, along with the feedback from the Blueprint Regional Advisory Committee (BRAC) and Summit participants, was then presented to the SJV Regional Policy Council (Valley elected officials) on April 1, 2009 for their ultimate selection and adoption of a preferred growth scenario for the entire Valley. This action officially brought the third year of the San Joaquin Valley Blueprint planning process to a close, thus moving the activities into the realm of implementation.

This holistic approach to planning for the Valley's future aims to break the barriers created by geography, political boundaries, and parochial thinking. Decisions in one locale can affect change in others. For example, land use policies that fail to curb urban sprawl will contribute to reduced investment in existing areas, producing downward pressure on existing land values. It can raise the cost to municipalities to provide utilities, water, police and fire services. Vehicle miles traveled (VMT) increases stress on the roadways. Congestion rises and air quality worsens.

As we move forward with the tasks of the fourth year of the San Joaquin Valley Regional Blueprint planning process, we are gratified by the progress we have made in collaborating across such a vast geographic area. Our common goal is to develop a Valley Vision that will lead to thoughtful planning and an enhanced quality of life for all who live here. We have met many challenges during this effort to change the way we approach the future, but we have had a tremendous amount of success in our progress. Much still remains to be done, however. In fact, some of the most important and challenging work lies ahead: turning the *vision* into a *reality* and making the transition from a planning *process* to planning *implementation*.

Looking Forward to the Fourth Year – Ongoing and Future Tasks

1. Develop Valleywide Blueprint Implementation Roadmap, which will include translating Valley Blueprint principles into local implementation strategies and developing local government commitment. It will also include development of a toolkit for implementation.
2. Convene meetings with local officials to discuss funding challenges of local government (and related “fiscalization of land use”). Track ‘California Forward’ and their efforts on governance and fiscal reform (see <http://www.caforward.org/about/>).
3. Develop adequate modeling tools for compliance with SB 375 (Address new greenhouse gas directives [SB 375] as well as continuing to use adopted methods to measure the effectiveness of the Regional Blueprint Plan).
4. Address the increasing of residential densities
 - a. Determine the impact of various development densities on the fiscal health of cities and counties in the San Joaquin Valley. Develop a fiscal analysis tool to determine this.
 - b. Determine the market demand for higher density residential housing projects
5. Identify institutional barriers, such as lending practices that may inhibit Smart Growth initiatives from being fully realized. Investigate policies, regulations and laws that may hamper or impede these initiatives.
6. Greenprint - incorporate Model Farmland Conservation Program mapping, that includes improved information on water resources into the Blueprint for each of the Valley Counties
7. Work with Central California EDCs and Partnership for SJV to address jobs/housing issue.
Work on this task should reconvene in early 2010.
8. Continue Blueprint’s Valleywide presence by maintaining partnership with Great Valley Center for website oversight and production of one Valleywide Blueprint event
9. Continue extensive public outreach efforts as well as developing a Blueprint Awards Program for the Valley.

7. Financial Element

7a. Valley IIP Effort

As the Valley continues to work together on various issues, an opportunity exists to work together to ensure and maximize Interregional funding (IIP) for valley projects. In order for this to happen, the Valley RTPAs will plan cooperatively to develop a unified request for IIP funding whenever possible. By working together, all RTPAs will benefit. The following is a brief discussion of the major items related to IIP priority selection for the Valley. The draft priorities below have only been proposed for discussion at this time and have not been approved or finalized by the eight RTPAs.

Project Priority Type

1. Existing Programmed IIP Components – Priority would be given to fund cost increases for existing programmed IIP components. This is consistent with Caltrans/CTC programming in the 2010 IIP. It is very unlikely that any of the Valley COGS have STIP capacity to spend on cost increases for already programmed IIP projects. A limit for regional support may be considered.
2. SR-99 Business Plan/Category Two projects – There are 22 Category Two projects of which 14 are 4 to 6 lane and 8 are 6 to 8 lane capacity increasing projects. *(Note: Caltrans does not support IIP for interchange improvements and therefore most of 99 Business Plan Categories 3 & 4 would not qualify.)*
3. Other interregional corridors – (Please note: the Valley has requested a grant that would outline the goods movement priorities for the Valley, focusing in particular the east-west corridors. The study outcome once adopted by the COGS would guide the priorities similar to the SR-99 Business Plan)

Project Priority Category

1. Construction - Priority would be given to fund cost construction component. This is consistent with Caltrans/CTC programming in the 2010 IIP and prior STIPs.
2. PS&E/ROW – Many of our IIP projects will be in different stages of development. Given that many of the 99 projects will be widened using the existing median, ROW costs are actually lower when compared to other IIP projects in the state. It should also be noted that is unlikely that ROW and construction will be programmed in the same STIP. Therefore ROW will often be programmed one STIP and the construction phase in the next STIP.
3. Environmental – With review of planned projects over a number of STIP cycles, the Valley could recommend environmental be started for selected segments.

7b. Valleywide Funding Strategies

Current Transportation Financing Strategies and Challenges

As California continues to grow, and add population to the world's seventh largest economy and the nearly 40 million people that will live here, California's ability to move both people and goods will become increasingly critical to our quality of life, and our ability to compete economically with the rest of the country and the world at large.

For nearly a century, California has relied on its road system “users” to pay fees. Historically, these fees have been the major source for financing the construction and maintenance of the State’s transportation infrastructure. However, in the last decade, the state has failed to raise those fees to keep up with its needs. Although federal and state fuel taxes are still the largest single source of revenue for transportation, such taxes are rising far more slowly than either traffic volumes or transportation system costs, and no longer come close to covering the costs of building, operating, and maintaining the transportation system. As the transportation system grows in extent and ages, an ever increasing share of expenditures is needed to operate, maintain, and renew the existing system, meaning that even less money is available for system growth. Yet, at the same time, there is clearly widespread opposition to raising fuel taxes in California to meet the estimated \$500 billion dollar shortfall in funding to meet California’s transportation infrastructure needs.

There a number of reasons that California is unable to fund its transportation infrastructure needs, these include:

- The state’s per gallon excise tax has not risen from 18 cents per gallon since 1994, and the federal excise tax has been at 18.4 cents per gallon since 1993.
- Because the excise tax on fuel is levied per gallon of fuel purchased and not per dollar or per mile, inflation and improved vehicle fuel efficiency combine to erode the excise tax’s buying power.
- Improved fuel economy directly reduces per-mile revenues from motor fuel taxes, without reducing the need for new roads or wear and tear on existing ones, even as we drive many more miles per penny of revenue.
- The cost of road maintenance and construction has risen steadily by more than the consumer price index, further reducing the effectiveness of the revenue raised by the tax.
- The overall state deficit has caused a great deal of transportation funding to be diverted to cover general state costs, thus burdening transportation programs.
- The political climate is one of wariness for any kind of tax increase—even increases in transportation user fees. This perspective exists in California and the rest of the nation as well.

Funding Transportation Projects in the San Joaquin Valley

With the above information as background, the Regional Transportation Planning Agencies in the San Joaquin Valley are charged with developing long range funding strategies that will provide the revenues necessary to build a multi-modal transportation system that will meet the long range needs of the San Joaquin Valley. In theory, there are a number of potential funding strategies, both traditional and non-traditional, that could be developed to help provide the necessary funding to construct our long range transportation infrastructure. However, each has its own unique set of challenges.

State Route 99 is a great example of a transportation facility that has monumental impact on the mobility of nearly all San Joaquin Valley residents, as it is the primary north-south transportation corridor through the San Joaquin Valley and directly impacts seven of the eight SJV counties. The following is a list of transportation funding sources, some traditional and some innovative or non-traditional, that might be considered as the eight SJV COGs grapple with finding the necessary funding for transportation projects.

Traditional Transportation Fund Sources

Type of Funding	Programming Mechanism
State Fuel Excise Taxes	State Highway Account
Federal Fuel Excise Taxes	Federal Highway Trust Fund then to State Highway Account
Sales Taxes on Fuels	Transportation Investment Fund/Public Transportation Account
Truck Weight Fees	State Highway Account
Roadway Tolls/HOT Lanes	Dedicated to Specific Routes and Corridors
Local Sales Tax Measures	Expenditure Plan Specified Projects
Development Mitigation Fees	Specified Uses

State Fuel Excise Taxes

This is the primary State generated transportation fund source for transportation improvements. Currently 18.0 cents per gallon of gasoline and diesel sold is generated, with 11.4 cents going into the State Highway Account and 6.46 cents per gallon going to cities and counties. In California, approximately \$2 billion per is generated from State fuel excise taxes per year.

Federal Fuel Excise Taxes

This is the primary federal transportation fund source for road and highway improvements nationwide. Currently 18.4 cents per gallon of gasoline and 24.4 cents per gallon of diesel fuel goes into the Federal Highway trust Fund. These funds are typically distributed to states by formulas or grants, with California's apportionment typically over \$3 billion annually.

Sales Tax on Fuel

California collects 7.25% sales tax on the sale of specified products, a portion of which is earmarked for transportation. In 2002, Proposition 42 was passed by voters specifying that 5% of the 7.25% sales tax per gallon of gasoline is to be earmarked for transportation and placed in the Transportation Investment Fund (TIF). State law requires that TIF are to be distributed as follows:

- 40% to the State Transportation Improvement Program
- 20% to the Public Transportation account
- 20% to counties
- 20% to cities

Truck Weight Fees

California truck weight fees typically generate nearly \$900 million per year in revenues and are deposited in the State Highway Account where they are eligible for many uses including the STIP. There no set annual amount targeted for the STIP.

Roadway Tolls

In California, the ability to charge roadway tolls on State Highways can only be authorized through enabling statewide legislation. Currently, tolls are authorized on specified bridges in the San Francisco Bay area, Los Angeles area and the San Diego area. In addition, AB 680 passed in 1989 authorized Caltrans to enter into agreements with private entities for four toll corridors in California. As a result there are currently three toll corridors in southern California, but none yet in northern California. Generally, toll facilities are applicable in locations where there is enough time savings for users that they are willing to pay a toll fee for that time savings. This usually occurs where there is either daily recurring congestion and/or there is no other reasonable travel alternative. Basically there are two categories of toll road approaches found in California: Traditional Toll Highways and High Occupancy Toll Lanes (HOT Lanes)

Traditional Toll Highways

These are toll highway segments that require a toll to be paid for its use by all users, but exemptions or reduced fees can be authorized for certain designated users. These designated users could be high occupancy vehicles or local residents. The funds collected are typically used to maintain and improve the toll road segment. Current technology offers the opportunity to collect tolls through an electronic monitoring system for those using the toll road as a commuter route, thereby reducing the operating cost of the facility. Others would still have to pay on site for each use of the toll facility.

Thinking innovatively, there are two potential options for tolling State Route 99 in the San Joaquin Valley. Under the first option, the entire SR 99 route from its junction with I-5 in southern Kern County to Hammer Lane in San Joaquin County could be a toll facility. Under this scenario, residents of the eight San Joaquin valley counties and the western Sierra mountain counties of Mariposa, Calaveras, Tuolumne and Amador could be authorized resident toll exemptions. Of course this approach would greatly reduce the annual revenue level, but it is likely this would be required in order for the concept to be politically acceptable to SJV residents. The second approach would be to focus the toll highway to segments with congestion lasting at least one hour during the morning or evening peak commute periods or have no competing parallel alternative road. Candidate locations are in the Stockton metro area, between Modesto and State Route 120 in Manteca, Modesto metro area, between Atwater and Ceres, Fresno metro area, and Bakersfield metro area.

High Occupancy Toll Roads

High Occupancy Toll (HOT) lanes are a revenue generating form of High Occupancy Vehicle lanes. HOT lanes are HOV lanes that single occupant vehicles, not otherwise eligible to use HOV lanes, can choose to use by paying a toll. HOT lanes provide users with a faster and more reliable travel alternative. Toll rates on HOT lanes tend to be variable based on the time of day and corresponding congestion, with toll rates varying widely.

Vehicle License Fee Surcharge

The vehicle license fee surcharge is a source of funding that has been used for a number of special interest programs in recent years. In the San Joaquin valley, counties have instituted vehicle license fee surcharges for such programs as vehicle abatement and safety call boxes. In addition, the San Joaquin Valley Air Pollution Control District has been authorized to levy a vehicle license fee surcharge for programs to achieve air quality emission reductions. In total, there are approximately 3.2 million registered vehicles in the eight county San Joaquin Valley region.

Vehicle Use Mileage Fee

Vehicle use mileage fee is another user fee that could be applied with the San Joaquin Valley. This mileage fee could be collected in several ways, but the simplest from an administrative perspective, would be to collect the fee each year as part of the annual vehicle registration process. Under this approach, each year the registered owner would report their beginning of year mileage and their end of year mileage when registering their vehicle. The challenge would come in developing some method of mileage verification.

Local Sales Tax Measures

Currently, there are four SJV counties (San Joaquin, Madera, Fresno & Tulare) that have local sales tax measures in place that are dedicated solely to transportation. Over time, these sales tax measures have proven very effective to those counties who have been able to institute one. The challenge is that passage requires a supermajority (66%) of voters to support, and that can be a very difficult threshold for more politically conservative counties to attain.

Development Mitigation Fees

Development mitigation fees are assessed to new development (residential, commercial, industrial, etc.). The fees are used for “mitigation” of impacts generated by that specific development. Mitigation fees can be used for a variety of purposes (transportation, education, air quality, flood control, etc.) provided there is a logical “nexus” or connection between the development and the impacts generated.

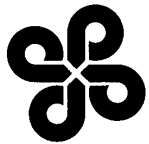
Possible Transition to Direct User Charges

Motor fuel taxes can continue to provide a great deal of needed revenue for a decade or two. But several types of more efficient and equitable user charges are ready to be phased in. For example, current technology has the potential to enable government agencies to institute vehicle miles traveled (VMT) charges as flat per mile fees. If there was public support, gradually public agencies could charge higher rates on some roads and lower rates on others to reflect more accurately than do fuel taxes, the costs of providing facilities over different terrain or of different quality. This approach would end cross subsidies of some travelers by others and make travel more efficient by encouraging the use of less congested roads. Unlike gasoline taxes, more direct road user charges also could vary with time of day, encouraging some travelers to make a larger proportion of their trips outside of peak periods, easing rush hour traffic.

In the short term, direct user fees could simply replace fuel taxes in a revenue-neutral switch, but they are attractive, in part, because they can become more lucrative as travel increases, while allowing charges to be distributed more fairly among road users. Initially, some vehicle operators might be allowed to continue paying motor fuel taxes rather than newer direct charges, but eventually gas and diesel taxes would be phased out.

APPENDIX V
REVIEW AND COMMENT

H:\RTPA\2011 RTP Update\Final\APPENDIX V - Review and Comment.doc



Kings County Association of Governments

339 W. "D" Street, Suite B, Lemoore, California 93245
(559) 582-3211 extension 2654 ❖ FAX (559) 924-5632
www.countyofkings.com/kcag

Member Agencies: Cities of Avenal, Corcoran, Hanford and Lemoore, County of Kings

NOTICE OF PUBLIC HEARING ON THE DRAFT 2011 FEDERAL TRANSPORTATION IMPROVEMENT PROGRAM, THE DRAFT 2011 REGIONAL TRANSPORTATION PLAN, THE DRAFT ENVIRONMENTAL IMPACT REPORT AND CORRESPONDING DRAFT CONFORMITY ANALYSIS

NOTICE IS HEREBY GIVEN that the Kings County Association of Governments (KCAG) will hold a public hearing on May 26, 2010 at 4:30 p.m. at the Board of Supervisor's Chambers, Administration Building, Kings County Government Center, 1400 W. Lacey Blvd., Hanford, CA regarding the Draft 2011 Federal Transportation Improvement Program (2011 FTIP), the Draft 2011 Regional Transportation Plan (2011 RTP), the Draft Environmental Impact Report (EIR) and corresponding Draft Air Quality Conformity Analysis for the 2011 FTIP and 2011 RTP. The purpose of this combined public hearing is to receive public comments on these documents.

- The 2011 FTIP is a near-term listing of capital improvement and operational expenditures utilizing federal and state monies for transportation projects in Kings County during the next four years.
- The 2011 RTP is a long-term strategy to meet Kings County transportation needs out to the year 2035.
- The Program EIR provides an analysis of potential environmental impacts related to the implementation of the RTP as required by the California Environmental Quality Act.
- The Conformity Analysis contains the documentation to support a finding that the 2011 FTIP and 2011 RTP meet the air quality conformity requirements for ozone and particulate matter.

Individuals with disabilities may call Victoria Hall at (559) 582-3211, ext. 2654 (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 concurrent 45-day public review and comment period will commence on April 30, 2010 and conclude on June 14, 2010. The draft documents are available for review at the KCAG office, located at 339 W. D Street, Lemoore, CA and on KCAG's website at www.countyofkings.com/kcag.

Public comments are welcomed at the hearing, or may be submitted in writing by 5 p.m. on June 14, 2010 to Bruce Abanathie at the address below.

After considering the comments, the documents will be considered for adoption, by resolution, by the KCAG Transportation Policy Committee at a regularly scheduled meeting to be held on July 28, 2010. The documents will then be submitted to state and federal agencies for approval.

Contact Person: Bruce Abanathie, Regional Planner
339 W. D Street, Lemoore, CA 93245
(559) 582-3211, ext. 2584
E-mail: Bruce.Abanathie@co.kings.ca.us

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KCAG

Kings County Association of Governments
339 W. "D" Street, Suite B, ,
Lemoore, CA 93245

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**NOTICE OF PUBLIC HEARING ON THE
DRAFT 2011 FEDERAL TRANSPORTATION
IMPROVEMENT PROGRAM,
THE DRAFT 2011 REGIONAL TRANSPORTATION PLAN,
THE DRAFT ENVIRONMENTAL IMPACT REPORT AND
CORRESPONDING DRAFT CONFORMITY ANALYSIS**

PUBLICATION SENT
STATE OF CALIFORNIA
COUNTY OF KINGS

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I AM A CITIZEN OF THE UNITED STATES AND A RESIDENT OF THE COUNTY FORESAID; I AM OVER THE AGE OF EIGHTEEN YEARS, AND NOT A PART TO OR INTERESTED IN THE ABOVE-ENTITLED MATTER. I AM THE PRINCIPAL CLERK OF HANFORD SENTINEL, INC., A NEWSPAPER OF GENERAL CIRCULATION, PRINTED AND PUBLISHED DAILY IN THE CITY OF HANFORD, COUNTY OF KINGS, AND WHICH NEWSPAPER HAS BEEN ADJUDGED A NEWSPAPER OF GENERAL CIRCULATION BY THE SUPERIOR COURT OF THE COUNTY OF KINGS, STATE OF CALIFORNIA, UNDER THE DATE OF OCTOBER 23, 1951, CASE NUMBER 11623,

- * The 2011 FTIP is a near-term listing of capital improvement and operational expenditures utilizing federal and state monies for transportation projects in Kings County during the next four years.
- * The 2011 RTP is a long-term strategy to meet Kings County transportation needs out to the year 2035.
- * The Program EIR provides an analysis of potential environmental impacts related to the implementation of the RTP as required by the California Environmental Quality Act.
- * The Conformity Analysis contains the documentation to support a finding that the 2011 FTIP and 2011 RTP meet the air quality conformity requirements for ozone and particulate matter.

THAT I KNOW FROM MY OWN PERSONAL KNOWLEDGE THE NOTICE, OF WHICH THE ANNEXED IS A PRINTED COPY (SET IN TYPE NOT SMALLER THAN NONPAREIL), HAS BEEN PUBLISHED IN EACH REGULAR AND ENTIRE ISSUE OF SAID NEWSPAPER AND NOT IN ANY SUPPLEMENT THEREOF ON THE FOLLOWING DATES, TO WIT:

Individuals with disabilities may call Victoria Hall at (559) 582-3211, ext. 2654 (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.

PUBLISHED ON: 4/29/2010
FILED ON: 05/04/2010

A concurrent 45-day public review and comment period will commence on April 30, 2010 and conclude on June 14, 2010. The draft documents are available for review at the KCAG office, located at 339 W. D Street, Lemoore, CA and on KCAG's website at www.countyofkings.com/kcag.

I CERTIFY (OR DECLARE) UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT.

Public comments are welcomed at the hearing, or may be submitted in writing by 5 p.m. on June 14, 2010 to Bruce Abanathie at the address below.

DATED AT KINGS COUNTY, CALIFORNIA,

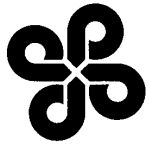
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Contact Person: Bruce Abanathie, Regional Planner
339 W. D Street, Lemoore, CA 93245
(559) 582-3211, ext. 2584
E-mail: Bruce.Abanathie@co.kings.ca.us

THIS DAY 4 OF MAY, 2010

SIGNATURE

Publish: Apr. 29, 2010



Kings County Association of Governments

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Member Agencies: Cities of Avenal, Corcoran, Hanford and Lemoore, County of Kings

COMMENTS RECEIVED ON THE DRAFT 2011 REGIONAL TRANSPORTATION PLAN, AND THE DRAFT ENVIRONMENTAL IMPACT REPORT

Since the mid-1970s, with the passage of AB 69, (Chapter 1253, Statute of 1972) California State law has required the preparation of RTPs to address transportation issues and assist local and State decision-makers in shaping California's transportation infrastructure.

The development of the RTP is consistent with California Government Code sections 14522 and 65080 and the changes to federal statute implemented by the Code of Federal Regulations (CFRs) that are also known as the "final rules" promulgated by SAFETEA-LU section 6001. Particularly with Title 23 CFR Part 450, which states in part that: "...MPOs should make special efforts to engage interested parties in the development of the plan."

For this reason transportation planning by MPOs/RTPAs is a collaborative process, led by the MPO/RTPA, state, tribal, and other key stakeholders in the regional transportation system. The process is designed to foster involvement by all interested parties, such as the business community, California Tribal Governments, community groups, environmental organizations, the general public, and local jurisdictions through a proactive public participation process conducted by the MPO/RTPA in coordination with the State and transit operators. It is essential to extend public participation to include people who have been traditionally underserved by the transportation system and services in the region. Neglecting public involvement early in the planning or programmatic stage can result in delays during the project delivery stage.

The Draft 2011 KCAG RTP and its accompanying EIR were circulated for a 45-day public review period that began April 30, 2010 and concluded on June 14, 2010. The five comment letters included herein were submitted by public agencies.

Each comment that KCAG received is included in this section. Responses to these comments have been prepared to address the concerns raised by the commenters and to indicate where and how the RTP and the RTP EIR address the pertinent issues.

NUMBER	FROM	AGENCY/ORGANIZATION	DATE
1	Bill Pfanner	CA Energy Commission	May 13, 2010
2	Kyle Sand	Kings County Counsel	May 28, 2010
3	Hector Rangel, on Behalf of	Caltrans Dist. 6	June 14, 2010
4	Chris Ganson	U.S. E.P.A.	June 15, 2010
5	Sue Kiser for Dist Admin.	FHWA	June 24, 2010

Letter 1

FROM: Bill Pfanner, Supervisor, Local Energy & Land Use Assistance Unit
California Energy Commission – Fuels and Transportation Division

DATE: May 13, 2010

Comment 1-1

The commenter references Appendix F of the CEQA California Environmental Quality Act for how to achieve energy conservation. The commenter also references the Energy Commission's Energy Aware Planning Guide as a tool to assist in land use planning.

Response 1-1

The Draft EIR determined that potential impacts to energy due to construction and maintenance of RTP projects would be less than significant. Nevertheless, mitigation was recommended to reduce energy consumption. No further response is necessary.

Letter 2

FROM: Kyle Sand, Deputy County Counsel, Kings County

DATE: May 28, 2010

Comment 2-1

The Kings County County Counsel reviewed the RTP EIR and found no concerns.

Response 2-1

No response required.

Letter 3

FROM: Hector Rangel, Project Manager, on behalf of the different divisions of the California Department of Transportation and District 6

DATE: June 14, 2010

Commenter #1: Native American Liaison

Comment 3-1

The Native American Liaison noted out of date information regarding the local Tribal lands in Chapter 2, Assumption No. 7.

Response 3-1

We have made numerous attempts to contact the Tribal Administration and Planning Offices to resolve these information gaps without response from the Tribe.

Comment 3-2

The Liaison also suggested: "It is recommended that Environmental Justice be addressed within the Policy Element so it has an overall effect throughout the document rather only within the Regional Highway System section.

Response 3-2

Language has been added to Chapter 3, Policy Element, which addresses KCAG's environmental justice approach to public participation and recognizes the census-identified environmental justice communities/areas of Kings County.

Comment 3-3

The Liaison asks: "Are there sections on Kings County Regional Blueprint (San Joaquin Valley Regional Blueprint) and SB 375 within the Draft RTP? It is clear Kings County has made substantial efforts and could benefit from the inclusion within the RTP."

Response 3-3

The 2011 RTP has been created before the full development of the SB 375 requirements and does not address SB 375 issues. The Blueprint information is included in the assumptions and plans for future development as planned in the local jurisdictions' general and specific plans. No further response is required.

Commenter #2: South Planning Branch

Comment 3-4

Page 3-3, Highway System Goal, Policy and Objectives, Objective 7 recommended addition to the text.

Response 3-4

The additional text has been added to Objective 7 on page 3-3.

Comment 3-5

Page 4-35: Figure 4-23: Priority 4: The State Route number should be '198' and not '189'.

Response 3-5

This error was not found, all highway references are correct. No further response required.

Comment 3-6

Page 4-35: Figure 4-23: Priorities 7 through 10: The Postmile and Location descriptions should read from south to north.

Response 3-6

The corrections to the postmile descriptions have been made.

Comment 3-7

Figure 4-23, page 4-35 for RTP and Appendix D-Non-Exempt Projects for FTIP: "There is a difference between the cost estimates for the 19th Avenue Interchange project on Route 198 in the RTP (\$36,234, 000) vs. the FTIP figure (\$34,234,000)."

Response 3-7

The cost figures for all STIP projects has been reconciled with the STIP and verified in CTIPS.

Commenter #3: South Planning Branch – Mass Transportation Coordinator**Comment 3-8**

"[Based on the review of]...Chapter 6[:] Public Transportation. [We]...commend KCAG for their efforts of:... [We]...have found the Regional Transportation Plan (RTP), Chapter 6: Public Transportation, to be complete..."

Response 3-8

Thank you – no response required.

Commenter #4: CSMP Branch**Comment 3-9**

"[T]he draft RTP had a good write up of the 198 Expressway project and its associated CSMP."

Response 3-9

Thank you – no response required.

Commenter #5: Division of Maintenance and Operations, Office of Traffic Operations**Comment 3-10**

"...for the 2007 RTP remain valid—please see Appendix for specific comments."

Response 3-10

The appendix (see letter at end of appendix V) contains a list of fifteen projects recommended for construction. These projects will be considered based on area development, project level performance factors, and funding availability. Currently several of these projects are listed in Table 4-21 (Long-Range State Highway Projects (unconstrained)) and Table 4-23 (Regional Future Development List of Project Study Reports For Capacity-Increasing Projects).

All projects related to Highway 43 emphasize the need to have the roadway designated an interregional route and therefore eligible for the Interregional funds (IIP) through the State Transportation Improvement Program (STIP).

Comment 3-11

We recommend that the Transportation Impact Fee Mitigation Program should be applied toward all the State Highway Project administered by Caltrans

Response 3-11

Comment noted.

Commenter #6: Div of Transportation Planning, Office of Regional and Interregional Planning**Comment 3-12**

Chapter 1: We would suggest expanding the discussion of the public participation and interagency coordination process in Chapter 1 to demonstrate clearly how KCAG's public outreach and interagency coordination process meets the requirements of 23 CFR 450.316(3)(b) and 23 CFR 450.322(g) 23 CFR 450.316(1)(i-x), CFR 450.316(c), and 23 CFR 450.316(i)."

Response 3-12

Further explanation has been added to Chapter 1.

Comment 3-13

Chapter 2: Please include a statement that the RTP is consistent with the Public Transit-Human Services Transportation Plan.

Response 3-13

The consistency with this document is stated in Chapter 1.

Comment 3-14

Chapter 2: The regional air quality planning authorities in the region should be identified in your discussion.

Response 3-14

The regional Air Quality planning authority is identified as the San Joaquin Valley Air Pollution Control District (SJVAPCD).

Comment 3-15

Chapter 4: While there is a good discussion in Chapter 4 of Intelligent Transportation Systems and the development of the regional ITS architecture in the KCAG region, please consider adding a statement that the RTP is consistent (to the maximum extent practicable) with the regional ITS architecture.

Response 3-15

A statement has been added to Chapter 4.

Comment 3-16

The performance measurement prioritization system provides a quantitative measure for projects. You might consider removing point values or giving negative points for negative impacts (i.e. increases water pollution levels.)

Response 3-16

Comment noted, but impractical at this time. Performance measures will be reevaluated for the 2014 RTP, this recommendation can be considered at that time.

Comment 3-17

The projected revenue section is missing a statement ensuring that the first four years of the projected fund estimate is consistent with the 4 year STIP.

Response 3-17

A statement has been added.

Comment 3-18

We are unable to determine whether the cost estimates for implementing the projects identified in the RTP reflect [']year of expenditure dollars['] to reflect inflation rates.

Response 3-18

As noted in paragraph D, page 4-45: "Figures 4-32 through 4-36 list local roads improvement projects for which funding is reasonably expected to be available (constrained). The project costs are escalated to Year of Expenditure (YOE)" It was also noted in Chapter 11 that the rate of escalation is at 3%.

Comment 3-19

Chapter 8: We recommend more discussion about regional pedestrian needs.

Response 3-19

Additional language discussing the value of walkable communities has been added.

Comment 3-20

Valleywide Chapter: "We would like to encourage KCAG to begin exploring regional coordination with local jurisdictions, and continue coordination with San Joaquin Valley MPOs in preparation for SB 375 compliance..."

Response 3-20
Comment noted.

Comment 3-21

RTP Checklist: Financial, Question 3, The referenced section (11-5) does not contain the sources of funding. The section should reference 4-64 to 4-68.

Response 3-21

This will be corrected with the Final RTP Checklist.

Comment 3-22

RTP Checklist: Financial, questions 7 and 8: Please provide a statement of the consistency between the projects in the RTP and the Interregional Transportation Improvement Program (ITIP), as well as the Federal Transportation Improvement Program (FTIP).

Response 3-22

Language added to page 4-37 in the RTIP description.

Comment 3-23

RTP Checklist: Environmental, Question 4: We were not able to locate the section discussing mitigation activities in the RTP..."

Response 3-23

As the EIR was being prepared at the same time as the draft RTP, this information was not available at the time. A summary of the EIR mitigations will be included in the final RTP.

Comment 3-24

RTP Checklist: Please ensure that a signed checklist is contained in the final RTP, please include specific page numbers when demonstrating compliance with various provisions on the RTP Checklist.

Response 3-24

Comment noted.

Commenter #7 Office Advance System Planning & Goods Movement:

Comment 3-25

CSMP Branch: page 4-23, Action Element A, a project study report is not a system planning document.

Response 3-25

Language removed from the section.

Comment 3-26

Freight Planning Branch: "One of the best if not the best RTP... reviewed in terms of goods movement content: "The table of contents item which identified the goods movement content in chapter 5 of the document was excellent; [Fourteen] pages of goods movement specific content covered all modes and was thorough in it's analysis of the related goods movement issues; Truck and rail content in particular was outstanding and discussion of freight rail abandonments, mainline and shortline content was noteworthy and thorough."

Response 3-26

Comment noted. Thank you.

Comment 3-27

Division Of Aeronautics: We compliment the KCAG for providing policy V(A) Aviation Goals, Policies and Objectives as a means to integrate the County's airports into the regional transportation system.

Response 3-27

Comment noted. Thank you.

Comment 3-28

Division Of Aeronautics: Chapter 5, Goods Movement. We would encourage the RTP maintain a focus on regional goods movement that is well connected to the airports in a manner complimentary to passenger and general aviation needs.

Response 3-28

Comment noted.

Comment 3-29

Division Of Aeronautics: Chapter 7 Aviation. We appreciate the descriptive narrative of the airports in this section and in particular the mapping of the public and private airports. We also appreciate the mention of helicopter uses in the County.

Response 3-29

Comment noted. Thank you.

Comment 3-30

ALUC: A beneficial addition to this section would be text explaining the purpose of the ALUC. We recommend adding a paragraph or two explaining how land use policies contained in the ALUCP are reconciled with your RTP transportation and land use policies.

Response 3-30

Language added to address these comments.

Comment 3-31

Public Participation: We also recommend adding text that includes the airport managers in County-wide public participation programs. Specifically, we would like to see language acknowledging that the various airport managers will be consulted on transportation affairs that

may affect or benefit airports and/or aviation interests, and how the aviation community will be included in vital transportation decision making processes.

Response 3-31

Language added to address these comments.

Commenter #8 Division of Mass Transportation

Comment 3-32

The Division of Mass Transportation would like to commend the Governments on the following items: For planning and establishing a comprehensive transit system through efforts such as: Creating a fundamentally sound and well organized regional transportation plan, Implementing a comprehensive Policy Element that promotes an integrated transportation system, especially the Public Transportation Policies and Objectives section, Collaborating with the public, transit agencies, and surrounding agencies to improve transportation in the region.

Response 3-32

Comment noted. Thank you.

Comment 3-33

Please consider replacing the term “disabled” with “people with disabilities.

Response 3-33

The changes have been made.

Letter 4

FROM: Chris Ganson, Environmental Review Office, United States Environmental Protection Agency, Region IX

DATE: June 15, 2010

Comment 4-1

Delineate Robust Measures to Improve Air Quality through Travel Efficiency. "...substantial focus on and investment in travel efficiency measures (e.g. smart growth and transportation demand management (TDM)) is also needed to further reduce emissions in the San Joaquin Valley."

Response 4-1

The consideration of these issues will be incorporated into the Sustainable Communities Strategy and/or Alternative Planning Strategy in the 2014 RTP.

Comment 4-2

Use the RTP Process to Spur Transportation Efficient Growth That Accomplishes Multiple Objectives. EPA recommends incorporation of carefully chosen performance measures to inform and guide planning efforts. EPA, the US Department of Housing and Urban Development (HUD) and the US Department of Transportation (DOT) recently joined in a partnership to support measures to improve livability and sustainability. We encourage you to consider the principles identified through this partnership when working to integrate the regional blueprint concept into regional planning.

Response 4-2

The consideration of these issues will be incorporated into the Sustainable Communities Strategy and/or the Alternative Planning Strategy of the 2014 RTP.

Comment 4-3

Clarify in the RTP How the Ongoing Regional Blueprint Effort Influenced Any Current Design and Route Network Location Decisions. EPA recommends that, from a regional perspective, the RTP identify how proposed transportation projects have been planned to (1) more efficiently use existing infrastructure, for example by incorporating intelligent transportation systems or improving transit service, rather than adding new infrastructure; (2) satisfy regional residents' need for efficient access to goods and services in the way that causes the least environmental and social harm; and (3) avoid and minimize harm to high quality resources and habitat. The RTP should also identify what design and route network location decisions were proposed in order to avoid and/or minimize impacts to resources. It should be clear how information about resources, including information from existing resource documents, has informed decisions about the route network.

Response 4-3

The ongoing blueprint effort is not to a stage yet that would provide anything other than some basic principles of development. These principles were vetted with the regional agencies and are a basis for recommendations to project sponsors, but have no compulsory or obligatory constraint. When a region, such as ours, spends more than 93% of its available funding just to

maintain and operate the current system there is little influence that programs such as the blueprint effort can effect.

Comment 4-4

Plan for Smart Growth Associated with High Speed Rail Stations. EPA strongly recommends that San Joaquin Valley MPOs work closely with member jurisdictions to integrate High Speed Rail into the transportation network and built environment in ways that reduce private motor vehicle travel, encourage transit, biking and walking. We in particular, encourage prioritization of residential and commercial development over parking, and higher density infill and brownfields development, in these areas.

Response 4-4

Comment noted. This will be considered for the 2014 RTP, or when decisions are made that will warrant adjustments in our long-term planning to incorporate high speed rail components.

Comment 4-5

Discuss Greenhouse Gas Implications and Preparation for a Carbon Constrained Future Transportation Network. EPA recommends including a discussion of estimates of the range of possibility with respect to these factors, and a discussion of the factors limiting these possibilities (e.g. funding, institutions). EPA recognizes that MPOs do not have direct land use control. They can, however, facilitate local jurisdictions in the region, coordinating and building consensus through blueprint planning. A number of incentive programs are available to help fund such coordination (see attachment). Further, an MPO can use its role in transportation network planning to influence growth. EPA recommends including discussion of both near-term transportation demand management strategies and more aggressive potential future solutions.

Response 4-5

The EIR addresses potential impacts to air quality (Section 4.3) and greenhouse gas emissions (Section 4.9) and determined impacts would be less than significant. As the EIR is included as part of the RTP by reference, information in the EIR is considered part of the RTP. See EIR for further detail.

Comment 4-6

Discuss Impacts to .critical Habitat Areas and Connect It to a Broader Regional Mitigation Strategy in the RTP. EPA strongly recommends avoiding biologically sensitive habitats when planning a regional transportation network. and high value resource areas should be identified and avoided at the regional transportation planning phase, rather than waiting until project implementation. See previous letter for EPA's recommendations for biological and sensitive habitat mitigation.

Response 4-6

The EIR addresses potential impacts to biological resources (Section 4.4) and has determined that compliance with existing regulations, in combination with careful site planning and development of specific mitigation measures on a case-by-case basis, would reduce impacts from transportation improvement projects to a less than significant level. See EIR for further detail.

Comment 4-7

Describe the Use of Available Data to Inform Regional Transportation Planning Decisions. SAFETEA-LU directs MPOs to compare transportation plans with other plans, maps, and data of inventories of natural or historic resources, if available. The RTP should therefore include a discussion of other data, plans, or maps that may be useful to inform long-range transportation planning. EPA recommends that the RTP specifically describe how the proposed transportation network has been designed to avoid resources identified in data sources such as the U.S. Fish & Wildlife Service species recovery plans, USDA Natural Resources Conservation Service wetland data, Nature Conservancy data and regional planning documents, California Department of Fish and Game Natural Diversity Database, and Local non-profit and land trust group information.

Response 4-7

See Response 4-6. The information for this comment is included in the EIR, section 4.4.

Letter 5

FROM: Sue Kiser, Director of Planning and Air Quality, on behalf of Walter C. Waidelich, Jr., Division Administrator of Federal Highways Administration, California Division, Region IX

DATE: June 24, 2010

RE: 23 CFR 450.322 Development and content of the metropolitan transportation plan:

Comment 5-1

Good description in the Executive Summary, Land use planning activities information pertaining to the current and projected trends and demographics in Kings County, and characteristics, location(s) and plans of the tribal governments; Good practice.

Response 5-1

Comment noted. Thank you

Comment 5-2

In Chapter 3 - The Policy Element, it would be helpful to include discussion on how KCAG's transportation policies incorporate the SAFETEA-LU planning factors.

Response 5-2

Language has been added to Chapter 3.

Comment 5-3

Consideration should be given to re-titling Figure 4-37 on page 4-54-55. While developing a process for prioritizing transportation projects is important, this methodology appears restricted to highway projects only, not transportation projects covering all modes.

Response 5-3

The title of these tables has been revised.

Comment 5-4

Good practice on including complete, comprehensive chapters on Goods Movement and Non-Motorized Facilities.

Response 5-4

Comment noted. Thank you.

Comment 5-5

As an enhancement to future FTIP and RTP updates KCAG may wish to consider a unitary format for the FTIP and RTP project lists, thus making it easier to make the linkage between projects shown in the FTIP and projects shown in the RTP.

Response 5-5

This change will be considered for the 2014 RTP.

RE: 23 CFR 450.316 Interested parties, participation and consultation

Comment 5-6

Clear documentation of the public involvement activities KCAG carried out in developing the draft 2011 RTP on page 1-8. How did KCAG coordinate its RTP planning activities with area tribal governments?

Response 5-6

KCAG includes (a representative of) the Tribal Government as part of its Technical Advisory Committee. The Tribe receives all public notices, meeting notices and agendas, and is included in any special mailings/notices regarding transportation. KCAG has also participated in a current EJ program specifically designed to increase the Tribal participation in transportation decision-making.

Comment 5-7

Good practice discussing the potential impacts on Environmental Justice (EJ) communities under Project Alternative 4 of the SR 198 widening project.

Response 5-7

Comment noted. Thank you.

RE: Other RTP Comments

Comment 5-8

KCAG has developed a well-written, organized and concise draft 2011 RTP document that has extensive and useful information on the regional transportation planning process. This is also a very comprehensive document for an MPO of KCAG's size. Good job.

Response 5-8

Comment noted. Thank you.

Comment 5-9

KCAG is commended for working with the 7 other Valley MPOs to develop the comprehensive and detailed Valley-Wide chapter (included as Appendix IV in the RTP). This work, in combination of what has been undertaken for Blueprint planning, is a best practice moving towards a better and more integrated local and regional planning process.

Response 5-9

Comment noted. Thank you.

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov



May 13, 2010

RECEIVED

MAY 19 2010

KCAG

Bruce Abanathie
Kings County Association of Governments
339 W. D Street, Suite B
Kings, CA 93245

Dear Mr. Abanathie:

The California Energy Commission has received the Kings County Association of Governments' Draft EIR titled 2011 Kings County Regional Transportation Plan EIR, SCH 2009091099 that was submitted on 4/30/2010 for comments due by 6/14/2010. After careful review, the Energy Commission has found the following:

We would like to assist in reducing the energy usage involved in your project. Please refer to the enclosed Appendix F of the California Environmental Quality Act for how to achieve energy conservation.

In addition, the Energy Commission's *Energy Aware Planning Guide* is also available as a tool to assist in your land use planning. For further information on how to utilize this guide, please visit www.energy.ca.gov/energy_aware_guide/index.html.

Thank you for providing us the opportunity to review/comment on your project. We hope that our comments will be helpful in your environmental review process.

If you have any further questions, please call Gigi Tien at (916) 651-0566.

Sincerely,

A handwritten signature in blue ink that reads "Bill Pfanner".

BILL PFANNER
Supervisor, Local Energy & Land Use Assistance Unit
Special Projects Office
Fuels and Transportation Division
California Energy Commission
1516 Ninth Street, MS 23
Sacramento, CA 95814

Enclosure

Appendix F

ENERGY CONSERVATION

I. Introduction

The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

- (1) decreasing overall per capita energy consumption,
- (2) decreasing reliance on natural gas and oil, and
- (3) increasing reliance on renewable energy sources.

In order to assure that energy implications are considered in project decisions, the California Environmental Quality Act requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

Energy conservation implies that a project's cost effectiveness be reviewed not only in dollars, but also in terms of energy requirements. For many projects, lifetime costs may be determined more by energy efficiency than by initial dollar costs.

II. EIR Contents

Potentially significant energy implications of a project should be considered in an EIR. The following list of energy impact possibilities and potential conservation measures is designed to assist in the preparation of an EIR. In many instances, specific items may not apply or additional items may be needed.

A. Project Description may include the following items:

1. Energy consuming equipment and processes which will be used during construction, operation, and/or removal of the project. If appropriate, this discussion should consider the energy intensiveness of materials and equipment required for the project.
2. Total energy requirements of the project by fuel type and end use.
3. Energy conservation equipment and design features.
4. Initial and life-cycle energy costs or supplies.
5. Total estimated daily trips to be generated by the project and the additional energy consumed per trip by mode.

B. Environmental Setting may include existing energy supplies and energy use patterns in the region and locality.

C. Environmental Impacts may include:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, opera-

tion, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.

2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

D. Mitigation Measures may include:

1. Potential measures to reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, maintenance and/or removal. The discussion should explain why certain measures were incorporated in the project and why other measures were dismissed.
2. The potential of siting, orientation, and design to minimize energy consumption, including transportation energy.
3. The potential for reducing peak energy demand.
4. Alternate fuels (particularly renewable ones) or energy systems.
5. Energy conservation which could result from recycling efforts.

E. Alternatives should be compared in terms of overall energy consumption and in terms of reducing wasteful, inefficient and unnecessary consumption of energy.

F. Unavoidable Adverse Effects may include wasteful, inefficient and unnecessary consumption of energy during the project construction, operation, maintenance and/or removal that cannot be feasibly mitigated.

G. Irreversible Commitment of Resources may include a discussion of how the project preempts future energy development or future energy conservation.

H. Short-Term Gains versus Long-Term Impacts can be compared by calculating the energy costs over the lifetime of the project.

I. Growth Inducing Effects may include the estimated energy consumption of growth induced by the project.

DEPARTMENT OF TRANSPORTATION**DISTRICT 6**

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FRESNO, CA 93778-2616
PHONE (559) 488-4151
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*Flex your power!
Be energy efficient!*

June 14, 2010

Ms. Terri King
Executive Director
Kings County Association of Governments
339 "D" Street, West
Lemoore, California 93245

Dear Ms. King:

Thank you for the opportunity to review the Draft Kings County Association of Governments (KCAG) 2011 Regional Transportation Plan (RTP) / Federal Transportation Improvement Program (FTIP). Staff Members at District 6 and various units within the California Department of Transportation (Caltrans) have reviewed the Draft RTP/FTIP for 2011. Caltrans offers the following comments.

DISTRICT 6-DIVISION OF TRANSPORTATION PLANNING**North Planning Branch-Native American Liaison (Caltrans, District 6):**

"Chapter 2, Overview of Transportation Planning and Programming, II. Assumptions and Inventories, A. Population Assumptions, #7:"

- *"This section may need to be revised to reflect updated status of the Santa Rosa Rancheria of Tachi Yokut Tribe."*
- *"The narrative mentions plans for expansion that have already taken place."*
- *"The hotel is already in place and there is the addition of new housing and gymnasium east of existing housing."*

"It is recommended that Environmental Justice be addressed within the Policy Element so it has an overall effect throughout the document rather only within the Regional Highway System section. General identification of environmental justice communities within Kings County and general environmental justice policy statements/ commitments could be included within the Policy Element."

“Are there sections on Kings County Regional Blueprint (San Joaquin Valley Regional Blueprint) and SB 375 within the Draft RTP? It is clear Kings County has made substantial efforts and could benefit from the inclusion within the RTP.”

South Planning Branch (Caltrans, District 6):

RTP:

- Page 3-3: *Highway System Goal, Policy and Objectives, Objective 7:*
 - *This is a recommended item to add to this objective.*
 - *Please rephrase “Work with Caltrans and local agencies to obtain right of way dedications at designated future interchanges and along mainline portions of State highways within the regional transportation system.”*
- Page 4-35: *Figure 4-23: Priority 4*
 - *The State Route number should be ‘198’ and not ‘189’.*
- Page 4-35: *Figure 4-23: Priorities 7 through 10*
 - *The Postmile and Location descriptions should read from south to north as follows:*
 - *State Route 41: R37.8/R38.5, Jackson Avenue to SR 198*
 - *State Route 43: 22.3/27.3, 10th Avenue to Fresno County line*
 - *State Route 43: 16.3/22.3, Houston Avenue to 10th Avenue*
 - *State Route 43: 0.0/16.3, Tulare County Line to Houston Avenue*

FTIP/RTP: *Figure 4-23, page 4-35 for RTP and Appendix D-Non-Exempt Projects for FTIP*

- *“There is a difference between the cost estimates for the 19th Avenue Interchange project on Route 198 in the RTP (\$36,234, 000) vs. the FTIP figure (\$34,234,000).”*
- *“Please reconcile the discrepancy for consistency between the documents.”*

South Planning Branch-Mass Transit Coordinator (Caltrans, District 6):

“[Based on the review of]...Chapter 6[:] Public Transportation. [We]...commend KCAG for their efforts of:”

- *“Engaging both private and public agencies to provide public transportation services...”*
- *“Encouraging ridesharing as...[a]...viable alternative single-occupant vehicle form of commuting...”*
- *“Encouraging public transit as a transportation control measure (TCM) to help attain state and federal air quality standards...”*
- *“Identification of two local public transit operators in Kings County; along with the types of services they offered...”*
- *“Identified the Financial Elements: Transportation Development Act (TDA) and Local Transportation (LTF)...”*
- *“Provided a breakdown of all the Federal Transit Act – Technical Planning Assistance Programs[,] i.e.[,] FTA Section 5311, 5311(f), 5310, 5307, 5316, 5317 and Congestion Mitigation [&] Air Quality (CMAQ).”*

“[We]...have found the Regional Transportation Plan (RTP), Chapter 6[:] Public Transportation, to be complete...”

Congestion System Management Plan (CSMP) Branch (Caltrans, District 6):

“[T]he draft RTP had a good write up of the 198 Expressway project and its associated CSMP.”

DISTRICT 6-DIVISION OF MAINTENANCE & OPERATIONS

Office of Traffic Operations:

“The District 6 Office of Traffic Operations had completed its review of the Kings County Association of Governments Draft 2011 Regional Transportation Plan dated April 30, 2010. Comments made by the Office of Traffic Engineering...”[for the 2007 RTP remain valid--please see Appendix for specific comments]. “This Office strongly supports the County of Kings and each municipality in establishing a Transportation Impact Fee Mitigation Program.”

[We recommend that the Transportation Impact Fee Mitigation Program should be applied toward all the State Highway Project administered by Caltrans.]

DIVISION OF TRANSPORTATION PLANNING

Office of Regional & Interagency Planning:

Regional Outreach Branch:

Chapter 1:

- *“We would suggest expanding the discussion of the public participation and interagency coordination process in Chapter 1 to demonstrate clearly how KCAG’s public outreach and interagency coordination process meets the requirements of 23 CFR 450.316(3)(b) and 23 CFR 450.322(g) 23 CFR 450.316(1)(i-x), CFR 450.316(c), and 23 CFR 450.316(i).”*
- *“For example, it would be helpful to provide an explanation of how public input was gathered; which specific State and local representatives were involved; which specific private interests were involved; whether Native American Tribal Governments were involved; as well as the extent of the involvement of these stakeholders; and lastly, how these stakeholder groups were given an opportunity to provide comments.”*

Chapter 2:

- *“Please include a statement that the RTP is consistent with the Public Transit-Human Services Transportation Plan.”*
- *“The regional air quality planning authorities in the region should be identified in your discussion.”*

Chapter 4:

- *“While there is a good discussion in Chapter 4 of Intelligent Transportation Systems and the development of the regional ITS architecture in the KCAG region, please consider adding a statement that the RTP is consistent (to the maximum extent practicable) with the regional ITS architecture.”*
- *“The performance measurement prioritization system provides a quantitative measure for projects. You might consider removing point values or giving negative points for negative impacts (i.e. increases water pollution levels).”*
- *“The projected revenue section is missing a statement ensuring that the first four years of the projected fund estimate is consistent with the 4 year STIP.”*
- *“We are unable to determine whether the cost estimates for implementing the projects identified in the RTP reflect [‘]year of expenditure dollars[‘] to reflect inflation rates.”*

Chapter 8:

- *“We recommend more discussion about regional pedestrian needs. The discussion could include the link between transit ridership and pedestrian access. There is reference to construction of a pedestrian and bicycle facility at Garden Drive and Shaw Place that would support pedestrian policy elements.”*

Valleywide Chapter:

- *“We would like to encourage KCAG to begin exploring regional coordination with local jurisdictions, and continue coordination with San Joaquin Valley MPOs in preparation for SB 375 compliance, which will require the region to meet a regional greenhouse gas emissions reduction target which ARB is statutorily required to provide to each region by September 30, 2010. We encourage extensive communication and collaboration amongst all the agencies within the San Joaquin Valley regarding the development of a sustainable communities strategy to meet the requirements of SB 375.”*

RTP Checklist:

- *“Financial, Question 3: All necessary financial resources from public and private sources that are reasonably expected to be made available to carry out the transportation plan shall be identified (23 CFR 450.322(f)(10)(ii). The referenced section (11-5) does not contain the sources of funding. The section should reference 4-64 to 4-68.”*
- *“Financial, questions 7 and 8: Please provide a statement of the consistency between the projects in the RTP and the Interregional Transportation Improvement Program (ITIP), as well as the Federal Transportation Improvement Program (FTIP). Consistency between the RTP and the ITIP, as well as the FTIP, is required per the 2006 State Transportation Improvement Program Guidelines, sections 33 and 19.”*
- *“Environmental, Question 4: We were not able to locate the section discussing mitigation activities in the RTP and how those measures would or could be implemented. Federal regulations require MPOs to include a discussion on the potential environmental mitigation activities and the potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the RTP, as stated in 23 CFR Part 450.322(f)(7). FHWA would like to see the discussion in the RTP, and not just in the environmental document.”*

General Comments:

- *“...Please ensure that a signed checklist is contained in the final RTP.”*
- *“To facilitate timely review and comment on the RTP please include specific page numbers when demonstrating compliance with various provisions on the RTP Checklist. Reference to entire chapters in the Checklist is often insufficient to clearly identify how requirements are met.”*

Office Advance System Planning & Goods Movement:

Corridor System Management Planning & Corridor Studies Branch:

“Comments Draft RTP[,] page 4-23[:]”

- *“Action Element A[,] project study report is not a system planning document.”*

Freight Planning Branch:

“[O]ne of the best if not the best RTP... reviewed in terms of goods movement content.”

- *“The table of contents item which identified the goods movement content in chapter 5 of the document was excellent.”*
- *“[Fourteen] pages of goods movement specific content covered all modes and was thorough in it's analysis of the related goods movement issues.”*
- *“Truck and rail content in particular was outstanding and discussion of freight rail abandonments, mainline and shortline content was noteworthy and thorough.”*

DIVISION OF AERONAUTICS

“Thank you for the opportunity to comment on the KCAG 2011 Draft Regional Transportation Plan. We offer the following comments for your consideration.”

- *“We compliment the KCAG for providing policy V(A) Aviation Goals, Policies and Objectives as a means to integrate the County’s airports into the regional transportation system. We also support the goal of fostering greater transit service to and from the Hanford Municipal and Corcoran Airports. As job centers, multi-modal accessibility to these places of employment is important to the health of the region.”*

Chapter 5 Goods Movement

- *“We concur with your statement that air cargo is expected to be the fastest growing segment of freight transportation nationwide. Rail intermodal traffic is the second fastest growing segment with truck transport growing at a slower pace. To meet this business expectation and ensure air cargo carriers are attracted to these airports, preparing the airports to not only receive the planes, but sort the packages on the ground, transfer goods to trucks, and easily move trucks in and out of the airport area will be critical to the success of meeting the needs of this business sector. We would encourage the RTP maintain a focus on regional goods movement that is well connected to the airports in a manner complimentary to passenger and general aviation needs.”*

Chapter 7 Aviation

- *“We appreciate the descriptive narrative of the airports in this section and in particular the mapping of the public and private airports. We also appreciate the mention of helicopter uses in the County.”*

Airport Land Use Commission (ALUC)

- *“A beneficial addition to this section would be text explaining the purpose of the ALUC. Our experience tells us there is sufficient confusion regarding the authority of ALUC reviews, Airport Land Use Compatibility Plans (ALUCP’s), and local planning processes. We recommend adding a paragraph or two explaining how land use policies contained in the ALUCP are reconciled with your RTP transportation and land use policies.”*

Public Participation Plan

- *“We also recommend adding text that includes the airport managers in County-wide public participation programs. Specifically, we would like to see language acknowledging that the various airport managers will be consulted on transportation affairs that may affect or benefit airports and/or aviation interests, and how the aviation community will be included in vital transportation decision making processes.”*

DIVISION OF MASS TRANSPORTATION

“Thank you for the opportunity to review and provide comments on Kings’ 2011 draft Regional Transportation Plan. The Division of Mass Transportation would like to commend the Governments on the following items:”

- *“For planning and establishing a comprehensive transit system through efforts such as:”*
 - *“Creating a fundamentally sound and well organized regional transportation plan”*
 - *“Implementing a comprehensive Policy Element that promotes an integrated transportation system, especially the Public Transportation Policies and Objectives section”*
 - *“Collaborating with the public, transit agencies, and surrounding agencies to improve transportation in the region”*

We would like to offer the following comments for your consideration:

- *“Please consider replacing the term “disabled” with “people with disabilities” as it may be offensive to some individuals and appears throughout the document, e.g. page 6-10, 6-14, 6-18, etc. The United States Department of Labor’s Office of Disability Employment Policy suggests addressing members of this community with people first language. Please visit the following website for more information:”*
 - *“<http://www.dol.gov/odep/pubs/fact/comucate.htm>”*
- *“In recognition of the recent lack of public transportation funds, please continue your efforts to provide the region with a comprehensive transportation system through collaboration and innovative activities such as ridesharing programs.”*

It is positively noted that there is adequate public participation solicited throughout the County during the local transportation planning process. Caltrans appreciate attention to this critical component.

If you have questions regarding the comments provided, please call Lisa Y. Flores (559) 444-2583, or me at (559) 488-4151.

Sincerely,

/s/ *Héctor J. Rangèl Ç.*

HÉCTOR J RANGÈL Ç
South Planning Branch
Transportation Planning Division
California Department of Transportation, District 6

Appendix

Lemoore - Hanford Area

- The Route 41 - 198 Interchange will need modifications. The City of Lemoore annexed Land west of Route 41 and north of Route 198 (Bush Street), which will significantly increase the southbound left (SBL) to eastbound (EB) Route 198 volumes. The existing at-grade intersection will need to be replaced with a loop ramp in the southwest quadrant or a high-speed fly over.
- The City of Lemoore is in the process of up dating the General Plan potentially increasing the northbound left (NBL) movement volumes on Route 41, to westbound Route 198. The current at-grade intersection will need to be converted to a loop ramp or to a fly over.
- Changes in land use in the northwest section of Lemoore will warrant conversion of the existing at-grade Hanford-Armona Road intersection to an urban interchange. A Project Study Report (PSR) should be prepared and land use setbacks established. The immediate need at this location is for left-turn channelization on Hanford-Armona Road. In addition, the City is showing Belle Haven to be an urban arterial. We have indicated, numerous times, the intersection spacing issues associated with Belle Haven and the State Highway System. Belle Haven should be realigned too.
- The 12th Avenue, Route 198 EB off ramp needs to be widened, today. This is the responsibility of the City of Hanford as part of mitigation monitoring.
- An interim solution to increasing traffic is needed at Hanford-Armona and Route 198. The narrow bridge opening would not accommodate left-turn storage under the bridge. One solution under consideration is roundabouts at the ramp termini. "Caltrans improves mobility across California"
- The Houston Avenue, Route 198 interchange needs significant improvements due to the increasing traffic associated with development. The bridge needs additional lane(s) as well as the off ramps. The WB ramps would need to be realigned. Intersection signalization will be need as well.
- The 14th Avenue, Route 198 interchange has an extremely compact footprint and the local road network includes very narrow streets. Off ramp operational improvements are needed. This would include the addition of lanes to the ramp termini and intersection signalization.
- The Route 41, Jackson Avenue intersection needs left-turn channelization on Route 41. A study needs to be undertaken to see if acceleration lanes should be included, as this area of Lemoore is developing industrial uses.

- Route 43 will continue to become an increasingly important route for farm-to-market goods movement and as a commuter corridor. The Route 43/198 interchange will need improves as will Route 43. A PSR should be programmed for improving the existing facility from a 2-lane highway to a 4-lane expressway, from 1 mile south of Route 198 to the Kings / Fresno County Line.
- The Lacey Boulevard, Route 43 intersection needs to be relocated north of its current location. It is within the operational footprint of the Route 198 Interchange.
- The Fargo Avenue, Route 43 Intersection is skewed at 34 degrees. The intersection should be realign to 75 degrees, minimum. This is true as well for 8 '11 Avenue and Route 43 too

Stratford

- The Route 43, Laurel Avenue intersection in Stratford needs to be realigned to not less than 75 degrees with left-turn channelization added to Route 41.

Corcoran

- The City has designated Whitley as the southern gateway to the community. In addition, it established as a Policy and Standard that commercial develop be encouraged along Whitley. The Route 41 - Whitley Avenue intersection includes a private airport. This intersection will one day need to be signalized. Signalization is incompatible with vertical encroachments into an airport glide path. This airport need to be relocated or the City circulation element needs to be changed.
- The Pickerell, Orange, and South 5 ½ Avenue - State Route 43 intersections skew angles should be corrected.

Kettleman City and 1-5

- Development in the area is creating the need for improvements. The left-turn channelization storage length on Route 41 at Bernard Drive is too short. The SB and NB approaches need to be lengthened. Ward-Route 41 intersection would need to be converted to a right-in, right-out movement. In addition, improvements to Bernard "Caltrans improves mobility across California" would be needed to manage highway-commercial traffic. Local development should be mitigating these impacts.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Terri King
Kings County Association of Governments
339 W. "D" Street, Suite B
Lemoore, CA 93245

Subject: U.S. EPA Comments on the Kings County Association of Governments Regional Transportation Plan and Draft Environmental Impact Report

Dear Ms. King:

The U.S. Environmental Protection Agency (EPA) appreciates the opportunity to provide comments on the Kings County Association of Governments (KCAG) 2011 Draft Regional Transportation Plan (RTP) and Draft Environmental Impact Report (DEIR). EPA is committed to the goal of incorporating environmental considerations early in the transportation planning process. Early coordination results in greater opportunities to avoid sensitive resources and minimize impacts associated with future transportation projects.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) directs metropolitan planning organizations (MPOs) to consult with resource agencies while developing long-range transportation plans. It also requires such plans to discuss potential environmental mitigation activities and potential locations for these activities to restore and maintain environmental functions that could be affected by the plan. While EPA did not complete a comprehensive review of the KCAG RTP, we provide the following comments in support of compliance with these requirements. While we understand some of the provided recommendations below may not be able to be incorporated into this RTP revision, we hope that the concepts and principles identified can be incorporated into the next RTP revision.

Delineate Robust Measures to Improve Air Quality through Travel Efficiency

Air quality in the San Joaquin Valley is among the poorest in the country, causing health and environmental impacts for its residents and costs to its economy totaling approximately \$1600 per capita annually. The valley's geography and meteorology traps pollutants, so special attention must be given to reducing the amount of pollutants emitted. Transportation within the valley contributes a significant portion of these pollutants, and conversely reduction of vehicle travel can provide reductions for all pollutants. Reducing emissions from transportation is

necessary to improving the valley's air quality. While improvements in fuel efficiency and vehicle technology will contribute to a reduction in emissions, substantial focus on and investment in travel efficiency measures (e.g. smart growth and transportation demand management (TDM)) is also needed to further reduce emissions in the San Joaquin Valley.

Use the RTP Process to Spur Transportation Efficient Growth That Accomplishes Multiple Objectives

A regional transportation planning process provides an opportunity to focus growth and activity where it most benefits the region. Compact development built in infill locations shortens trip distances; transit-oriented development leads to a greater share of transit use; mixing of uses accomplishes both and also creates opportunities for active transportation modes. Such development patterns, and the transportation patterns they help create, in turn can create environmental and livability benefits. These concepts and others are included in Caltrans' recently completed *Smart Mobility 2010: A Call to Action for the New Decade*. In particular, EPA would like to call attention to its discussion of performance measures aimed at quantifying the benefits of integrated planning:

Transportation performance measures forecast, evaluate, and monitor the degree to which the transportation system accomplishes adopted public goals and mobility objectives. Smart Mobility Performance Measures demonstrate the relationship between integrated transportation and land use decisions and the consequent effects on the full range of economic, social, and environmental conditions. (p. 50)

As detailed in the document, EPA recommends incorporation of carefully chosen performance measures to inform and guide planning efforts.

EPA, the US Department of Housing and Urban Development (HUD) and the US Department of Transportation (DOT) recently joined in a partnership to support measures to improve livability and sustainability. We encourage you to consider the principles identified through this partnership when working to integrate the regional blueprint concept into regional planning. More information on this partnership, including grant opportunities, can be found at <http://www.epa.gov/smartgrowth/partnership/>. Programs offered by the partnership, including funding opportunities, can be found at http://www.epa.gov/smartgrowth/pdf/2010_0506_leveraging_partnership.pdf.

Clarify in the RTP How the Ongoing Regional Blueprint Effort Influenced Any Current Design and Route Network Location Decisions.

EPA recognizes that San Joaquin Valley MPOs intend to apply the ongoing regional blueprint process to identify preferred growth scenarios for the future which will serve as the foundation for determining a Sustainable Community Strategy. EPA recommends that, from a regional perspective, the RTP identify how proposed transportation projects have been planned to (1) more efficiently use existing infrastructure, for example by incorporating intelligent transportation systems or improving transit service, rather than adding new infrastructure; (2) satisfy regional residents' need for efficient access to goods and services in the way that causes the least environmental and social harm; and (3) avoid and minimize harm to high quality

resources and habitat. The RTP should also identify what design and route network location decisions were proposed in order to avoid and/or minimize impacts to resources. It should be clear how information about resources, including information from existing resource documents, has informed decisions about the route network.

In the next RTP cycle, SB 375 will require the preparation of a Sustainable Communities Strategy (SCS). In a growing region, the SCS provides an excellent opportunity to consider land use and environmental implications of transportation network improvements and integrate smart growth opportunities into the RTP. In its SCS, EPA recommends that including discussions of the other goals and criteria of the regional blueprint and how each relates to and/or influences the RTP. EPA also encourages providing support and resources to local jurisdictions to make their general plans and proposed projects consistent with the RTP and the San Joaquin Valley Blueprint (<http://www.valleyblueprint.org/>).

EPA, the US Department of Housing and Urban Development (HUD) and the US Department of Transportation (DOT) recently joined in a partnership to support measures to improve livability and sustainability. We encourage KCAG to consider the principles identified through this partnership when working to integrate the blueprint concept into regional planning. As mentioned above, more information on this partnership, including grant opportunities, can be found at <http://www.epa.gov/smartgrowth/partnership/>. A summary of Sustainability Programs at HUD, DOT, and EPA is enclosed.

Plan for Smart Growth Associated with High Speed Rail Stations.

High Speed Rail holds the potential to revitalize those communities in which it stops; it also holds the potential to cause them to become bedroom communities for thriving centers elsewhere. The former could lead to shorter trip distances, mode shift away from the single occupancy vehicle, and greatly improved livability, while the latter could exacerbate congestion, air quality, greenhouse gas emissions, and livability. Thus, planning vibrant station areas is paramount.

EPA strongly recommends that San Joaquin Valley MPOs work closely with member jurisdictions to integrate High Speed Rail into the transportation network and built environment in ways that reduce private motor vehicle travel, encourage transit, biking and walking. We in particular, we encourage prioritization of residential and commercial development over parking, and higher density infill and brownfields development, in these areas.

Discuss Greenhouse Gas Implications and Preparation for a Carbon Constrained Future Transportation Network.

Many factors influence transportation greenhouse gas emissions. While population and employment growth drive transportation activity, a number of other factors also influence travel behavior, many of which MPOs are in a position to influence directly or indirectly.

A significant fraction of the built environment that will exist in the area affected by this RTP has yet to be built. Thus, significant opportunity exists to make substantial changes to land use development patterns. Because land use has significant direct influence on factors such as mode choice and average trip distance, and therefore indirect influence on factors such as air quality and greenhouse gas emissions, opportunity exists for significant change from current trends. EPA recommends including a discussion of estimates of the range of possibility with respect to these factors, and a discussion of the factors limiting these possibilities (e.g. funding, institutions).

EPA recognizes that MPOs do not have direct land use control. They can, however, facilitate local jurisdictions in the region, coordinating and building consensus through blueprint planning. A number of incentive programs are available to help fund such coordination (see attachment). Further, an MPO can use its role in transportation network planning to influence growth.

EPA recommends including discussion of both near-term transportation demand management strategies and more aggressive potential future solutions. While we recognize there may not be an opportunity to include a comprehensive discussion and analysis of these measures in this RTP update, we recommend expanding this discussion as feasible in this RTP with an eye toward the next RTP cycle. We recommend such a discussion focus primarily on opportunities and secondarily on constraints.

Discuss Impacts to Critical Habitat Areas and Connect It to a Broader Regional Mitigation Strategy in the RTP.

EPA strongly recommends avoiding biologically sensitive habitats when planning a regional transportation network. Where applicable open space plans, conservation areas, mitigation banks, conservation plans (such as Habitat Conservation Plans (HCPs) and Natural Community Conservation Planning programs), and high value resource areas should be identified and avoided at the regional transportation planning phase, rather than waiting until project implementation. Choices involving both roadway network placement and land use are decided or highly influenced by the regional transportation planning process and can have large implications for biologically sensitive areas.

The following are EPA's recommendations for biological and sensitive habitat mitigation:

- Use resource data to inform transportation decision-making.
- Use watershed, conservation, and recovery plans to identify important environmental considerations for the region, such as critical wildlife corridors, the most important areas to protect for sensitive species, and areas with a high concentration of resources.
- Give conservation plans as much weight as General Plans when planning transportation investments.

- Incorporate concepts such as 100 to 200 foot buffers for stream corridors, and identification and improvement of priority culverts that currently restrict wildlife corridors and natural processes of stream and river systems.
- Use parcel maps to identify larger, undivided parcels for ease of acquisition and preservation, and designate areas as potential future mitigation sites.
- Consider the resource, “Eco-logical: An Ecosystem Approach to Developing Infrastructure Projects” (2006)¹ which encourages Federal, State, Tribal and Local partners involved in infrastructure planning, design, review, and construction to use flexibility in regulatory processes. Specifically, Eco-Logical puts forth the conceptual groundwork for integrating plans across agency boundaries, and endorses ecosystem-based mitigation - an innovative method of mitigating infrastructure impacts that cannot be avoided.

The Regional Mitigation Strategy contained in the RTP should also establish the foundation for innovative regional mitigation solutions:

- Identify financial mechanisms to fund mitigation, such as development fees, sales tax, or the use of funds from alternative methods to identify and protect critical resource areas.
- Establish conservation easements that connect to and expand existing conservation areas.
- Describe locally-developed measures such as county/city designation of open-space, measures requiring development set-backs near streams, etc.

Describe the Use of Available Data to Inform Regional Transportation Planning Decisions.

SAFETEA-LU directs MPOs to compare transportation plans with other plans, maps, and data of inventories of natural or historic resources, if available. The RTP should therefore include a discussion of other data, plans, or maps that may be useful to inform long-range transportation planning. EPA recommends that the RTP specifically describe how the proposed transportation network has been designed to avoid resources identified in data sources such as those identified below:

- U.S. Fish & Wildlife Service species recovery plans
- USDA Natural Resources Conservation Service wetland data
- Nature Conservancy data and regional planning documents
- California Department of Fish and Game Natural Diversity Database
- Local non-profit and land trust group information

¹ Eco-logical is available on-line at: http://www.environment.fhwa.dot.gov/ecological/eco_index.asp. Information on pilots using Eco-logical principals is available on-line at: http://www.trb.org/StrategicHighwayResearchProgram2SHRP2/Public/Pages/capacitypilottests_334.aspx.

EPA values the opportunity to be involved in the regional transportation planning process. When the final RTP and EIR are available, please send a copy of each to the address above (mail code CED-2). If you have any questions about our comments, please contact me at 415-947-4121 or ganson.chris@epa.gov.

Sincerely,



Chris Ganson
Environmental Review Office

Enclosure: Leveraging the Partnership: DOT, HUD, and EPA Programs for Sustainable Communities

cc: Garth Hopkins, Caltrans Headquarters
Christine Cox-Kovacevich, Caltrans Central Region
Aimee Kratovil, Federal Highway Administration
Eric Eidlin, Federal Transit Administration
Roberta Gerson, US Fish and Wildlife Service



U.S. Department
of Transportation
**Federal Highway
Administration**

**Federal Highway Administration
California Division**

June 24, 2010

650 Capitol Mall, Suite 4-100
Sacramento CA 95814
(916) 498-5001
(916) 498-5008 fax

In Reply Refer To:
HDA-CA

Ms. Terri King
Executive Director
Kings County Association of Governments
339 West D Street, Suite B
Lemoore, CA 93245

SUBJECT: KCAG Draft FY 2011 FTIP/RTP Comments

Dear Ms. King:

Thank you for submitting KCAG's Draft 2011 FTIP and RTP for our comments.

Federal Transportation Improvement Program

23 CFR 450.324 Development and content of the transportation improvement program

- Well-written overview of the FTIP development process on pages 5-8.
- Excellent discussion of revenue assumptions, inflation rate (3%), and emphasis Operations & Maintenance (O&M) as the main investment priority of the FTIP, with 93% of the total expenditures in Kings County for O&M activities on the entire transportation system.
- Good practice of including the same unified, Valley-wide format for FTIP project listings that have been used by other SJV MPOs.
- Also good practice of including the most recent Annual List of Obligated Projects to show previous FTIP projects completed by KCAG and its member agencies.

23 CFR 450.316 Interested parties, participation and consultation

- Pages 5-6 contain a reference to KCAG's Public Involvement Program (PPP) and Appendix F is presented as a placeholder for public input. In addition to the PPP reference on pages 5-6, we recommend that the final FTIP include a detailed discussion



of what public involvement activities KCAG carried out and the results and responses of that process. A suggested improvement to the final FTIP would be to include a copy of KCAG's PPP or a link to the PPP on KCAG's website.

Other FTIP comments

- As with previous KCAG FTIPs, the draft 2011 FTIP is well-written in a concise, to the point manner, the sections are well-organized, and the document provides a sufficient overview of how the FTIP process is conducted for interested parties and members of the public.

Regional Transportation Plan

23 CFR 450.322 Development and content of the metropolitan transportation plan

- Good description of the organization of the draft 2011 RTP document on pages x-xi in the Executive Summary.
- Land use planning activities are detailed page 2-12. Good practice. The draft 2011 RTP also includes a lot of information pertaining to the current and projected trends and demographics in Kings County, and also includes extensive information on the characteristics, location(s) and plans of the tribal governments in regards to development and transportation, such as the description of Santa Rosa Rancheria on page 4-5.
- In Chapter 3 - The Policy Element, it would be helpful to include discussion on how KCAG's transportation policies incorporate the SAFETEA-LU planning factors.
- Consideration should be given to re-titling Figure 4-37 on page 4-54-55. While developing a process for prioritizing transportation projects is important, this methodology appears restricted to highway projects only, not transportation projects covering all modes.
- Good practice on including complete, comprehensive chapters on Goods Movement and Non-Motorized Facilities.
- As a enhancement to future FTIP and RTP updates KCAG may wish to consider is a unitary format for the FTIP and RTP project lists, thus making it easier to make the linkage between projects shown in the FTIP and projects shown in the RTP.

23 CFR 450.316 Interested parties, participation and consultation

- Clear documentation of the public involvement activities KCAG carried out in developing the draft 2011 RTP on page 1-8. How did KCAG coordinate its RTP planning activities with area tribal governments?
- Good practice discussing the potential impacts on Environmental Justice (EJ) communities under Project Alternative 4 of the SR 198 widening project.

Other RTP Comments

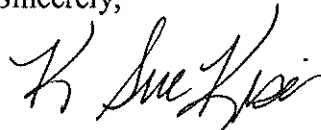
- KCAG has developed a well-written, organized and concise draft 2011 RTP document that has extensive and useful information on the regional transportation planning process. This is also a very comprehensive document for a MPO of KCAG's size. Good job.
- KCAG is commended for working with the 7 other Valley MPOs to develop the comprehensive and detailed Valley-Wide chapter (included as Appendix IV in the RTP). This work, in combination of what has been undertaken for Blueprint planning, is a best practice moving towards a better and more integrated local and regional planning process.

To follow up on the above comment regarding regional integration, FHWA commends KCAG and the other 7 San Joaquin Valley (SJV) MPOs on the hard work and efforts that you have put forth collectively in improving the entire transportation planning process across the Valley since adoption of the last FTIP and RTP. The Interagency Consultation (IAC) email process for project-level conformity, and periodical SJV IAC conference calls, as well as other formal and informal coordination meetings and opportunities are examples of good practice.

We are also looking forward to the use of improved travel forecasting modeling tools (currently under development) for the 2014 RTP update. This enhanced modeling process may provide an opportunity for technology transfer of new modeling methods that can more accurately access the benefits of greater integration of the land-use and transportation planning processes.

If you have any questions about our comments, please call Scott Carson at 916-498-5029 or email him at scott.carson@dot.gov.

Sincerely,



For
Walter C. Waidelich, Jr.
Division Administrator

cc: (e-mail)

Ray Sukys, FTA

Alex Smith, FTA

Garth Hopkins, Caltrans Planning

Kevin Tucker, Caltrans Planning

Muhaned Aljabiry, Caltrans Programming

Lima Huy, Caltrans Programming

Paul Albert-Marquez, Caltrans District

Karina O'Connor, EPA

Cari Anderson, CA Consulting

cc: (other)

KCAG FTIP/RTP Binders

scarson

Regional Transportation Plan Checklist

(Revised September 2007)

(To be completed electronically in Microsoft Word format by the MPO/RTPA and submitted along with draft RTP to the Calif. Department of Transportation)

Name of MPO/RTPA: Kings County Association of Governments

Date Draft RTP Completed: April 4, 2010

RTP Adoption Date: July 28, 2010

What is the Certification Date of the Environmental Document (ED)? July 28, 2010

Is the ED located in the RTP or is it a separate document? Separate

By completing this checklist, the MPO/RTPA verifies the RTP addresses all of the following required information within the RTP.

Regional Transportation Plan Contents

General

1. Does the RTP address no less than a 20-year planning horizon (Title 23 CFR 450.322(a))?
2. Does the RTP include both long-range and short-range strategies/actions (Title 23 CFR 450.322(b))?
3. Does the RTP address issues specified in the policy, action and financial elements identified in California Government Code Section 65080?
4. Does the RTP include Project Intent i.e. Plan Level Purpose and Need Statements?

Consultation/Cooperation

1. Does the MPO have a public participation plan that meets the requirements of Title 23, CFR 450.316 (1)(i-x)?
2. Did the MPO/RTPA consult with the appropriate State and local officials responsible for airport, transit, and freight operations, environmental protection, and economic development during the preparation of the RTP? (Title 23CFR 450.316(b))

Yes/No	Page #
Yes	Exec Sum
Yes	4-32 to 4-36
Yes	Chap 3, 4, & 11
Yes	Ex Sum
Yes	1-8
Yes	1-8

	Yes/No	Page #
3. Did the MPO/RTPA who has Federal lands within its jurisdictional boundary involve the Federal land management agencies during the preparation of the RTP?	Yes	1-8
4. Does the RTP specify that the appropriate State and local agencies responsible for land use, natural resources, environmental protection, conservation and historic preservation consulted? (Title 23 CFR 450.322(g))	Yes	1-8
5. Did the RTP include a comparison with the California State Wildlife Action Plan and (if available) inventories of natural and historic resources? (Title 23 CFR 450.322(g))	Yes	1-8, App III
6. Did the MPO/RTPA who has a Federally recognized Native American Tribal Government(s) and/or historical and sacred sites or subsistence resources of these Tribal Governments within its jurisdictional boundary address tribal concerns in the RTP and develop the RTP in consultation with the Tribal Government(s)? (Title 23 CFR 450.316(c))	Yes	2-14
7. Does the RTP address how the public and various specified groups, including the nonmortorized community, were given a reasonable opportunity to comment on the plan using the participation plan developed under Title 23 CFR 450.316(a) and (a) (1) (i)?	Yes	1-8
8. Does the RTP contain a discussion describing the private sector involvement efforts that were used during the development of the participation plan? (Title 23 CFR 450.316(a))	Yes	1-8
9. Does the RTP contain a discussion describing the coordination efforts with regional air quality planning authorities (Title 23 CFR 450.316(3)(b)? (MPO nonattainment and maintenance areas only)	Yes	I-8, 2-14
10. Is the RTP coordinated and consistent with the Public Transit-Human Services Transportation Plan?	Yes	2-14 & 6-23
11. Were the draft and adopted RTP posted on the Internet? (Title 23 CFR 450.322(j))	Yes	N/A

Modal Discussion

1. Does the RTP discuss intermodal and connectivity issues?	Yes	6-14
2. Does the RTP include a discussion of highways?	Yes	4-26
3. Does the RTP include a discussion of mass transportation?	Yes	6-1
4. Does the RTP include a discussion of the regional airport system and its ground access improvement program?	Yes	7-8
5. Does the RTP include a discussion of regional pedestrian needs?	Yes	8-1
6. Does the RTP include a discussion of regional bicycle needs?	Yes	8-2
7. Does the RTP include a discussion of rail transportation?	Yes	6-25

Yes/No	Page #
N/A	
Yes	5-1

8. Does the RTP include a discussion of maritime transportation (if appropriate)?
9. Does the RTP include a discussion of goods movement?

Programming/Operations

N/A	
Yes	4-56
Yes	3-1
Yes	4-53-55
Yes	App II

1. Is a congestion management process discussed in the RTP? (MPOs designated as TMAs only) (Title 23 CFR 450.450.320(b))
2. Is the RTP consistent (to the maximum extent practicable) with the development of the regional ITS architecture?
3. Does the RTP address both safety and security issues?
4. Does the RTP identify the objective criteria used for measuring the performance of the transportation system?
5. Does the RTP contain a list of un-constrained projects?

Financial

Yes	11-5
Yes	4-37
Yes	11-5
Yes	4-46-52
Yes	4-46-52
Yes	11-5
Yes	4-38
Yes	1-5
Yes	10-1

1. Does the RTP include a financial plan that meets the requirements identified in Title 23 CFR 450.322(f)(10)?
2. Does the RTP contain a consistency Statement between the first 4 years of the fund estimate and the 4-year STIP fund estimate? (2006 STIP Guidelines, Section 19)
3. Do the projected revenues in the RTP reflect Fiscal Constraint (Title 23 CFR 450.322(f)(10)(ii))?
4. Does the RTP contain a list of financially constrained projects? Any regionally significant projects should be identified. (Government Code 65808(3)(A))
5. Do the cost estimates for implementing the projects identified in the RTP reflect “year of expenditure dollars” to reflect inflation rates? (Title 23 CFR 450.322(f)(10)(iv))
6. After 12/11/07, does the RTP contain estimates of costs and revenue sources that are reasonably expected to be available to operate and maintain the freeways, highway and transit within the region (Title 23 CFR 450.322(f)(10)(i))?
7. Does the RTP contain a Statement regarding consistency between the projects in the RTP and the ITIP (2006 STIP Guidelines section 33)?
8. Does the RTP contain a Statement regarding consistency between the projects in the RTP and the FTIP (2006 STIP Guidelines section 19)?
9. Does the RTP address the specific financial strategies required to ensure the identified TCMs from the SIP can be implemented? (nonattainment and maintenance MPOs only) (Title 23 CFR 450.322(f)(10)(vi))

Environmental

1. Did the MPO/RTPA prepare an EIR or a program EIR for the RTP in accordance with CEQA guidelines?
2. Does the RTP contain a list of projects specifically identified as TCMs, if applicable?
3. Does the RTP contain a discussion of SIP conformity, if applicable? **(MPOs only)**
4. Does the RTP specify mitigation activities? (Title 23 CFR part 450.322(f)(7))
5. Where does the EIR address mitigation activities?
6. Did the MPO/RTPA prepare a Negative Declaration or a Mitigated Negative Declaration for the RTP in accordance with CEQA guidelines?
7. Does the RTP specify the TCM's to be implemented in the region? **(Federal nonattainment and maintenance areas only)**

Yes	Sep Doc
See Sep	Conform doc
See Sep	Conform doc
Yes	App III
Yes	Table ES-1
No	
Yes	10-2

I have reviewed the above information and concur that it is correct and complete.

 (Must be signed by MPO/RTPA
 Executive Director
 or designated representative)

 Date

 Print Name

 Title