9-25-2002

California Transportation Plan 2025 - DRAFT

California Department of Transportation

DRAFT

CALIFORNIA TRANSPORTATION PLAN 2025

THE VISION

California has a safe, sustainable transportation system that is environmentally sound, socially equitable, economically viable and developed through collaboration; it provides for the mobility and accessibility of people, goods, services and information through an integrated, multimodal network.

September 25, 2002

DRAFT

CALIFORNIA TRANSPORTATION PLAN 2025

TABLE OF CONTENTS

CALIFORNIA TRANSPORTATION PLAN 2025

EXECUTIVE SUMMARY

Over the next two decades, California is expected to add another 11 million new residents, reaching a total population of 45 million by 2020[1]. How will state, regional, and local governments and the private sector meet California's growing demand for transportation? The draft **California Transportation Plan 2025** (CTP) explores the social, economic, and technological trends and demographic changes anticipated over the next 20 years and their potential influence on travel behavior. The plan then presents goals, policies, and strategies to address the projected demand for transportation services.

The draft CTP proposes a balanced approach to the projected increase in demand for mobility and accessibility. It seeks to guide transportation investments that benefit our economy, support our communities, and safeguard our environment.

Prior to developing the draft CTP, we asked Californians to share their transportation concerns. The draft CTP reflects the public concerns expressed during an early public participation program, guidance from transportation experts, providers and decision makers, and was refined by a multi-disciplinary policy advisory group. Details of the public participation and outreach efforts are contained in Appendix IV to the draft CTP.

The release of this draft signals the beginning of the public review and comment of the draft CTP. Transportation users, providers, and decision and policy makers will have an opportunity to review and comment on the draft CTP in numerous forums, and through questionnaires, comments cards, and the CTP website. The public's participation and comments will help shape this plan and, most importantly, California's future transportation system.

Long-Term Commitments

The results of the early public participation revealed that we, as Californians, are committed to making this state the best place to live, work, play, and visit. We are proud of our state, but have concerns about our future. We are concerned about our children and our ability to safely access the economic, educational, cultural, and social opportunities we desire, and the services we need. We are concerned about population growth and its

[1] Department of Finance, Demographic Research Unit, County Population Projections with Age, Sex, and Race/Ethnic Detail, December 1998.

impacts on traffic congestion, the environment, our communities, and our quality of life.

California's leaders and voters have demonstrated their commitment to address these concerns. The CTP builds upon the foundation established over the past several years to improve the state's infrastructure and end decades of disinvestments. The following are examples of California's commitment to the future:

Commitment to Safety and Security

In 1999, Governor Gray Davis signed into law the Safe Routes to School Program, a major pedestrian safety grant program specifically targeted to improve the safety of school children. The funds can be used for bicycle lanes, sidewalks, traffic signs, crosswalks, and traffic calming measures. The first year generated $130 million in grant applications.

Californians demonstrated their commitment to safety by having the nation's highest rate of seatbelt and child safety seat usage in 2001. The state received the only "A" grade from the National Safety Council and the National SAFE KIDS Campaign for its occupant protection laws.

Commitment to Relieving Traffic Congestion

In July 2000, Governor Gray Davis initiated the Traffic Congestion Relief Program (TCRP). The TCRP, dedicating the state's portion of sales tax on gasoline to transportation for seven years, provides over $5 billion in new funds for high-priority projects to relieve congestion and improve goods movement, and $1.4 billion for local streets and road maintenance and transit operations. The TCRP represents the single largest investment in transportation infrastructure improvements in the state's history.

In March 2002, Californians voted two-to-one in favor of Proposition 42 to continue the transportation improvements initiated by the TCRP. Proposition 42 permanently dedicates the state's portion of sales tax on gasoline to transportation improvements and is expected to generate an additional $35 billion for transportation projects during the first 20 years.

Commitment to Preserving the System

The Governor's commitment to preserve the existing transportation system initiated by the TCRP was continued by the voters with the approval of Proposition 42. The state's cities and counties will receive 20 percent of Proposition 42 resources for maintaining their local streets and roads.

Californians demonstrated their commitment to preserving and maintaining the system by participating in the Adopt-A-Highway Program. 40,000 participants representing 4,700 groups volunteered to pickup trash, plant

trees and wildflowers, remove graffiti, and maintain traveler information centers at roadside rest areas. In 2001, volunteers picked up nearly 210,000 bags of trash from California's roadsides.

Commitment to the Economy

In 2002, California launched a record $7 billion in transportation projects, providing approximately 182,000 jobs and nearly $20 billion in economic stimulus.

The $2.4 billion Alameda Corridor rail cargo expressway was completed in 2002. The project, linking the Ports of Long Beach and Los Angeles to transcontinental rail yards was developed through a public and private collaboration. The corridor will improve distribution of approximately $300 billion in trade, relieve congestion, reduce noise and air pollution, and improve safety. However, the trade benefits on the Alameda Corridor cannot be fully realized until capacity on the Alameda Corridor-East to San Bernardino County has been increased. The TCRP provides $273 million towards safety and signal improvements and grade separations to help relieve congestion and improve operations on this critical trade corridor.

> *"More than ever, transportation is the critical link between California and economic success in the 21st century. We need to invest money, yes, but we need to do it wisely."*
>
> **GOVERNOR GRAY DAVIS**

Commitment to Communities

In 2001, the California Department of Transportation (Caltrans) adopted a Context Sensitive Solution policy providing for innovative approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. The policy promotes creative and collaborative problem-solving to make projects better reflect their surroundings.

During a freeway project to close the gap on Interstate 15 in San Diego, local communities and neighborhoods, Caltrans, and the San Diego Association of Governments collaborated to meet the needs of those people affected by the project. As a result, 11 over-crossings were designed to knit neighborhoods together by providing pedestrian and bicyclist circulation and open space for parks, plazas, bridges, and retail buildings.

Commitment to the Environment

In July 2002, Governor Davis signed landmark legislation to combat global warming, putting California at the forefront of a worldwide effort to reduce greenhouse gases. Assembly Bill 1493 requires the California Air Resources Board to develop carbon pollution (greenhouse gas) standards for vehicles in model year 2009 and beyond. Continued global warming could have

negative impacts on California's health, environment, communities and economy.

In March 2002, the American Lung Association of Sacramento honored Caltrans with its Clean Air Award for Government for initiating a five-year program to green its fleet. The program is intended to modify the majority of Caltrans' 14,000 vehicles to use cleaner-burning engines and fuels, or convert to electric, hybrid, and solar power.

THE CALIFORNIA TRANSPORTATION PLAN 2025 VISION

> ***California has a safe, sustainable transportation system that is environmentally sound, socially equitable, economically viable and developed through collaboration; it provides for the mobility and accessibility of people, goods, services and information through an integrated, multimodal network.***

The CTP provides a vision of sustainability and adopts guiding principles to reach the vision. Overarching these principles is the "system" concept. Transportation policy- and decision-makers cannot view transportation by individual mode. It must be viewed, planned, and operated as an integrated system with complementary modes. Nor can policy- and decision-makers take a narrow geographic approach to transportation. The system must connect effectively between jurisdictions and appear "seamless" to the transportation user.

To develop a seamless, integrated transportation system that offers a high degree of accessibility to California's growing population, the CTP adopts four guiding principles:

- Collaboration
- Innovation
- Leadership
- Communication.

COLLABORATION is included in both the vision and the guiding principles to emphasize its level of importance. Transportation planning and programming in California is a complex process shared among multiple public and private entities. It requires collaboration among the transportation providers and governmental entities as well as community-based organizations, urban planners, developers, social, community and emergency service providers, the environmental and business communities, permitting agencies, system users, and others. All of these voices must be heard and considered in order to achieve an integrated transportation system that promotes economic vitality and community goals.

While collaboration may take substantial time and effort, it is essential to selecting and completing transportation projects that best meet current and

future local, regional, and state needs. If meaningful communication is not achieved early during transportation planning and continued through project development, projects could be delayed due to legal action. Reaching consensus early will facilitate timely project completion.

To help ensure community participation, the Governor's Office of Planning and Research (OPR) is sponsoring a series of Vital Community Forums. The Forums are designed to provide participants with the tools they will need to help their community through civic engagement. The Forums bring together state representatives with community leaders, local government officials, and business, industry, educational, nonprofit, and community organization leaders to discuss how they can collaborate to create more vital and economically healthy communities.

There also must be collaboration among policy makers to ensure policy harmonization. For example, if a community or region adopts a policy to relieve roadway congestion by offering convenient and reliable transit, the land-use policies should support transit service.

> *"We must foster policies and initiatives that make the infrastructure building blocks work together. The new millennium home, for example, must be affordable, energy-efficient, technology-enabled, and close to mass transportation. Our thinking must be as integrated as our lives."*
>
> **MARIA CONTRERAS-SWEET**, Secretary
> Business, Transportation and Housing Agency

The draft CTP was developed through consultation with state, regional, and tribal governments, and in collaboration with local officials, community-based organizations, and a multitude of stakeholders. It involved land-use, environmental, transit, highway, bicycle and pedestrian advocates, shippers, the business community, and the public. The objective was to build consensus regarding the transportation vision, principles, goals, and strategies that will guide transportation decisions and investments over the next two decades.

LEADERSHIP means defining the transportation vision, working toward the vision, taking risks to reach the vision, and inspiring and encouraging others to embrace the vision.

INNOVATION is the creativity, ability, and flexibility to develop, test, and implement new solutions.

COMMUNICATION is the exchange of information and ideas. Communication involves both expressing and receiving ideas and information, and striving to understand and relate to the concerns of others.

Providing Mobility and Accessibility

The transportation vision includes the concepts of mobility and accessibility. It is important to understand mobility and accessibility, and their relationship

to transportation, in order to understand the goals, policies and strategies outlined in the CTP.

MOBILITY is the potential for movement. It is affected by the cost of transportation and the transportation system available. It is also affected by personal limitations, both financial and physical. As the cost of transportation increases, mobility decreases. In addition, if one's options are limited due to physical disability, mobility decreases. However, movement is generally not an end in itself, but a means to access services, activities, and markets.

ACCESSIBILITY is measured by the time and ease with which destinations can be reached. One may access a destination by actual movement or by "virtual" movement using communication systems such as the Internet, telephone, video, or teleconference systems. Accessibility is affected by distance, connectivity, congestion, transportation and communication options, and physical capabilities. Thus, it incorporates the characteristics of mobility, plus the factors of time and ease.

Accessibility may be influenced by many factors, including urban form and street design. For example, the traditional grid street pattern has numerous options for getting from point A to point B. However, late 20th Century residential developments often include circuitous street patterns with cul-de-sacs, may be surrounded by walls, and often have limited entry points. Thus, while movement or mobility is still possible, the new development pattern reduces accessibility because it limits options, decreases ease, and likely adds time to get from one point to another.

Accessibility is of utmost importance to the economy. Businesses, as well as consumers and the labor force, rely on quick access to airports, seaports, rail lines, and major highways. If access to destinations and markets is not reliable, firms may choose to go elsewhere.

Transportation system performance can be measured by the mobility and accessibility it provides the user. The CTP proposes goals, policies, and strategies to enhance California's accessibility over the next two decades. It builds on current activities and policies and proposes new approaches to make the system safer and more efficient, and to provide more transportation choices.

THE SYSTEM

To many, transportation means the roadway system, but it is much more. It is also transit, bicycle, pedestrian, maintenance and communication facilities, railways, air, sea and space-ports, pipelines, and the public and privately owned vehicles that use them. Californians use the transportation system each day to access employment, education, shops, medical services, and to participate in social and recreational opportunities. Our transportation

system is the network that connects our local, state and national economies, and allows us to efficiently move people, goods, and information from place to place.

TRENDS

California is the most populous state in the nation and is expected to increase by 33 percent in the first two decades of the 21st century. The state's population is also the most ethnically diverse. While the state's growth and diversity adds to California's economic strength and vibrancy, it also confronts policy-makers with a multitude of social, economic, environmental, and transportation challenges. Transportation is an integral part of the social and economic fabric of California. It cannot be examined without considering population growth and demographics, changing travel behavior, safety, employment, housing, land-use, the economy, technology, the environment, community values, individual opportunity, and funding. The CTP explores the impact of projected trends and demographics on transportation.

Transportation influences the shape of our communities. In the 20th Century, urbanization has been accompanied by increasing decentralization within cities (or urban sprawl). This decentralization is supported by a series of transportation innovations, streetcars, automobiles, subways, and urban and commuter rail services that make longer daily trips possible.

As employment centers moved from the central city to the suburbs and edge cities in the late 20th Century, jobs became less accessible to inner-city residents, especially the urban poor. The problem is made more complex by the fact that relatively few suburban jobs are well served by public transit, and many urban residents are without cars. The CTP explores the changes in urban form and their impacts on travel behavior, transportation demand, and the environment.

California is the fifth-largest economy in the world. Our economic status is dependent upon the accessibility of people and goods within the state, as well as to other states and countries. California's Pacific Rim and North America Free Trade Agreement location are an economic blessing, and a security and traffic challenge. The CTP explores options for meeting the projected increase in demand for goods movement.

Adequate and flexible funding is one of the greatest challenges in providing a transportation system that offers a high degree of accessibility to all Californians and the efficient movement of goods. The primary source of transportation revenue is the excise tax collected on each gallon of gas. Its value is steadily diminishing because this tax has not kept pace with inflation. The estimated additional $1.4 billion to be made available annually by the Governor's TCRP and the voter's approval of Proposition 42 will help reverse decades of disinvestments. However, it will not entirely bridge the

gap between future transportation demand and revenue. The CTP offers strategies for maximizing existing resources and securing more flexible additional transportation revenue.

GOALS

The following goals were developed based on based on consultation with numerous public and private transportation providers and concerns expressed by Californians during the early public outreach effort. The goals, while identified and discussed as separate issues, are interdependent. (For example, if the system is not well maintained, the level of mobility will decline.)

Each of the following goals support one or more concepts contained in the vision for California's transportation system:

Goal 1. **ENHANCE PUBLIC SAFETY AND SECURITY** - Ensuring the safety and security of people, goods, information, and services in all modes of transportation. Integrating new technologies when designing system infrastructure and developing coordinated security and response plans.

Goal 2. **PRESERVE THE TRANSPORTATION SYSTEM** - Maintaining and rehabilitating California's extensive transportation system to preserve it for future generations.

Goal 3. **IMPROVE MOBILITY AND ACCESSIBILITY** - Expanding the system and enhancing modal choices and connectivity to meet the state's future transportation demands.

Goal 4. **MAXIMIZE EFFICIENT USE OF RESOURCES** - Planning and providing transportation services while protecting our environment and historical and cultural assets. Maximizing the efficient use of resources including land and energy consumption.

Goal 5. **REFLECT COMMUNITY AND ENVIRONMENTAL VALUES** - Finding transportation solutions that balance and integrate community, aesthetic, and environmental values with transportation safety and performance.

TRANSPORTATION POLICIES

The following seven policies are developed to support the Goals identified above and to respond to concerns expressed by the public and stakeholders, while being mindful of future trends and challenges. The policies may support more than one goal.

Policy 1. Expand opportunities for early and ongoing collaboration in transportation planning and decision-making.

Policy 2. Maintain, manage, and preserve a safe and secure transportation system.

Policy 3. Develop, manage, and operate an efficient, inter-connected, and intermodal transportation system.

Policy 4. Manage growth and conserve resources.

Policy 5. Enhance capacity and provide viable transportation choices.

Policy 6. Provide additional and more flexible transportation financing.

Policy 7. Support research to advance mobility and accessibility.

The policies are designed to preserve the transportation system and provide mobility and accessibility for California's growing population while enhancing the environment, economy, and social equity of California. The CTP offers a number of implementing strategies designed to realize California's transportation vision and goals.

Rural Issues

Rural issues, while as acute as those in urban areas, have very different characteristics. With only eight percent of California's population, rural areas comprise 94 percent of the land area. Providing transportation services to a sparsely and widely distributed population presents special transportation challenges that must be considered when planning for a balanced, interconnected system. California's economy relies on rural agricultural products, timber, and tourism, and consequently, the rural and interregional road system.

Rural transportation issues vary depending on the area's economic base, topography, or proximity to urban areas and tourist destinations. If located adjacent to an urban area, the rural jurisdiction might receive a "spill over" of big city problems, such as traffic and air pollution, but not receive sufficient resources needed to address those issues. The CTP explores some of the issues facing rural transportation providers and offers policies and strategies to address them.

Performance Measures

Performance measures serve to indicate progress toward identified goals; to inform decision-making on transportation issues and opportunities; to provide a point of departure for policy and program analysis; to evaluate system conditions and strategies; to enable monitoring and problem identification; and to contribute to the integration of economic, social, and environmental factors during the planning and early decision-making processes.

Performance measures consist of a set of objective, measurable criteria used to evaluate the performance of the transportation system and to gauge if and

to what degree our vision and goals are being achieved. Transportation planners and providers must make sure they are using the appropriate performance measures and that the data is reliable. For example, past transportation efficiency may have been measured by the number of vehicles flowing through the system. This assumed that increased vehicle throughput was the desired outcome. However, if enhanced mobility and accessibility is the objective, measuring the accessibility of people, goods, and services makes more sense.

California Transportation Action Plan Development

Upon approval of the CTP, Caltrans will initiate development of an Action Plan that will present specific steps to implement the strategies proposed in this document. Building on our mutual commitments and capitalizing on our successes, the Action Plan will identify measurable objectives, roles and responsibilities, timelines, estimated costs, and targeted outcomes. Caltrans will also develop a method to monitor progress toward the goals, and a reporting system and schedule.

The CTP is a plan for all of California. Developing and implementing the Action Plan will require considerable coordination and collaboration with regional transportation planning agencies, local and regional officials, other governmental entities, tribal governments, business, communities, and system users. The participants in this effort will vary depending on the strategy being addressed.

Objectives and priorities may vary based on regional goals. It will be the state's responsibility to help sort through these varying goals and ensure that interregional state transportation goals are addressed and cross-jurisdictional issues are considered.

Work has already begun on developing the Action Plan. Preliminary research and identification of stakeholders is currently underway. It is anticipated that the Action Plan will be completed within one year of the Governor's approval of the CTP.

CALIFORNIA TRANSPORTATION PLAN 2025

INTRODUCTION

Transportation benefits us all. We are all dependent on transportation to access goods, services, and activities. It is so much a part of our daily lives that we may take it for granted. However, when the system ceases to serve us, perhaps due to a natural disaster or terrorist activity, we become fully aware of the vital role it plays.

To many, transportation means the roadway system, but it is much more. It is also transit, bicycle and pedestrian facilities, railways, air, sea and space-ports, pipelines, vehicles, and communication facilities. It is a complex network that serves many purposes, from getting our kids to school to moving our goods to market.

> *"People can't work if they can't get to work. If we are to keep our economy moving forward, we must find faster, more efficient ways to connect goods, services, and – most important of all – people."*
>
> **GOVERNOR GRAY DAVIS**
> 2000 State of the State Address

Transportation influences the shape of our communities. When our primary mode of transportation was walking, our communities were very compact. As transportation evolved to horse, river, canal, and rail modes, our communities expanded. With the advent of automobiles and air travel, we were allowed even greater freedom and independence and our communities developed accordingly. The continuing evolution of our transportation system will influence our communities and activities in the future.

The transportation system of the future must provide people with options in going from place to place. People should be able to choose to commute by foot, bicycle, or public transit, as well as by auto. Statewide transportation routes must provide access for people and goods to all areas of the state, nation, and the world. The system must be interconnected, allowing travelers and goods to transfer easily between transportation modes.

The system must be efficient, safe, reliable, and affordable. It must enhance California's communities, and preserve and protect our resources and natural environment.

Just as business makes itself less vulnerable and more responsive to market demand by having a variety of suppliers, California's mobility must rely on a variety of transportation options and strategies. This plan provides goals, policies, and strategies to achieve a balanced transportation system, leading to increased mobility and accessibility, while preserving the system and improving safety.

PURPOSE OF THE CALIFORNIA TRANSPORTATION PLAN

The CTP provides long-range strategies to improve safety, mobility, and accessibility. It is a policy plan designed to guide transportation investments and decisions at all levels of government and the private sector. It is consistent with and supports the findings of the California Commission on Building for the 21st Century's report *Invest for California, Strategic Planning for California's Future Prosperity and Quality of Life*, the Speaker's Commission on Regionalism's report *New California Dream, Regional Solutions for 21st Century Challenges*, and the *Global Gateways Development Program* developed by the Business, Transportation and Housing Agency and Caltrans in partnership with goods movement industry representatives and stakeholders.

This document provides a vision for California's transportation system and explores major trends that will likely influence travel behavior and transportation decisions over the next 20-plus years. In the context of these future trends and challenges, it then provides goals, policies, and strategies to reach the vision.

Following the Governor's approval of the CTP, Caltrans – in collaboration with regional transportation planning agencies, other state agencies, community-based organizations, and other stakeholders – will develop a California Transportation Action Plan. The Action Plan will provide specific steps to implement and measure progress toward the vision and goals outlined in this document. It will capitalize on our previous successes and build on our collective commitments to safety and security, the economy, our communities, the environment, and our commitment to relieving traffic congestion and preserving the existing transportation system.

Developing a statewide long-term transportation plan is an ongoing effort. The last California Transportation Plan was developed in 1993, and updated in 1998 by the "Statewide Goods Movement Strategy," the "Transportation System Performance Measures Report" and the "Study of the Role of the State in Mass Transportation." The CTP 2025 incorporates strategies contained in the 1993 CTP and the 1998 updates, as appropriate.

The CTP has been developed in consultation with the state's 43 Regional Transportation Planning Agencies (RTPA) and will inform the regional transportation plans. State law and the California Transportation Commission (CTC) requires the metropolitan regional planning agencies to adopt a 20-year transportation plan every three years, and every four years for rural agencies (see Appendix X).

Additionally, the CTP considers the findings and recommendations of numerous other focused transportation plans such as the California Aviation System Plan, Interregional Transportation Strategic Plan, Strategic

Deployment Plans, California State Rail Plan, High Speed Rail Plan, Amtrak's California Passenger Rail System 20-Year Improvement Plan, and State Highway Operation and Protection Plan.

VISION FOR CALIFORNIA'S TRANSPORTATION SYSTEM

California faces many challenges and opportunities, including protecting our sensitive agricultural lands and natural environment while preserving our economic prosperity, and providing opportunities and a desirable quality of life for our rapidly growing population. Decisions must be made today to responsibly meet the transportation demands of the future.

Developing a universally accepted vision for a transportation system in a state as large and diverse as California is difficult. To accomplish this task, Caltrans, on behalf of the Secretary of Business, Transportation and Housing Agency, initiated a multi-faceted, statewide public participation program to gain input from our customers, partners, and stakeholders regarding the state's current and future transportation system. Included in this statewide outreach effort was a two-part customer survey, including 54 focus groups and resulting in 3,200 completed telephone surveys, 24 workshops, comment cards, a brochure and questionnaire distributed in four languages, and a CTP website. Appendix IV provides a detailed description of this effort and a summary of the comments and concerns received.

On a broad view, the public's comments and concerns are incorporated in the following vision for California's transportation system in 2025:

> ***California has a safe, sustainable transportation system that is environmentally sound, socially equitable, economically viable, and developed through collaboration; it provides for the mobility and accessibility of people, goods, services, and information through an integrated, multimodal network.***

Key concepts should be defined for the vision to be fully understood.

SUSTAINABLE means meeting the needs of the present without compromising the ability of future generations to meet their own needs. When applied to transportation, it means ensuring that environmental, social, and economic considerations are factored into decisions affecting transportation activity.[2]

A **TRANSPORTATION SYSTEM** is effectively inter-connected among jurisdictions and modes. It is comprised of many publicly and privately owned and operated transportation modes and supporting facilities designed to move people, goods, services, and information. Transportation facilities and modes include transit, bicycle, pedestrian, air, sea and space-ports, ferries, pipelines, railways, roadways, and vehicles. The transportation system is

[2] Moving on Sustainable Transportation (MOST), Transport Canada, 1999.

integrally tied to the shape and vitality of California's society and reflects community values.

ENVIRONMENTALLY SOUND means that the transportation system is part of an enhanced, ecologically healthy environment, and is developed with appropriate safeguards to protect open space, agricultural and sensitive lands, critical habitats, wildlife, water and air quality, and to minimize noise and visual impacts.

SOCIAL EQUITY in transportation system has two components. The first is to ensure that no group of people receives disproportionate burdens or benefits from transportation investment decisions. The second is that low-income individuals, the young and elderly, people with disabilities, and other disadvantaged individuals in rural and urban areas have access to safe and reliable transportation.

ECONOMICALLY VIABLE means transportation decisions are made based on an analysis of the total benefits and long-term costs of transportation, including life cycle, environmental, social and economic costs, and their immediate and cumulative impacts and efficiencies. Benefits include the improvements of the state's mobility and regional economic vitality, development and land-use objectives, and the environment. Additionally, the cost of maintaining, managing, and operating the existing system is considered before improving or expanding the system.

COLLABORATION is included in both the vision and the guiding principles to emphasize its level of importance. Transportation planning and programming in California is a complex process shared among multiple public and private entities. It requires collaboration among transportation providers and governmental entities as well as community-based organizations, urban planners, developers, social, community and emergency service providers, the environmental and business communities, permitting agencies, system users, and others. All of these voices must be heard and considered in order to achieve an integrated transportation system that promotes economic vitality and community goals.

MOBILITY is the ability to move people, goods, information, and services. Increasing mobility may be accomplished by increasing capacity, improving system connectivity, management, and operations. It can also be improved by effectively using all travel modes including privately and publicly owned vehicles, air and ferry services, bicycling, and walking.

ACCESSIBILITY is the ability of people to reach other people, goods, services, activities, destinations, and information. Access can be achieved by expanding the capacity, efficiency, and convenience of the transportation system. It can also be achieved by alternate methods, such as telecommuting, electronic business, and government transactions and through land-use changes that reduce the distances between residences, employment, services, and points of entry to the transportation system.

TRENDS AND CHALLENGES

The first step in determining how to reach the vision for California's transportation system is an assessment and identification of the current and projected future trends and challenges under which the Plan's goals, policies, and strategies will be implemented.

Transportation is part of the social and economic fabric of California. It cannot be considered apart from population growth, changing demographics, and travel behavior, safety, employment, housing, land-use, the economy, technology, the environment, community values, individual opportunity, and funding. Many current trends, if continued, give rise to concerns regarding California's future in terms of environmental quality, economic prosperity, equity of individual opportunity, and society's ability to provide adequate services.

California is the most populous state in the nation, and its population and natural environment is the most diverse. While the state's growth and diversity adds to California's economic strength and vibrancy, it also confronts policy-makers with a magnitude of social, economic, environmental, and transportation challenges. The following is an overview of trends expected to influence future transportation decisions and travel behavior.

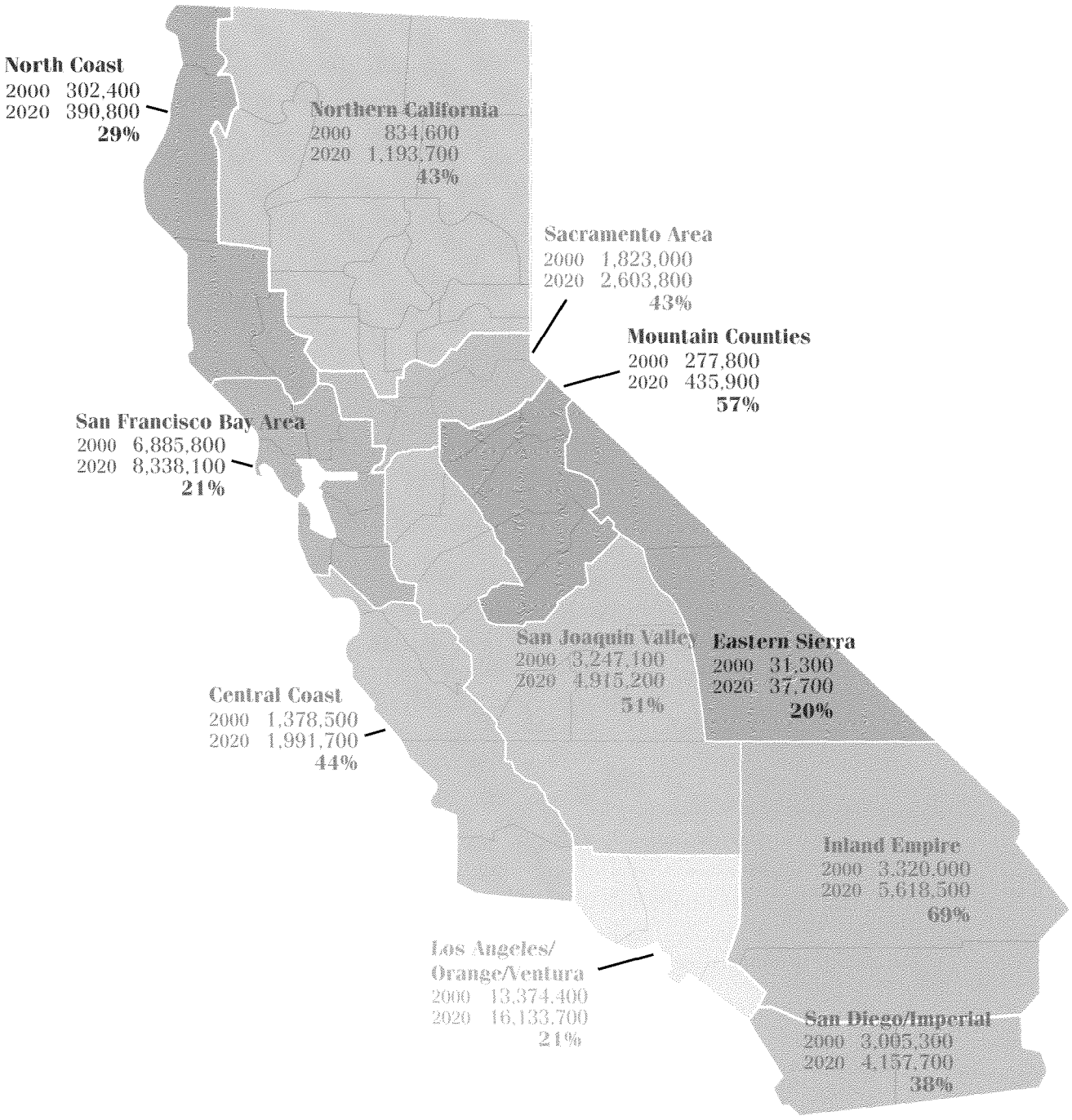
Population: The Department of Finance projects the state's population will increase by approximately 11 million during the first two decades of the 21st Century, to 45 million. While international migration will continue to contribute to the state's growth, the largest source will be from Californians bearing children.[3] The 2000 census revealed that for the first time since the Gold Rush, the majority of Californians were born in the state. Continued internal growth requires a transportation system that provides for Californians who are likely to remain in the state throughout their lives.

FIGURE 1 on the following page shows California's projected regional population in actual numbers and rate of growth. The Los Angeles Basin and the Inland Empire (San Bernardino and Riverside Counties) are expected to experience the most population growth. The San Francisco Bay Area will also likely face considerable growth. These regions are already experiencing substantial demands on their infrastructure and have limited developable land.

[3] Elizabeth Deakin and John Thomas, Trends and Projections for Consideration in California's Transportation Plan, UC Berkeley Transportation Center, May 2001, p. 2-3.

FIGURE 1

Regional Population (2000 Census)
Regional Projected 2020 Population
Regional Rate of Growth



The San Joaquin Valley is also projected to experience a high rate of growth. Much of the growth in the northern and southern parts of the San Joaquin Valley can be attributed to the lack of affordable housing in the Los Angeles Basin and the San Francisco Bay Area. Kern, San Joaquin, and Stanislaus Counties provide housing for workers in adjacent metropolitan area's employment centers. Due to the Central Valley's attractive supply of affordable land, it will likely continue to experience loss of prime agricultural land, lengthening commutes, increasing transportation demand, and the potential for further degradation in air quality.

Demographic Changes: While California's general population is expected to increase nearly 33 percent by 2020, the senior age group is projected to increase about 71 percent. Projections indicate in 2020, there will be about 2.6 million more Californians over the age of 65 than there are today. This generation of older drivers has spent their entire adult lives traveling by automobile. They will likely be reluctant to give up the freedom of driving in spite of declining vision and physical capacity.

The over-85 age group will increase by 62 percent. Licensed drivers 85 years and older increased substantially from 1969 to 1995 – men from about 48 percent to 72 percent, and women from 12 percent to 29 percent.[4] Decision-makers will need to consider the safety implications in designing and providing transportation for elderly, but mobile, Californians.

According to Department of Finance projections, in 2020 there will be about 13.7 million Californians under the age of 20, or about three million more than in 2000. According to California Highway Patrol's *Annual Report of Fatal and Injury Motor Vehicles Traffic Collisions*, children under the age of 15 accounted for nearly 30 percent of the 15,200 pedestrian victims in 2000. California's youth will need safer options to access school, cultural, and recreational opportunities.

SAFE ROUTES TO SCHOOL

Under legislation signed by Governor Davis in 1999, $50 million in federal and matching local transportation funds was made available for the Safe Routes to School Program. In 2001, the program was extended through December 31, 2004. The funds are used for safety projects including traffic signals and signs, sidewalks, crosswalks and bike lanes, and traffic calming and speed reduction projects. The Program is undertaken in collaboration with Caltrans, California Highway Patrol, local school- based associations and school

In 2000, based on adjusted local housing costs, the adjusted poverty rate in California was about 15 percent, compared to 10.6 percent in the rest of the nation. Those living at or below the poverty level often fulfill service and agricultural positions and are key to California's prosperity. They are located throughout the state and span all races and ethnicities.[5]

---

[4] Ibid. pg. 3-2.

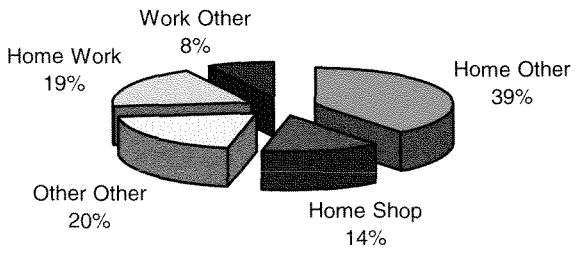
[5] Abel Valenzuela, "Transportation Issues in Low-Income and Immigrant Communities," California Futures Conference, June 21 and 22, 2001, Los Angeles.

Currently, one of every four Californians was born in another country, a higher proportion than any other state.[6] Population estimates indicate that no race or ethnic group currently comprises a majority of the state's population. It is expected that the percentage of Latinos, Asians, and Pacific Islanders will increase over the next 20 years, while the percentage of non-Latino Whites and African-Americans will decrease.

Change in Travel Behavior: The focus of transportation congestion has traditionally been accessibility to employment sites. In recent years, however, the number of non-work trips has overtaken the number of commuting trips (see **FIGURE 2** below). This has led to increased use of road networks for non-work trips, thus increasing congestion during off peak periods. Non-work trips do not cluster around peak periods of the day and are not geographically predictable. Because of the unpredictable nature of non-work trips, privately owned vehicles best serve them.

Figure 2

California 2000-01 Weekday Trip Type Distribution



Source: California Department of Transportation
2000 2001 Statewide Household Travel Survey

There are a number of potential causes for the increase in non-work trips, including the rise of consumer culture resulting in increasing shopping, entertainment, and recreational trips; changing ethnic and demographic lifestyle characteristics and choices; changing family structure; an increasing number of multi-income, multi-vehicle households; increasing household income; and changing urban form and community design.

Recent immigrants rely on a wide range of alternative transportation modes, including casual shared transportation, unregulated jitney services (small buses with flexible routes and schedules), and bicycles. In Los Angeles, those relying on bicycles are often night workers who need to access work after normal bus service hours. However, bicycle commuting in Los Angeles has proved dangerous, as adult bicycle fatalities doubled between 1998 and 1999.[7]

Californians born in other countries form a disproportionate share of transit riders. However, after ten years of residence, immigrants' travel behavior

[6] Deborah Reed and Richard Van Sweringen, Poverty in California, Public Policy Institute of California, November 2001.

[7] Valenzuela.

reflects the higher automobile use of the native-born population.[8] Since the majority of the projected population increase will be internal rather than immigrant, California could see a decrease in transit ridership and an increase in automobile travel among this demographic group.

The University of California, Berkeley and Los Angeles, have undertaken studies to further explore the implications of California's demographic changes on travel behavior and transportation planning. Appendix VII has additional information on the California Transportation Trends and Demographics Study.

Transportation Safety and Security: Although traffic fatality and injury rates have decreased since Congress passed the National Safety Act in 1966, transportation safety is still a major concern of system providers and users. In California, the death rate decreased from 5.0 fatalities per 100 million vehicle miles traveled in 1967 to 1.2 in 2000. This can largely be credited to safety belt usage, aggressive traffic safety programs, and improved vehicle and facility design. The reduced rate has resulted in a cost savings to California and its citizens of up to $1.8 billion.[9]

In spite of the substantial reductions, during 2000 California had 511,248 reported traffic collisions, resulting in 3,730 fatalities and 303,023 injuries. Thirty-two percent of the fatal crashes involved alcohol, and speed was identified as the primary collision factor in 11 percent of the fatalities. Of the licensed drivers in California, 22 percent were under 20 years of age; however, drivers under 30 years of age comprised 35 percent of all drivers in fatal and injury collisions.

Included in the total, were nearly 700 fatalities and 15,000 injuries among pedestrians, and 116 fatalities and nearly 8,000 injuries among bicyclists resulting from traffic incidents. Of these, children under the age of 15 accounted for nearly 30 percent of pedestrian and 27 percent of bicycle victims (killed and injured).[10]

Safety issues affect public transit as well. In 1999, there were 4,212 transit-related collisions, resulting in 72 fatalities and 3,644 injuries reported in California. Also reported were 1,028 transit-related violent crimes, of which 45 percent were committed at a transit station or bus stop, 45 percent in a transit vehicle, and the remaining 10 percent elsewhere in a transit facility. Approximately 5,000 property crimes were reported at transit facilities, nearly 13 percent of which were vehicle thefts.[11] California will be challenged to reduce transportation-related fatalities, injuries, and

---

[8] Elizabeth Deakin and Christopher Ferrell, Trends and Projections for Consideration in California's Transportation Plan, May 2001, p. 3-19.

[9] California Office of Traffic Safety.

[10] Annual Report of Fatal and Injury Motor Vehicle Traffic Collisions, California Highway Patrol.

[11] 2000 National Transit Database for California. Numbers exclude Amtrak-operated intercity and long-distance passenger rail service.

property costs in all modes considering the projected increases in population, vehicle miles traveled, and transportation demand.

Unlike other parts of the world, the United States has not been subject to ongoing terrorist campaigns. However, the events of September 11, 2001, the 1995 derailment of a passenger train in Arizona by a group calling itself "Sons of the Gestapo," and the World Trade Center and the Oklahoma City federal building bombings in 1993 confirm that the terrorist threat in the United States is real, although the nature and magnitude of the threat is uncertain.

Because of the state's Pacific Rim location, California can be seen as being especially vulnerable. California is favored with numerous surface, sea, and air gateways crucial to state and national economic vitality. Securing our borders and global gateways without stifling the movement of people and goods will continue to challenge the public and private sectors. Security plans and measures will need to be flexible, responsive for each mode and location, preventive, and include mitigation measures to minimize casualties, environmental impacts, and disruption.

Economy: Transportation investments have a direct and immediate impact on the economy. Based on estimates developed by the U.S. Department of Commerce for California, a $1 billion investment in highway and transit improvements would directly and indirectly provide over 26,000 jobs, generating about $870 million in personal income, and almost $2 billion net increase in the Gross State Product. The full realization in the economic impacts of transportation investments may take up to a decade, with the majority of impacts occurring in the first three to five years of the expenditure.

California's status as the world's fifth largest economy is connected to our ability to transport people and goods within the state, as well as to other states and countries. California is the nation's leading global gateway for Pacific Rim trade. It is estimated that 37 percent of the value of all U.S. and foreign trade (an amount over $200 billion) passes through California's ports. More than one million jobs are tied to these ports.

Since the North American Free Trade Agreement (NAFTA) was ratified in 1993, California's exports to Mexico have grown 192 percent; reaching $19 billion in 2000, a record for California exports to any country. The estimated total annual value of trade at the California-Mexico ports of entry exceeds $29 billion. Although considerable state and federal resources have been devoted to improving the border crossing, California's border with Mexico is experiencing severe congestion from NAFTA-related goods movement, and automobile and truck border crossings are expected to double in the next 20 years.[12]

[12] Global Gateway Development Program, Department of Transportation, January 2002.

Air cargo is the fastest growing segment of freight transportation. According to the U.S. Customs Service, $173 billion in air cargo moved through California's airports in 2000. Air cargo demand is expected to increase at an annual rate of about 6 percent through 2020.[13]

The second fastest growing segment of freight transportation is rail. Railroads carried approximately 55.2 million tons of freight traffic on California's 6,300 miles of rail tracks during 1999. As demand increases over the next two decades, railroads will face capacity, environmental, emergency access, safety, and other community-related problems.

The volume of truck transport is enormous and is expected to continue to grow, but at a slower rate than air and rail transport. In 1998, 1.1 billion tons of manufactured freight was transported into and out of California by truck, and one out of every 12 workers was employed in trucking-related occupations. Highway congestion is not the sole issue. Routes providing access to rural areas (such as California's North Coast), older interchanges, local roadways, and truck parking facilities have not kept pace with the needs of the trucking industry.

In goods movement, time is money. Products and services are only as good as their timely and reliable delivery. California will need to improve access to ports and airports and ensure the safety and security of ports of entry and cargo moving through the state. Failure to invest in the system could result in the state's economic decline, rising unemployment, environmental degradation, and the loss of our quality of life.

Employment: As employment centers moved from the central city to the suburbs and edge cities in the late 20th Century, making jobs accessible to inner-city residents, especially the urban poor became an important concern. The problem is made more complex by the fact that relatively few suburban jobs are well served by public transit, and many inner urban residents are without cars.

It is expected that employment centers will continue to be in suburban centers and office parks and that employment growth will continue to be heavily concentrated in Southern California and the San Francisco Bay Area. These areas are already experiencing considerable traffic congestion. Transportation providers and employers will need to explore new forms of transit or telecommuting to provide alternatives to the single occupancy vehicle.

Housing - Employment Mismatch: Currently, affordable housing supplies in the San Francisco Bay Area, Los Angeles Basin, and Orange County employment centers are not keeping pace with employment growth. This has resulted in long commutes and congestion on corridors linking affordable housing in the Central Valley and Inland Empire with employment centers.

---

[13] Airports International Magazine, March 2001 (online: http://www.californiaaviation.org)

Among recent homebuyers in California metropolitan areas, the median commute time increased about five minutes between 1985 and 1995. However, among first-time homebuyers, those most affected by rising house prices, the median commute times increased 11 minutes during the same time period.[14]

Nearly 10 percent of Californians commute more than one hour to reach their place of work, which is 2.5 percent higher than the national average. If the housing – employment mismatch continues, Californians will experience increasing transportation costs in the form of longer commutes, increased vehicle maintenance, fuel and insurance costs, and degradation of air quality. The public sector will incur additional maintenance and rehabilitation costs and the cost of increasing system capacity.

Land-use Impacts on Transportation: The way communities are planned and designed has a profound impact on our travel behavior. Over the past several decades, three predominant land-use practices have influenced urban design:

- Cities and counties making local land-use decisions, with regional agencies and the state making regional and interregional transportation decisions.
- Single-use zoning ordinances isolating employment, shopping and services, and housing locations.
- Low-density growth planning resulting in considerable land consumption and sprawl-type urban form, requiring higher infrastructure investments due to distances served.

These practices have often resulted in increased traffic congestion and commute times, air pollution, greater reliance on fossil fuels, loss of habitat and open spaces, inequitable distribution of economic resources, and loss of a sense of community. The land-use practices have contributed to the increase in vehicle miles traveled and vehicular non-work trips. Existing community designs often do not include safe bicycle and pedestrian facilities, or destinations are too great in distance to be practicably accessed by walking or biking. Additionally, suburban street designs and low-density housing make communities difficult to serve effectively with transit.

A major influence on community form over the past 20 years is a phenomenon often called "the fiscalization of land use." This means a policy environment in which land-use decisions are made mostly or entirely based on fiscal considerations, rather than the health, quality of life, and balance of communities. The roots of this phenomenon can be found in the unintended consequences of Proposition 13 of 1978 and other "tax revolt" initiatives.

---

[14] Raising the Roof: California Housing Development Projections and Constraints, 1997-2020, Department of Housing and Community Development, May 2000.

The results of fiscalization of land-use decisions include: 1) many local governments rejecting affordable housing projects because they cost more in fire, police, and other services than they produce in tax revenues; 2) communities that do accept housing balance their budgets by imposing large up-front development fees, which increases the cost of new housing; and 3) cities and counties competing for retail developments that generate sales-tax revenue, resulting in competitive "big-box" strip mall and auto mall development, rather than housing.

All of these factors have contributed to the lack of affordable housing, low-density development, and longer commutes to job centers. The competitive retail development environment has resulted in abandoned city centers and derelict shopping malls in older suburban communities.

To maximize resources and minimize impacts on the state's natural environment, land-use decisions and transportation must be more closely linked in the future. California's 58 counties and 476 cities will need to collaborate on a regional basis to plan, manage, and operate infrastructure to maximize resources and sustain their economy, environment, and quality of life.

Technology: Transportation services, vehicles, and infrastructure are rapidly being changed by new technologies. Technology applications include electronic payment of transit fares, tolls and parking; on-board diagnostics, information and control systems that can assist the driver in maneuvering the vehicle and avoiding collisions; personal- and vehicle-based "mayday" systems; smart infrastructure that monitors real-time usage and conditions to increase system efficiency; monitoring systems to enhance public transit and airport security; and logistics systems that route, monitor, and track shipments.

Technological changes will also influence the transportation fuels we use. For example, electric, hydrogen, or hybrid electric-petroleum vehicles are being introduced, substantially reducing emissions and changing fleet fuel characteristics.

Advances in computer and communications technology will also influence how Californians work, educate, shop, and do business. Telecommuting, teleshopping, and videoconferencing could reduce the need to travel, and have a profound impact on where Californians choose to live and work.

Technology presents unique challenges. Short life cycles require flexibility and compressed timelines that are uncommon in transportation decision-making. Technologies must also be standardized and integrated statewide so that transportation services are seamless. Consumer devices, such as vehicle-based navigation systems, must work effectively everywhere to achieve market penetration levels needed for low-cost mass production.

The range of options and their impacts will continue to expand and may alter transportation systems in many ways as additional technologies are introduced. Whether and to what extent these technologies become a significant element of the transportation system will depend not only on the technological developments but also on public and private decisions about the technologies' desirability and usefulness.

Fuel and Energy Use: California's transportation sector consumes 50 percent of all energy in California. Current trends of increasing travel and greater commuting distances, and the growing popularity of less fuel-efficient vehicles (such as SUVs), indicate California's transportation fuel consumption will increase by approximately 40 percent over the next 20 years.[15] However, projections also indicate that world petroleum production levels will peak and begin to decline by mid-century.[16] Knowing that petroleum supplies will decline, yet not knowing when or how quickly, is a policy dilemma. California must begin transitioning from petroleum as its predominant source of transportation energy to an environmentally and economically sustainable source.

Environmental Impacts: Air quality is often the first environmental impact that comes to mind when discussing transportation. In addition to transportation-related emissions from vehicle fuel combustion and resulting health and greenhouse gas impacts, transportation typically has the following negative effects:

- Water quality is degraded through storm water run-off from roadways and parking facilities and impermeable surfaces that limit water filtration via soil percolation
- Vegetation is harmed by direct removal as well as transportation-generated air and water pollutants
- Wildlife habitat is divided, degraded, or destroyed to provide for transportation
- Open space, wetlands, and prime agricultural land are consumed directly or indirectly by transportation
- Communities, individuals, and wildlife are impacted by vehicular noise
- Urban, suburban, and rural visual quality are degraded directly or indirectly by transportation facilities.

Environmental goals and values pose challenges to the operation and expansion of transportation facilities to meet growing demand. Nearly all major metropolitan areas in California do not attain federal and state air quality standards. Federal funding for transportation projects is limited in

[15] California Energy Outlook 2000, Vol. II Transportation Energy Systems, California Energy Commission, August 2000.
[16] ibid.

these areas. Supporting the improvement of air quality may take precedence over many other concerns in regional transportation planning.

Meeting storm water run-off requirements will be a major expense during the period covered by this plan, and beyond. The California Transportation Commission's 1999 *Inventory of Ten-Year Funding Needs for California's Transportation Systems* estimated the cost associated with storm water run-off on the state's highways to be as much as $6 billion. In May 2001, the State Water Resources Control Board approved Caltrans' statewide Storm Water Management Plan. The California Transportation Commission responded by increasing funds in the State Highway Operation and Protection Program by approximately $300 million over a five-year period to help address storm water discharge. Additional resources will need to be identified, or redirected, to address this critical issue.

To advance environmental sustainability, transportation providers will need to improve mitigation of environmental impacts, reduce emissions, and impose construction limitations to avoid coastal or floodplain hazards. Additionally, they will need to develop new tools for projecting the consequences, costs, and benefits of new or expanded facilities and alternative strategies for meeting transportation demand, and develop new collaborative partnerships to streamline the environmental review process without compromising the environment.

Increasing Demand for Transportation: Congestion in the transportation system is worsening as demand outstrips the ability to provide additional capacity. Travel demand increases are the result of population growth and more trips per capita. According to the recently completed California Trends and Demographics report, between 2000 and 2025 personal vehicle trips are expected to increase 38%, transit trips 72%, and walk/bike trips 77%.[17]

According to the Federal Highway Administration, nearly half of California's urban highways are currently congested.[18] This is 65 percent greater than the national average. On-road vehicle miles traveled per year in California is projected to increase from approximately 307 billion miles in 2000 to 475 billion miles by 2020 – a 55 percent increase. The number of on-road vehicles is projected to reach almost 35 million, up from about 23 million in 2000.[19] (see **FIGURE 3** on the following page)

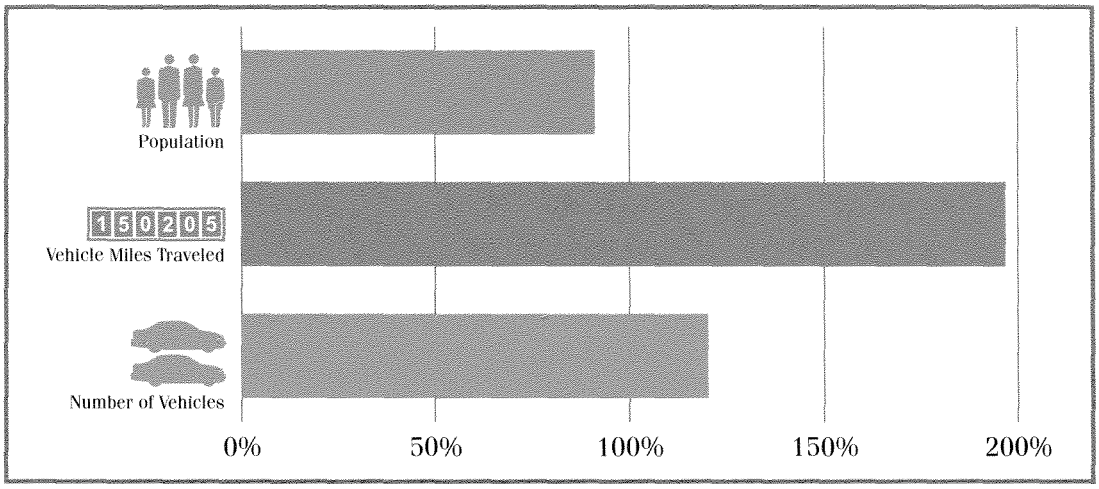
[17] Randall Crane and Abel Valenzuela, UC Los Angeles, and Chris Williamson, Solimar Associates, California Travel Trends and Demographics, 2002.

[18] Federal Highway Administration defines congestion as when an Interstate highway exceeds 13,000 vehicles per-lane-mile daily, or 5,000 vehicles per-lane-mile on principal arteries.

[19] California Department of Transportation, Division of Transportation System Information, Vehicle Stock, Travel and Fuel Forecast, November 2001.

FIGURE 3

Projected Rates of Increase (1990 - 2020)



Roadways are not the only mode experiencing increased demand. Many major metropolitan airports will soon reach capacity. The larger commercial airports in California's urbanized regions are experiencing increasing capacity shortfalls and ground access congestion. The Southern California Association of Governments and the Metropolitan Transportation Commission[20] project a significant increase in air passengers. Los Angeles International Airport expects to handle over 85 million passengers in 2010 and San Francisco International expects 46 million. This represents a 67 percent and 16 percent increase respectively in ten years. As demand increases, general aviation aircraft will be increasingly forced from larger commercial airports to surrounding general aviation airports.

Transit also experienced increased demand. Travel on California's urban public transit systems, including bus, rail, and demand-responsive services, increased by 9 percent between 1990 and 1997.[21] **FIGURE 4** (on the following page) shows the passenger miles traveled by transit in California's major metropolitan areas, and the rate of increase between 1990 and 1997. Passenger Miles Traveled (PMT) is calculated based on total passenger miles of travel provided by California's public transit agencies. For example, a bus carrying 10 passengers, one mile would equal 10 PMT.

Meanwhile, the physical capacity of the system is growing more slowly than in the past for a variety of reasons, including cost, community resistance, and environmental concerns. System operators are improving methods to

[20] Southern California Association of Governments represents Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The Metropolitan Transportation Commission represents the nine Bay Area Counties of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, Napa, Solano, and Sonoma.

[21] California Urban Travel Trends from 1990-1997, The Road Information Program, May 2000.

manage and operate the system to increase throughput. Transportation providers will need to develop new and more integrated approaches for demand management and system operations, as well as expanding transportation facilities to address increasing demand.

Figure 4 Transit Passenger Miles Traveled

	1990 PMT (in millions)	1997 PMT (in millions)	Percent Increase
Los Angeles	2,103	2,257	7
Riverside-San Bernardino	48	116	142
Sacramento	98	124	26
San Diego	380	445	17
San Francisco-Oakland	2,030	2,051	1
San Jose	188	219	17

Source: California Urban Travel Trends from 1990-1997

Shared Transportation Decision-Making: Transportation planning and programming in California is a complex process shared among multiple public and private entities. The process is regulated by federal and state statutes, federal and state environmental regulatory agencies, and influenced by organized interest groups and political and public will.

In accordance with state and federal laws, the majority of transportation decisions are made at the regional level. In California, 75 percent of state and federal transportation revenues available for new projects are allocated to regional transportation planning agencies. Most metropolitan regions in California have supplemented state and federal transportation funding with resources generated from local sales tax measures. Funds generated from sales tax measures can be used for roadway and transit projects on or off the state highway system.

The remaining 25 percent of resources available for new projects are reserved for interregional projects selected by Caltrans. This is intended to support the movement of people and goods to, and through, California's metropolitan regions, as well as providing rural access. Large interregional projects in urban areas usually require cooperation and funding from multiple sources to ensure completion.

The CTC is responsible for programming and allocating funds for the construction of highway, passenger rail and transit improvements throughout California. The CTC also advises the Governor on transportation policy.

The state supports three intercity passenger rail routes and contracts with Amtrak to operate the services. Amtrak also operates three long-distance passenger rail services that traverse California. Local and regional entities plan and operate commuter and urban rail services, and the High Speed Rail Authority is charged with planning and developing a California high-speed rail system.

Most rail lines in California are owned and operated by private freight railroad companies, such as Burlington Northern and Santa Fe, and Union Pacific.

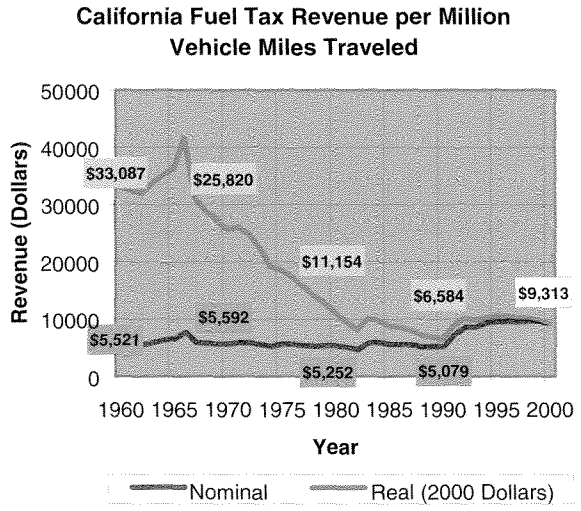
The freight railroads enter into contract with Amtrak and local or regional entities to permit operation of rail passenger services on their lines. The private freight railroad companies provide freight service to industry, air, and seaports.

Air and seaport operators and federal agencies set policy for seaports and airports. Privately owned trucking companies, intercity, local and regional bus companies, taxi services, and private vehicle owners operate on state, regionally, and locally owned and operated roadways.

All of these operators, owners, and decision-makers function with varying degrees of autonomy, making statewide transportation planning and coordination time-consuming and challenging. Transportation planners, providers, and decision-makers will need to find new ways to negotiate, collaborate, and share resources to reach common goals and ensure California's prosperity.

Financing Shortfall and Dilemma: Transportation service demands have increased while there has been a decrease in resources available to meet the demands. The current level of state, local, and federal funds for transportation falls substantially short of what is needed to ensure mobility and facilitate goods movement in the next decade. Much of the shortfall can be attributed to eroding transportation revenues compared to vehicle miles traveled. As **FIGURE 5** (below) indicates, in 2000 inflation-adjusted dollars (Real), California fuel tax revenue per vehicle mile traveled is approximately 36 percent of what drivers paid in 1970.

Figure 5



According to the CTC's *Inventory of Ten-Year Funding Needs for California's Transportation System* released in May 1999, California's total ten-year funding shortfall for transportation exceeds $100 billion. This amount includes estimated needs for state highway and local roads; bridge rehabilitation; intercity, commuter and urban passenger rail; and bus, bicycle, and pedestrian facilities.

Responding to the considerable funding shortfalls and recognizing the critical role transportation plays in the state's economy, Governor Gray Davis signed Assembly Bill 2928, implementing the Traffic Congestion Relief Plan (TCRP), in July 2000. The TCRP's purpose is to fund projects that will relieve

congestion, improve goods movement, and connect all state and local modes of transportation. The TCRP provides over $5 billion in new funds to 141 high-priority projects and another $1.4 billion to maintain state highways and local streets and roads over seven years (see Appendix VI).

In March 2002, Californians voted overwhelmingly to make the TCRP a permanent program by approving Proposition 42. The fund source for this program is the state portion of sales tax on gasoline sales which will be dedicated to transportation projects after the TCRP provisions terminate in Fiscal Year 2007/08. It is estimated that Proposition 42 will provide an additional $35 billion for transportation during its first 20 years.

California and other states face a transportation-financing dilemma. The primary source of transportation funds is the state and federal excise tax imposed on each gallon of transportation fuel sold. (See Appendix V for more information on transportation financing.) To the extent California minimizes vehicle miles traveled and increases the overall fleet fuel efficiency, the rate of gasoline and diesel fuel consumption will be reduced. Reducing the number of gallons of fuel sold also reduces the transportation revenues generated. However, the demand for transportation and the need to maintain and operate the system will continue.

Another financing dilemma is approximately 80 percent of transportation funds go to operating, managing, maintaining, and rehabilitating the system. This leaves approximately 20 percent of resources available for increasing system capacity. As the system expands, in the form of transit vehicles, lane miles, right-of-way, etc., the cost of operating, managing, maintaining and eventually rehabilitating the system components also increases. The cost for increased transportation system security will further compound the problem.

GUIDING PRINCIPLES FOR REACHING THE VISION

The overarching principle of the CTP is the "integrated system" concept. Transportation policy- and decision-makers cannot view transportation by individual mode. It must be viewed, planned, and operated as a complete integrated system with complementary modes. Nor can policy- and decision-makers take a narrow geographic approach to transportation. The system must connect effectively between jurisdictions and appear "seamless" to the transportation user. To this end, the CTP was developed with four guiding principles in mind: Collaboration, Leadership, Innovation, and Communication.

COLLABORATION is making a sustained commitment to work with partners and stakeholders to operate and maintain the system and to develop solutions that accomplish a common mission. Collaboration requires a commitment to shared decision-making. Implementing the CTP will require effective management, research and technology, and the participation of

federal, regional, local, and Indian tribal governments, community-based organizations, the private sector, and residents. The CTP provides an opportunity to promote a dialogue among our diverse population regarding the future of California and its communities.

LEADERSHIP means defining a desired vision of the future, having the courage to work towards the vision, encouraging people and organizations to support the vision, and inspiring them to make it happen. Leadership also means taking risks to test innovative approaches to transportation challenges; making difficult choices; ensuring people understand their choices and associated benefits and consequences; and the trade-offs and limitations. It is the driving force towards change.

INNOVATION is the creativity, ability, and flexibility to develop, test, implement, and replicate new ideas and solutions. Innovation and collaboration are the two values essential to developing and carrying out strategies and actions that result in a better future.

COMMUNICATION is the exchange of information and ideas. Effective communication is a two-way exchange, involving both expressing and receiving ideas and information. Communication is the way to ensure that change happens in the best way possible. The transportation vision cannot be realized without clear and effective communication.

GOALS

The transportation system must provide effective mobility and accessibility. It must be safe and secure and support the state's economic vitality. It must co-exist with and enhance our natural and human environments.

The following goals, while identified and discussed as separate issues, are interdependent. For example, if the system is not well maintained, the level of mobility and safety will decline. Each of the following goals support one or more concepts contained in the vision for California's transportation system:

1) **ENHANCE PUBLIC SAFETY AND SECURITY** – Providing for the health, safety, and security of its residents is a primary concern of governments at all levels. Ensuring traveler safety must be addressed by all modes of transportation. Prevention strategies, including the integration of new technologies when designing the system's infrastructure, should be incorporated into the planning process and coordinated at the state, regional, and local level to meet the needs of the traveling public.

   A safe transportation system helps to ensure optimum movement of people and goods to their destination, on-time and injury-free. Time, and therefore money, is lost when the system is disrupted due to congestion-inducing incidents, such as train derailments or vehicle collisions. Beyond the economic impacts, accidents on our highways, airways, and

waterways can have long-lasting toxic effects on water, plants, and wildlife.

The perception of safety can have a profound impact on the transportation user's sense of security and behavior. The public's response to perceived safety and its economic consequences were demonstrated in the aftermath of the terrorist attacks on September 11, 2001. The security of California's transportation system must be improved to ensure traveler safety, cargo security, and the state's economic prosperity.

2) **PRESERVE THE TRANSPORTATION SYSTEM** – Rehabilitating and maintaining the state's extensive transportation system will preserve it for future generations. Californians have been investing in this system for over 100 years. The state and national economies, and our quality of life are dependent on the system. Preservation investment needs to be reliable and continuous to ensure the system's viability for future generations, to avoid the higher cost of deferred maintenance, and to realize the useful life of the state's transportation assets. Preserving the system includes maintaining roadways and rail beds, pedestrian walkways, bicycle paths, air and sea-ports, and transit facilities and vehicles.

3) **IMPROVE MOBILITY AND ACCESSIBILITY** – California's complex network of roadways, seaports, airports, railways, inter-modal facilities, and pipelines is vital to our economic prosperity and quality of life. Projections indicate that by the year 2020, California will be home to over 45 million residents, with 34 million registered vehicles.[22] Due to environmental, physical, and fiscal limitations, building new transportation facilities alone cannot provide for the anticipated demand. We must manage the system efficiently, provide viable transportation choices, and increase connectivity among all modes.

> *"We already know the results of traffic congestion, air pollution, and un-regulated urban sprawl. We must continue to work hard to weave together the threads of transportation, commerce, health, safety, and the environment to build more livable communities."*
>
> **JEFF MORALES, DIRECTOR**
> California Department of Transportation

California is currently the world's fifth-largest economy. The state's economic growth is directly connected to the system's ability to transport people, goods, and information reliably and efficiently into and throughout the state, as well as to other states and countries. As transport efficiency is improved, transportation and consumer costs are minimized - an important outcome in a competitive environment. If

[22] Division of Transportation System Information, California Department of Transportation.

projections prove correct, it is expected that the volume of goods moving by all modes within and through California will double by 2020.[23]

Providing transportation choices will help balance the system and reduce congestion and environmental impacts. Enhancing and expanding modal choices will also provide options for those who can drive and improve access for those who cannot or choose not to drive. With this in mind, and after considerable consultation with regional transportation planning agencies and public input, the TCRP earmarks half the program's resources to transit enhancements and capacity improvements, including ferry projects.

4) **MAXIMIZE EFFICIENT USE OF RESOURCES** – Californians in the public and private sector must protect the state's precious and finite resources when planning and implementing transportation projects. These resources include air, water, and land, our rich and diverse plant and animal life and habitat, and historical and cultural assets. As this plan looks to our future transportation needs, it must also consider the cumulative impacts of past transportation-related activities.

   Transportation in California remains vulnerable to oil supply disruptions and price spikes that can play havoc with consumer pocketbooks and the state's economy. Energy supply and demand projections indicate that the state's vulnerability will escalate over the next 20 years.

   Additionally, transportation-related emissions are California's largest source of air pollution. They are associated with fuel consumption and directly related to vehicle use. Currently, more than 90 percent of the state's population is exposed to unhealthful air.

   In the long term, the costs of transportation may include environmental damage that affects future generations in the form of global climate change. In the near term, the growing demand for transportation energy will result in price spikes and long-term supply considerations increasing business and production costs, and the cost of transportation to system users and providers. Reducing fossil fuel consumption is critical to California's environmental and economic vitality.

5) **REFLECT COMMUNITY AND ENVIRONMENTAL VALUES** – Our growing population and travel demands will place pressure on our land, natural resources, quality of life, schools, infrastructure, and transportation options. While this growth will have statewide impacts, transportation planning and solutions to address growth must be sensitive to their local context. We must find solutions that balance and integrate community, aesthetic, and environmental values with transportation safety and performance.

---

[23] Global Gateways Development Program, California Department of Transportation, January 2002.

California communities contain diverse populations with differing transportation needs and travel patterns. Meeting the basic transportation needs of all the state's communities, in geographically dissimilar regions of the state, is critical to maintaining a desirable quality of life. Community, cultural, and historic values must be considered when assessing the transportation impacts to social and environmental resources – including housing, neighborhoods, historic and agricultural lands, downtown districts, and natural habitats. While natural, cultural, and biological resources are essential for the environmental and economic health of the state, communities must contain a balance of viable transportation, housing, and business resources to support and facilitate economic opportunities.

TRANSPORTATION POLICIES AND STRATEGIES

The following seven policies are developed to support the goals identified above and to respond to concerns expressed by the public and stakeholders, while being mindful of future trends and challenges. The policies and strategies may support more than one goal.

Policy 1: Expand opportunities for early and ongoing collaboration in transportation planning and decision-making.

Policy 2: Maintain, manage, and preserve a safe and secure transportation system.

Policy 3: Develop, manage, and operate an efficient, inter-connected, and intermodal transportation system.

Policy 4: Manage growth and conserve resources.

Policy 5: Enhance system capacity and provide viable transportation choices.

Policy 6: Provide additional and more flexible transportation financing.

Policy 7: Support research to advance mobility and accessibility.

The policies are designed to preserve the transportation system and provide mobility and accessibility for California's growing population, while enhancing the state's environment, economy, and social equity. The following pages will present an explanation and supporting strategies for each policy.

Policy 1: Expand opportunities for early and ongoing collaboration in transportation planning and decision-making.

During the public participation workshops held throughout the state, participants were asked to prioritize strategies to address our future transportation needs. Public participation, information sharing, and interagency coordination were among the top strategies identified at every location. Participants wanted more information on why decisions are made, the benefits and costs of transportation solutions, and the anticipated environmental and community impacts.

TRI-AGENCY PARTNERSHIP

In February 2001, three state agencies (Business, Transportation and Housing Agency, California Environmental Protection Agency, and the Resources Agency) entered into a concerted, cooperative, and collaborative partnership to ensure the timely planning and implementation of transportation projects that protect or restore the State's environment.

They also wanted opportunities to participate in identifying problems, exploring solutions, and in the decision-making process. An effective public involvement process provides for an open exchange of ideas and information, leading to a better understanding of the needs and issues by all

parties. It also provides those persons traditionally underserved by existing transportation systems an opportunity to participate in the decision-making process.

STRATEGIES:

- Consult and coordinate with local, regional, and tribal governments during development of their general plans and other long-term planning efforts.
- Involve businesses, communities, including community-based organizations, and institutions early in the transportation planning and decision-making process.
  - Develop a collaborative approach to resolve transportation issues and to develop performance criteria and indicators.
  - Develop, implement, and advertise a web-based public participation system, consisting of informational and educational materials, online surveys and focus groups, and online voting to enhance decision-making.
  - Design and implement public participation strategies to include those traditionally underrepresented in the public planning and decision-making process.
  - Develop Geographic Information Systems that spatially illustrate projects and affected land (neighborhoods, etc.), interactive visual simulations, and other techniques to effectively convey the information to the public.
- Assess and provide information regarding the full benefits and costs of transportation by mode, including direct and indirect costs, societal, environmental, governmental, and personal costs.
  - Evaluate and provide cumulative environmental costs, including mitigation costs such as habitat conservation programs, and land-use impacts on a programmatic basis.
  - Analyze and provide life cycle, social, health, and environmental costs for reasonable alternatives, including modal alternatives.

Policy 2: Maintain, manage, and preserve a safe and secure transportation system.

Preserving the existing multimodal transportation system and increasing system safety is a primary concern of transportation providers and users. Improving transportation safety includes improving driver behavior as well as the design and operation of vehicles and infrastructure, and providing for the secure movement of goods and information.

California's transportation system includes over 168,000 miles of maintained public roads. According to the 2000 update to the Ten-Year State Highway Operation and Protection Plan, approximately one-third of the state highway

system needs pavement work and more than half the bridges are over 30 years old, and, while safe, are in need of costly rehabilitation. According to the Commission on Building for the 21st Century's preliminary findings, 60 percent of California's county roads are in poor condition.

However, on the state and local levels, there are insufficient resources to maintain and operate the roadways, bicycle, pedestrian and transit facilities, and general aviation airports. Even with the new resources from the TCRP and Proposition 42, there will not be enough to maintain the aging system.

Transportation policy-makers and providers must identify, analyze, and implement additional transportation fees and financing instruments to maintain our transportation infrastructure. The current system must receive priority for funding to preserve the system's safety and the public's investment.

STRATEGIES:

- Continue to place a high priority on preserving the transportation system and protecting the public's multi-billion dollar investment.
- Use technology, innovative techniques, and new materials to enhance the life of the transportation system, provide safer work sites, enhance productivity, and reduce traveler inconvenience.
  - Empower travelers with real-time information in order to avoid construction and maintenance delays.
  - Support research and development of improved construction and maintenance techniques and materials.
- Increase private sector participation and coordinate transportation maintenance and rehabilitation projects with other transportation agencies and public utility projects to minimize costs and traveler disruption.
- Reduce the response time to motor vehicle, bicycle and pedestrian incidents, and the rate of fatalities, injuries, and property damage on the transportation system.
  - Deploy infrastructure-based detection and warning safety systems, as appropriate (for example, fog, dust, ice, and curve speed warning systems).
  - Provide incentives to vehicle manufacturers to deploy vehicle-based safety systems, such as mayday, vision enhancement, and collision warning systems.
- Increase patrols to enforce speed restrictions, minimize aggressive driver behavior and driving under the influence of alcohol or other drugs, and increase security at airports, transit facilities, and on public transit vehicles.

- ❑ Develop a transportation system security plan, including risk assessment, monitoring methods, pre- and post-incident preparedness, response and recovery, crisis management and evacuation plans, and redundant transportation alternatives.
  - ❖ Analyze best practices from countries that have experienced and responded to security threats.
  - ❖ Evaluate design of transportation facilities for security risks.
  - ❖ Develop security guidelines for all modes and facilities, including goods movement facilities.
  - ❖ Coordinate with emergency response agencies, including law enforcement, medical services, and the media.
  - ❖ Train personnel in emergency response procedures.

Policy 3: Develop, manage, and operate an efficient, inter-connected, and intermodal transportation system.

People, goods, services, and information must travel by the most efficient means possible to foster economic prosperity. Each mode must connect with others to allow convenient and efficient movement. When asked, the public said they want a transportation system in which they can easily move between modes, jurisdictions, and operators. They want transit fare structures and schedules that are complementary, consistent, convenient, and easily understood. The public also expressed concerns regarding system capacity now and, considering the projected growth in demand, in the future.

The following strategies are designed to lead to a transportation system that can incorporate changing technology, manage growth, and balance system demand.

STRATEGIES:

- ❑ Improve the operating efficiency, system management, and connectivity of the state's transportation system by using advanced transportation applications.
  - ❖ Integrate services and technologies statewide so that transportation services are seamless, consumer devices work everywhere, and market size reaches levels needed for low-cost mass production.
  - ❖ The state should lead the way by promoting and negotiating cross-jurisdictional coordination to bring about improved efficiencies and connectivity, including at ports-of-entry, for the movement of people, goods, and information.
  - ❖ Establish a statewide coalition to develop strategies ensuring full consideration of goods movement projects in federal, state, and regional transportation planning and programming.

- Maximize transportation investments through a coordinated approach to capacity and operational improvements, such as providing dedicated bus service on HOV lanes.
- Improve capabilities for measuring transportation system performance.
  - Accelerate deployment of data collection technologies and communications.
  - Improve analytical methods for assessing performance data.
- Empower travelers to better manage their individual trips, such as:
  - Deploying a statewide traveler information web portal that effectively integrates local, regional, and interregional public services with private, for-profit services.
  - Deploying a statewide "511" traveler information telephone service that effectively integrates existing and planned telephone-based systems.
  - Collaborating with private sector and transportation providers to develop and implement a statewide electronic payment system for transit fares, toll collection, parking fees, bicycle lockers, etc.
- Support research and development of advanced transportation systems and deployment of solutions, as they are proven effective.

Policy 4: Manage growth and conserve resources.

During the public participation program, concerns were commonly expressed throughout the state related to our land-use practices, the lack of comprehensive, integrated transportation/land-use planning, resource consumption, and a general concern for the current and future quality of life in California. Additionally, the Public Policy Institute of California's *Special Survey on Land Use* conducted in November 2001 indicated that Californians are very concerned about growth and land-use and its resulting traffic congestion.

Perhaps due to the well-publicized results of Census 2000, Californians are aware of the projected population growth and the challenges that growth will bring. They are concerned about how we will meet the transportation challenges, as well as other infrastructure and social needs, while protecting our environment, health, and quality of life.

SAN JOAQUIN MULTI-SPECIES HABITAT CONSERVATION AND OPEN SPACE PLAN

This innovative plan required consensus among federal, state, and local agencies, business, development, agriculture, and environmental interests. The plan protects 97 endangered and threatened species and open space in San Joaquin County. The plan provides biological analysis, species identification, and a mitigation plan, thus facilitating the permitting process.

http://www.sjcog.org/habitat/Titlepage.htm

Growth will happen. How we plan, prepare, and manage growth will determine if it adds to California's vitality and economy, or negatively influences our quality of life. The following strategies are recommended to minimize land consumption and vehicle miles traveled, and the resulting need for roadways and parking lots. The objectives are to reduce impacts on sensitive wildlife habitat, vegetation, and wetlands, reduce pavement storm water run-off, reduce tailpipe emissions, and preserve open space and agricultural lands.

STRATEGIES:

- ❑ Develop or amend transportation-planning tools to include land-use impacts, demand management, and modal alternative analysis.
- ❑ Provide incentives to promote sustainable land-use decisions that integrate land use, housing, and transportation through General Plans, regional transportation plans, and interregional cooperation.
  - ❖ Strategically increase densities and designs that facilitate effective transit service, including transit-oriented development within major transit corridors, and the ability to conveniently walk to destinations.
  - ❖ Provide information, technical assistance, and best practices on transit-oriented development.
  - ❖ Facilitate the sale of state-owned "excess" or underutilized land near major transit stations for transit-oriented development.
  - ❖ Encourage localities to foster "smart growth" development in areas where transportation infrastructure can readily support it.
  - ❖ Encourage efficient land-use through clean up and re-use of contaminated lands (brownfields).
  - ❖ Encourage lending institutions to offer Location Efficient Mortgages Program to promote housing near transit.
  - ❖ Promote the revision of zoning ordinances to provide for mixed-use development.
- ❑ Incorporate community values and support context-sensitive solutions for all transportation facilities and infrastructure.
- ❑ Promote use of technology to increase accessibility and reduce need for physical travel.

MARE ISLAND ACCORD

In July 2000, the U.S. Environmental Protection Agency, the Federal Highway Administration and the California Department of Transportation signed a cooperative partnership agreement known as the Mare Island Accord. The Accord contains several provisions to improve communication, and to address environmental issues early in transportation planning. The purpose is to improve project delivery times and address environmental issues at the earliest stages.

- Investigate reforms to the local fiscal/land-use relationship to provide incentives for communities to make better long-term land-use decisions.
  - Strengthen the link between land-use and transportation planning.
  - Options include exchanging state-share property tax for local-share sales tax.
- Provide incentives for collaborative, integrated regional and sub-regional planning initiatives linked to sustainable development criteria and State General Plan guidelines.
  - Encourage facility and revenue sharing; collaborative approaches to assessing housing and employment needs and reduce fiscal competition between cities and counties.

Policy 5: Enhance system capacity and provide viable transportation choices.

It is clear that California will need to increase transportation system capacity to help provide for the increased demand resulting from the projected population growth and changing travel behavior. Indeed, if transportation providers do not increase system capacity, the economic vitality, individual opportunity, and quality of life that make California so attractive will be diminished. The question is how to best increase capacity with limited transportation resources.

CARLINK

CarLink is an innovative car sharing transportation option for commuters in the Bay Area. CarLink, a public/private partnership, links commuters to a fleet of ultra-low-emission vehicles for both home-based and work-based users. CarLink provides the subscriber dedicated parking, vehicle maintenance, fuel, and insurance. CarLink cuts air pollution and reduces congestion in heavily traveled corridors.

There are numerous ways to increase transportation capacity or, alternately, reduce demand. Developing new and expanding existing facilities, and improving operational characteristics and system management practices are key strategies to accommodating increased demand.

Providing viable transportation options is another way to enhance California's mobility. Communities designed to accommodate safe, convenient transportation alternatives will result in more transportation choices for all segments of our changing society, reduced tailpipe emissions, and mitigate demand on our roadways. Enhancing interregional transportation alternatives linking communities and national and international transportation facilities will increase the economic viability of smaller urban and rural communities. Additionally, providing viable and affordable transportation alternatives will result in greater accessibility to those who cannot or choose not to drive.

Providing transportation alternatives extends to the use of alternative fuel vehicles. Governmental agencies at all levels are currently playing a crucial role in expanding the market share of alternative fuel vehicles by "greening" their fleets. We also need to consider the state's alternative fuel infrastructure needs, customer information for fueling facilities in California and in neighboring states, and marketing the advantages of owning and operating alternative fuel vehicles.

STRATEGIES:

- ❑ Establish methods for evaluating multimodal levels of service in support of an integrated multimodal transportation system.
- ❑ Evaluate pilot projects such as CarLink to determine effectiveness, identify winning attributes, and deploy on a wider basis as appropriate.
  - ❖ Share best practices and guidance with other transportation entities.
  - ❖ Gain insight and guidance from other entities regarding solutions to common problems.
- ❑ Improve and expand roadway, rail, bus, transit, and air service infrastructure, reliability, and connectivity.
  - ❖ Redesign and modernize interchanges to reduce or eliminate bottlenecks or restraints to smooth traffic flow, and reflect current traffic-flow patterns.
  - ❖ Expand dedicated guideway, bus rapid transit service and facilities, smart shuttles and shared car programs such as CarLink where proven effective.
  - ❖ Integrate and interconnect transit service among transit providers and with other modes, and collaborate with private transportation providers to improve and coordinate service.
  - ❖ Improve multimodal ground access to airports, including intercity bus service connecting small urban and rural communities to passenger air service.
  - ❖ Provide state leadership, in cooperation with local, regional, and federal agencies and tribal governments to develop an efficient cargo and passenger aviation system, and mitigate impacts.
  - ❖ Deploy advanced transportation systems to improve safety, traveler information, coordinate service schedules, and fare purchase.

BUS RAPID TRANSIT

The bus rapid transit system under development in Los Angeles will operate on exclusive right of way, use "smart card" passes, low floors and wide doors for fast passenger loading, station displays showing when the next bus will arrive, and 7-10 minutes headways during peak hours. It will provide a high level of transit service at a much lower infrastructure cost.

- ❖ Continue incremental improvements to the state's intercity rail system and passenger services, while preserving options for a potential high-speed rail network.
- ❖ Incorporate safe pedestrian and bicycle facilities in roadway capacity improvement and rehabilitation projects.

- ❑ Provide greater access to information, products, and services without the need for physical travel.
  - ❖ Increase use of telecommuting, e-commerce, and e-government services.
- ❑ Expand market share of cleaner vehicles and supporting fuel infrastructure.
  - ❖ Expand use of clean fuel transit vehicles.
  - ❖ Encourage public entities to continue investing in alternative fuel vehicles to increase market share and encourage increased production.
- ❑ Continue collaborating with California Energy Commission, California Air Resources Board, and Technology, Trade and Commerce Agency to research and develop strategies to reduce demand for petroleum fuels and increase transportation energy efficiency.
  - ❖ Research and develop alternative fuels and develop a plan for deploying appropriate alternative fuel infrastructure.
  - ❖ Collaborate on a marketing program to provide information on alternative fuel vehicles, including the location of fueling facilities.

SACRAMENTO EMERGENCY CLEAN AIR & TRANSPORTATION

SECAT was launched in November 2000 to reduce emissions from heavy-duty diesel vehicles three-tons per day by 2005. The program makes $70 million available for truck operator-owners in the Sacramento area to replace existing engines with new low-emission diesel engines, buy newer low-emission vehicles, or use cleaner fuels.

Policy 6: Provide additional and more flexible transportation financing.

The state's economic prosperity and quality of life depends on an efficient transportation system. However, funding shortfalls for transportation challenge the ability of transportation providers, operators, and planners to provide for the current and projected mobility and access needs of the state. The shortfalls affect capital projects as well as operations and maintenance of all system elements.

The transportation system must be managed so that steps are taken to ease the demands and maximize efficiency. For example, reducing peak period travel, improving the traffic flow and encouraging the use of transit, bicycling, and walking can help reduce demand on the road system. In ports, greater efficiency can be achieved by extending hours of operation.

Good management practices and stable and flexible revenue streams are needed to meet the challenges facing the state's transportation system and future demand. In the future, strategically applied user fees may be an important element of urban freeway demand management. However, the benefits, consequences, and equity issues associated with a user-based fee structure must be fully understood before implementation.

AB 1012/STATUTES OF 1999

The primary intent of AB 1012 is to use State and federal funds more efficiently. Before AB 1012, local agencies were only obligating 87% of their federal funds. Since AB 1012, they have obligated approximately 130% of applicable federal funds.

AB 1012 also facilitates project development by adding a steady flow of projects in addition to those traditionally programmed in the State Transportation Improvement Program (STIP). The 2000 STIP included 37 projects and the 2002 STIP includes 48 projects advanced due to AB 1012 provisions.

STRATEGIES:

- Evaluate past transportation financing initiatives, compile current regional transportation plan financial forecasts, and undertake a long-term projection of the Fund Estimate to provide decision-makers with a better understanding of transportation financing and potential changes.
  - Fully explore the implications and consequences of user-based and traditional financing mechanisms.
- Increase private sector investment in transportation.
  - Implement a process to monitor and incorporate private sector mobility services and investments within transportation planning and programming.
  - Help to make private instruments, such as the Location Efficient Mortgage Program, more widely available.
- Support the following Transportation Equity Act for the 21st Century reauthorization strategies:
  - Ensure that California receives an increased share of highway funding based on its contributions to the Highway Trust Fund and preeminent role in the national economy.
  - Remove barriers to funding projects and programs that improve efficient operation of the existing transportation system.
  - Promote a stronger commitment of resources to public/private partnerships.
  - Advocate for flexibility to use federal funds to address highway safety and congestion problems caused by goods movement-related congestion.
  - Provide for increased program capacity to support the safe and efficient movement of goods in corridors that are crucial to national

economic security and vitality, and provide for the mitigation of their congestion and environmental effects.

- Increase flexibility in jet fuel tax, airport, and passenger facility charge revenues for use on projects such as cargo and ground access and security needs.
- Review the State Transportation Improvement Program funding split to best meet statewide transportation goals.
- Support a constitutional amendment to lower the vote threshold to 55 percent for local revenue initiatives to support local transportation priorities, linked to integrated community and regional planning.

Policy 7: Support research to advance mobility and accessibility.

California has long been viewed as a leader in research and technological innovation. The state is home to many of the world's leading universities and university-based transportation centers. University transportation centers provide the energy and expertise needed to explore new ideas, materials, and methods for advancing California's mobility and accessibility.

In the past, the state's aerospace and defense industry sectors spurred tremendous economic growth. Today, Silicon Valley pushes forward the boundaries of computer research and technology, making California the nexus of the Information Age. Since research and technology drive much of California's economic growth and resulting transportation demand, it is only fitting that we turn to these industries to help improve the efficiency of our transportation system.

Areas of research supporting the goals identified in the CTP include:

- Test geospatial, digital, and other advanced imaging systems to evaluate environmental and social data related to infrastructure projects, and to minimize project costs.
- Develop new materials adding to the life and performance of the transportation system.
- Research methods and technologies to better operate, manage, and maintain the transportation system, and improve system safety and security.
- Research successful models in other states and countries and determine their value if implemented in California. Explore alternatives, opportunities, and challenges for new ideas and solutions.
- Collaborate with federal and state agencies, universities, and other states to explore alternative fuels and fuel infrastructure.

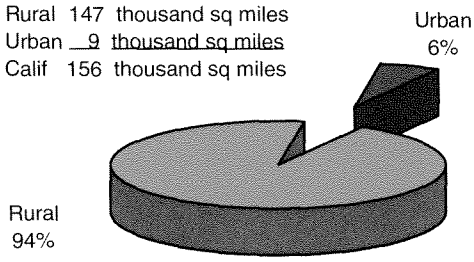
RURAL ISSUES

Rural issues, while as acute as those in urban areas, have very different characteristics. With only eight percent of California's population, rural areas comprise 94 percent of the land area (see **FIGURE 6** below). Providing transportation services to a sparsely and widely distributed population presents special transportation challenges that must be considered when planning for a balanced, interconnected system.

Rural transportation issues may vary depending on the area's economic base, topography, or proximity to urban areas and popular destinations. There are, however, many areas of common need.

Figure 6

California Land Area – 1999



Source Federal Highway Administration Statistics 1999

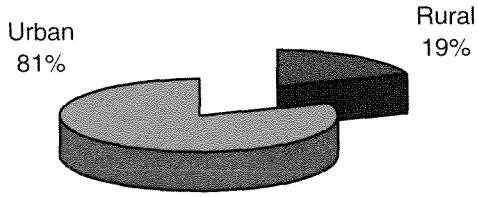
Integrity of the existing road system is a significant concern in rural areas. With approximately 80 percent of the road miles located in rural areas, the proportion of road miles to population creates a far larger responsibility, without the economic means to address it. Weather issues exacerbate road condition problems, particularly where flooding, landslides, and snow removal can quickly jeopardize pavement integrity.

California's economy relies on the efficient movement of interregional commercial trucking. While rural areas might experience substantial goods movement traffic, and associated air quality effects, they may receive inadequate resources to address the impacts of that traffic.

For more than 50 consecutive years, California has been the number one food and agricultural producer in the nation. The state's agricultural output is nearly $25 billion per year. This makes truck access of particular importance in bringing food and timber to the world. These large trucks take a substantial toll on the local road systems that feed into the state highways, not only in traffic volumes, but also in impacts to pavement conditions.

Figure 7

Vehicle Miles Driven – Rural and Urban



Source Federal Highway Administration Statistics 1999

California's travel and tourism

industry generated an estimated $75.4 billion, or 6 percent of the Gross State Product, and supported over 1.1 million jobs in 2000. Destinations in rural areas are major attractors for state, national, and international travelers. For example, Yosemite, Sequoia, Joshua Tree, Cabrillo, and Death Valley National Parks, Point Reyes National Seashore, and Whiskeytown-Shasta-Trinity National Recreation Area attracted nearly 11 million visitors in fiscal year 2000/2001.[24] While rural tourism, and consequently rural economies, is dependent on a well-maintained and reliable roadway system, the roadways are inadequate to serve the demand.

COATS PROJECT

The California-Oregon Advanced Transportation Systems Project is a bi-state, multi-jurisdictional partnership designed to utilize advanced transportation technologies to improve safety and mobility in northern California and southern Oregon. To date, the Project has resulted in coordinated traveler information system on Interstate 5 Siskiyou Pass.

Safety is another significant concern in rural areas. Nationally, over 58 percent of total vehicular fatalities occur in rural areas. The fatality rate per 100 million vehicle miles traveled is more than twice that of urban areas. The higher fatality rate could be attributed to several factors including rugged terrain, shortened sightlines, unforgiving roadways, faster speeds, alcohol, longer response time to the accident, and distance to medical treatment centers.

For some rural residents, transit service is the only means of transportation. Rural entities are often challenged to provide transit and paratransit services to rural customers sparsely distributed over considerable distances. Regional and intercity bus service can be difficult to provide due to low demand, fare box return requirements, and limited resources for operating and maintaining the system. Lack of regional and intercity transportation alternatives reduce the level of independence and opportunities available to rural residents who cannot or choose not to drive.

Rural area airports provide vital access for medical emergencies, and fire fighting and agricultural operations. These airports also provide links to larger urban airports for passenger and air cargo service. Many rural airport runways need to be extended to accommodate larger aircraft.

Rural areas do not have the communication infrastructure that urban areas have. Lack of wireless communication directly affects safety and increases information and advanced transportation systems infrastructure deployment costs.

Transportation plays a crucial role in the sustainable development of rural areas and communities. Pedestrian-oriented main streets in the historical rural downtowns of California have served as examples for improving urban environments. These rural main streets should continue to reflect the

[24] "Tourism and the State's Economy", California Office of Tourism.

community values and character while enhancing the rural economy by facilitating goods movement and access to goods, services, and jobs.

While many of the strategies discussed in the previous section are applicable to rural needs, the following strategies address specific rural issues.

STRATEGIES:

- Ensure rural areas have adequate funds to provide for the operation, maintenance, and rehabilitation of the rural and interregional transportation system.
  - Provide for roadway safety improvements and efficiencies.
  - Funding must be flexible to provide for fund-matching opportunities with other programs.
  - Consider interregional traffic, including goods movement and tourism, and weather impacts when allocating resources to rural entities.
  - Ensure critical transportation facilities, such as general aviation, are adequately funded to provide lifeline services.
  - Upgrade communication to enable deployment of advanced transportation systems to improve safety, incidence response, and traveler information, including emergency response entities in the early planning stages.
- Advocate coordinated public transportation services with social service agencies to optimize resources and services.
  - Consult with tribal governments to coordinate improved public transportation access to and through tribal lands.
  - Initiate effort with full participation of federal, state, regional, and local governments to explore funding options and opportunities and to address potential barriers.
  - Identify best practices, including advanced public transportation technologies, to improve and coordinate services.
- Consider the "main street" characteristics of transportation corridors and incorporate community values and context-sensitive solutions.
- Explore alternatives to moving goods through rural areas to mitigate impacts on infrastructure and air quality.

PERFORMANCE MEASURES

Performance measures serve to indicate progress toward identified goals; to inform decision-making on transportation issues and opportunities; to provide a point of departure for policy and program analysis; to evaluate system conditions and strategies; to enable monitoring and problem identification; and to contribute to the integration of economic, social, and environmental factors during the planning and early decision-making processes. Performance measures consist of a set of objective, measurable criteria used to evaluate the performance of the transportation system and to gauge if and to what degree our vision and goals are being achieved.

The Business, Transportation and Housing Agency initiated a statewide effort to develop indicators and measures to assess the performance of California's multi-modal transportation system, and to support informed transportation decisions by public officials, operators, service providers, and system users. This cooperative effort resulted in the 1998 "Transportation System Performance Measures Report" that provided a blueprint for developing performance measures, defined desired outcomes, and identified mode-neutral candidate measures or indicators.

The system performance measures and indicators identified in the 1998 report, and subsequent ongoing work, are supported by the vision, goals, and policies contained in the CTP. The relationship between CTP goals and System Performance Measures is listed in **FIGURE 8** on the next page.

Developing performance measures and indicators to assess performance is standard private sector business practice. Caltrans, working with the public and private sector transportation providers, developed the above performance measures. As the table indicates, the measures are at differing stages of implementation ranging from "testing ongoing" to "included in some Regional Transportation Plans." Full implementation should occur within the next two to three iterations of the Regional Transportation Plans. Challenges for full implementation of performance measurement of the next couple of years include:

- Integrating the performance measures into ongoing planning and programming activities and processes.
- Improving the availability and accessibility of data required to systematically measure, forecast, and evaluate transportation systems and decisions.

FIGURE 8

Relationship Between CTP Vision & Goals and System Performance Measures

CTP Vision/Goal	System Performance Measure	Indicator	Status
Enhance Public Safety and Security	Safety and Security	• Accident Rates • Crime Rates • Security Levels	• Fully tested • Included in some Regional Transportation Plans
Preserve the Transportation System	System Preservation	• Asset Condition	• Fully tested • Included in some Regional Transportation Plans
Improve Mobility and Accessibility	Mobility Accessibility Reliability	• Travel Time Delay • Access to Desired Locations • Access to System • Variability of travel time (expected vs. actual travel time)	• Fully tested • Included in some Regional Transportation Plans • Fully tested for aeronautics, highways and transit
Maximize Efficient Use of Resources	Sustainability (Environmental related)	• Fuel usage per person mile • Fuel usage per ton moved	• Testing ongoing
Reflect Community and Environmental Values	Sustainability (Social Equity related) Environmental Quality Customer Satisfaction	• Emissions • Noise Levels • Species, Wetlands, etc • Responses from Customer Surveys	• Fully tested • Included in some Regional Transportation Plans • Department External Survey: First survey validated selected Performance Measures. Second survey under development.

Caltrans and its partners recognize the benefits of developing performance measures implementation: making better decisions, communicating clearly with the public and other transportation customers, and improving accountability. Caltrans continues making advances on these challenges through initiatives designed to improve data quality and access, and enhance partnerships with environmental and resources decision-makers. Integration of performance measures into long-range planning is critical to the continued success of performance measures implementation. As we endeavor to develop a more balanced and sustainable system, the evaluation of transportation objectives and related performance measures will continue.

California Transportation Action Plan Development

Upon approval of the CTP, Caltrans will initiate development of an Action Plan that will present specific steps to implement the strategies proposed in this document. Building on our mutual commitments and capitalizing on our successes, the Action Plan will identify measurable objectives, roles and responsibilities, timelines, estimated costs, and targeted outcomes. Caltrans will also develop a method to monitor progress toward the goals, including a reporting system and schedule.

The CTP is a plan for all of California. Developing the implementing Action Plan will require considerable coordination and collaboration with regional transportation planning agencies, local and regional officials, other governmental entities, tribal governments, community-based organizations, business, communities, and system users. The participants in this effort will vary depending on the strategy being addressed.

Objectives and priorities may vary based on regional goals. It will be the state's responsibility to help sort through these varying goals and ensure the overall, interregional state transportation goals are addressed and cross-jurisdictional issues are considered.

The Action Plan will be developed in modules. Some of the strategies are continuous efforts, some will require legislation, and others multi-organizational collaboration. We will focus first on the most critical issues that need to be addressed immediately. We will complete the entire Action Plan within one year of the Governor's approval of the CTP, but will implement elements of the Plan as they are completed.

The Action Plan must be tied to resources. This document identifies several transportation financing options. The options must be evaluated for their effectiveness and their consequences. To this end, Caltrans is initiating a Financing Study that will forecast transportation revenues through 2025 based on current funding structures. The study will also explore the revenue and cost impacts of various scenarios and strategies identified in this document.

CALIFORNIA TRANSPORTATION PLAN 2025

APPENDIX

September 25, 2002

CALIFORNIA TRANSPORTATION PLAN 2025

APPENDIX I

LEGAL REQUIREMENTS AND REGULATIONS

The following are the federal and state statutory requirements for developing and updating a comprehensive state long-range transportation plan:

FEDERAL STATUTES

- The requirements for the development of a comprehensive state long-range transportation plan are contained in Title 23, USC, and Section 135.
- The Intermodal Surface Transportation Efficiency Act (ISTEA) first required states to develop a long-range transportation plan in 1991. The requirement was reaffirmed in the 1998 Transportation Equity Act for the 21st Century (TEA-21).
- Under federal law, the state long-range transportation plan shall provide for the development and implementation of the intermodal transportation system of the state.
- The state plan shall be developed in cooperation with the state's Metropolitan Planning Organizations, and in consultation with affected local transportation officials, Indian Tribal Governments, and other interested parties. It shall also be coordinated with the development of the transportation portion of the State Implementation Plan as required by the Clear Air Act.
- The plan must have a minimum 20-year forecast horizon. The plan must be developed as part of a planning process that addresses at least seven broad areas for the movement of people and freight including:
  - Mobility and accessibility
  - Integration and connectivity
  - Efficient system management and operation
  - Existing system preservation
  - Safety and security
  - Economic development (including productivity and efficiency)
  - Environmental protection and quality of life.

Federal Statewide Planning Regulations

The U.S. Department of Transportation (U.S. DOT) has proposed, but has not yet adopted revised statewide planning regulations to implement TEA-21. The proposed regulations are comparable to those implementing ISTEA and contained in 23 CFR 450 et seq., including:

- Section 450.214(e): "The (state-wide) plan shall be continually evaluated and periodically up-dated . . ."
- These regulations, and the proposed TEA-21 regulations, further specify the public involvement and coordination process that must be followed in developing the plan.

State Statutory Authority

- Government Code Section 65070, et seq., requires the California Department of Transportation (Caltrans) develop a California Transportation Plan (CTP).
- Government Code Section 65072 requires the CTP to include:
  - (a) a policy element that describes the state's transportation policies and system performance objectives,
  - (b) a strategies element that shall incorporate the broad system concepts and strategies synthesized from the adopted regional transportation plans. The CTP shall not be project-specific.
  - (c) a recommendations element that includes economic forecasts and recommendations to achieve concepts, strategies, and performance objectives.
- Government Code Section 14000 further defines the CTP and Caltrans' role:
  - (b) "...regional and local expressions of transportation goals, objectives, and policies which reflect the unique characteristics and aspirations of various areas of the state shall be recognized in transportation planning tempered, however, by consideration of statewide interests."
  - (d) "The responsibilities for decision making for California's transportation systems are highly fragmented. This has hampered effective integration of transportation planning and intermodal coordination. A comprehensive multimodal transportation planning process should be established which involves all levels of government and the private sector in a cooperative process to develop coordinated transportation plans."

APPENDIX II

THE CALIFORNIA TRANSPORTATION PLAN GUIDELINES TEAM

Caltrans formed a California Transportation Plan Guidelines Team in May 2000, to create guidelines that would lead to the successful development of a CTP and an accompanying public participation program. The guidelines became the first step in developing an ongoing and iterative process that guided the development of this plan and future updates. They also define the CTP's review and comment process, evaluation process, and public involvement.

The team was comprised of representatives from regional transportation agencies, Business, Transportation and Housing Agency (BT&H), Governor's Office of Planning and Research (OPR), the California Transportation Commission (CTC), Federal Highway Administration (FHWA), Local Government Commission (LGC), Surface Transportation Policy Project (STPP), and selected programs within Caltrans.

The draft guidelines elements and public participation program were distributed to over 250 organizations and individuals for review and comment. The comments received were incorporated into the final draft in accordance with the Guideline Team's direction. The final guideline elements were released in May 2001.

Guidelines Team members included:

Charles Fields, Executive Director
Amador County Transportation Commission

John Ferrera, Assistant Secretary for Transportation
Business, Transportation & Housing Agency

Gary Dickson, Chair
California Association of Councils of Government

Pete Hathaway, Chief Deputy Director
California Transportation Commission

Charles Oldham, Deputy Director
California Transportation Commission

Wade Hobbs
Federal Highway Administration

Terry Roberts, Chief
State Clearinghouse
Governor's Office of Planning & Research

Judith Corbett, Executive Director
Local Government Commission

Trinh Nguyen, Northern California Campaign Manager
Surface Transportation Policy Project

Brian J. Smith, Deputy Director
Planning & Modal Programs
California Department of Transportation

Joan Sollenberger, Chief
Division of Transportation Planning
California Department of Transportation

Cindy Adams
Division of Environmental Analysis
California Department of Transportation

Katie Benouar
Division of New Technology & Research
California Department of Transportation

Christopher Curtiss
Transportation Planning, District 4
California Department of Transportation

Gale McIntyre
Division of Mass Transportation
California Department of Transportation

APPENDIX III

CALIFORNIA TRANSPORTATION FUTURES SYMPOSIUMS AND CONFERENCES

Caltrans sponsored a three-event program to explore transportation issues, solutions, and policy. The events were coordinated and facilitated by the University of California, Public Policy Extension Program. The programs were designed to provide guidance to the CTP, identify forces shaping California's mobility, and explore potential solutions.

Symposium on Forces Shaping Mobility Strategies was held on November 30 and December 1, 2000, in Sacramento. This event gathered transportation experts on relevant trends, such as:

- California's population and demographics
- Transportation options and needs of an aging population
- Changing characteristics of immigrant populations and transportation
- Economic trends, transformations and transportation
- Technological innovations in transportation
- Strategies for addressing sustainability in the context of transportation planning
- Financing transportation in California
  - Alternative financing mechanisms
  - Policy context for gaining adoption of transportation finance plans and policies

Participants included:

Arthur Bauer
Arthur Bauer & Associates
Californians for Better Transportation

Jeffrey Brown
UCLA Institute of Transportation Studies

Patrick Conroy, Manager
ATMIS Program, California Partnership for Advanced Transit and Highways

Gene Crumley, Manager
Director of Business Management and Corporate Education
UC Davis, University Extension

Larry Dahms, Executive Director
Metropolitan Transportation Commission

Elizabeth Deakin, Director
University of California Transportation Center

Dan Beal, Manager
Public Policy & Program
Automobile Club of Southern California

Laura Cohen, Director
State Policy
Rails to Trails Conservancy

Maria Contreras-Sweet, Secretary
California Business, Transportation & Housing Agency

James Corless, California Director
Surface Transportation Policy Project

Dana Curry, Director
Transportation & Resources
California Legislative Analyst's Office

Karen Douglas
Office of Special Project
California Highway Patrol

Phil Dow, Executive Director
Mendocino County Organization of Governments

Charles Field, Executive Director
Amador County Transportation Commission

Jonathan Gifford, Associate Professor
Public Management & Policy
George Mason University

Genevieve Giuliano, Professor
University of Southern California

Jim Gosnell, Director
Planning and Policy
Southern California Association of Governments

Douglas Jackson, Senior Program Assistant
Great Valley Center

Hans Johnson, Research Fellow
Public Policy Institute of California

Daniel Kirshner, Senior Economic Analyst
Environmental Defense Fund

Stephen Levy, Director & Senior Economist
Center for the Continuing Study of the California Economy

Richard Lyon, Senor Legislative Advocate
California Industry Building Association

Dean Misczynski, Director
California Research Bureau

Stan Randolph, Transportation Planning Consultant
California Trucking Association

Michael Ritchie, Division Administrator
Federal Highway Administration

Rusty Selix, Executive Director
California Association of Councils of Government

Brian Taylor, Assistant Professor, Urban Planning
Associate Director, Institute of Transportation Studies, UCLA School of Public Policy

Emily Tibbot, Government Relations Advisor
The Nature Conservancy

Martin Tuttle, Executive Director
Sacramento Area Council of Governments

Mel Webber, Professor Emeritus
University of California, Berkeley

John Ferrera, Assistant Secretary for Transportation
California Business, Transportation & Housing Agency

Joanne Freilich, Program Director
UCLA Extension, Public Policy Program

Laura Gipson, Interim Deputy Director
Operations and Maintenance
Sacramento International Airport

John Glover, Director
Office of Strategic & Policy Planning
Port of Oakland

LeRoy Graymer, Founding Director
UCLA Extension, Public Policy Program

Norm King, Executive Director
San Bernardino Associated Governments

Jeff Loux, Program Director
Land Use and Natural Resources Program

Lawrence Magid, Deputy Secretary
California Business, Transportation & Housing Agency

Michael Meyer, Professor and Chair
Georgia Institute of Technology
School of Civil and Environmental Engineering

Jeff Morales, Director
California Department of Transportation

Pete Hathaway, Chief Deputy Director
California Transportation Commission

Sandra Rosenbloom, Director
University of Arizona
Drachman Inst. For Land & Regional Dev.
Brian Smith, Deputy Director Planning
California Department of Transportation

Joan Sollenberger, Chief
Division of Transportation Planning
California Department of Transportation

Martin Wachs, Director
Institute of Transportation Studies
University of California, Berkeley

Linda Wheaton
California Department of Housing and Community Development

The California Transportation Futures Conference was held on June 21 and 22, 2001, at Universal City. The conference explored strategies to address California's future transportation challenges. Over 200 attendees had an opportunity to gain insight from and respond to national transportation experts. Caltrans sponsored scholarship and subsidized transportation costs for high school students and representatives from non-profit and community based organizations to participate in the event.

Issues addressed included:

- Economic Change in California
  - Impacts on Transportation
  - Getting Goods to Market
- Serving Our Many Populations
  - Equity Issues in Transportation Policy
  - Transportation Planning and the Aging in California
  - Working Far From Home: Transportation and Welfare Reform in the Ten Big States
  - The California Saving and Asset Project
  - Reconsidering Social Equity in Public Transportation
- Sustainability Strategies for Protecting Natural Resources While Enhancing and Maintaining Mobility
  - Protecting Quality of Life through Policy Harmonization and Incentives
  - San Joaquin County Multi-Species Habitat Conservation and Open Space Plan
- Developing and Maintaining High Performance Transportation Systems
  - New Operations Management
  - Measuring Performance and Progress in Transportation
- Financing Transportation System for California's Future
  - Financing Transportation in California, Strategies for Change

The third event was a two-day policy advisory retreat held at Cal Poly Pomona University on November 15 and 16, 2001. The purpose of this meeting was to gain input from California's policy leaders and key stakeholders on the draft policy concepts contained in the CTP. The concepts were prepared as based on a six-month public participation and outreach effort conducted (Appendix IV). During this period, numerous workshops and meetings were conducted throughout the state to gain broad-based input on the vision, goals and strategies designed to sustain California's economy and environment, and to equitably address the transportation needs of a growing and increasingly diverse population.

Participants included:

Robert Arnold, Senior Economist
Center for Continuing Study of the California Economy

Arthur Bauer, Principal
Arthur Bauer & Associates

Robert Cervero, Professor
University of California, Berkeley

Cathy Creswell, Deputy Director
California Department of Housing & Community Development

John Ferrera, Assistant Secretary for Transportation
California Business, Transportation & Housing Agency

LeRoy Graymer, Founding Director
UCLA Extension Public Policy Program

Trixie Johnson, Research Director
Mineta Transportation Institute

Jeff Morales, Director
California Department of Transportation

Terry Roberts, Director
State Clearinghouse
Governor's Office of Planning and Research

Rusty Selix, Executive Director
California Association of Councils of Government

Brian Smith, Deputy Director of Planning
California Department of Transportation

Joan Sollenberger, Chief
Division of Transportation Planning
California Department of Transportation

Marty Wachs, Director
Institute of Transportation Studies
University of California, Berkeley

Rick Wilson, Professor
Department of Urban & Regional Planning
Cal Poly Pomona

DeAnn Baker, Legislative Representative
California Association of Counties

Dan Beal, Manager
Public Policy & Programs
Automobile Club of Southern California

Natasha Fooman, Legislative Representative
League of California Cities

Genevieve Giuliano, Professor
Department of Policy, Planning & Development
University of Southern California

Greg Greenwood, Science Advisory
The Resources Agency

Randolph Hall, Professor
University of Southern California

John Keller, Senior Planner
California Highway Patrol

Charles Oldham, Deputy Director
California Transportation Commission

Robert Poole, Director
Transportation Studies
Reason Public Policy Institute

Kenneth Ryan, Chair
Transportation Issues
Sierra Club of California

Timothy Schott, Association Secretary
California Association of Port Authorities

Brian Taylor, Associate Professor
Department of Urban Planning
UCLA, School of Public Policy & Social Research

Jeff Weir, Air Pollution Specialist
Air Resources Board

Paul Zykofsky, Director Land Use
Local Government Commission

APPENDIX IV

PUBLIC PARTICIPATION PROGRAM

DEVELOPMENT AND PURPOSE

As a state entity, Caltrans is required to adhere to federal and state statutes that help to ensure broad and diverse public participation. Beyond the legal requirements, Caltrans is committed to ensuring that the many voices of our state are given opportunities to be heard during the early development of the CTP.

In Spring 2001, Caltrans initiated a public participation program to solicit transportation system stakeholders and users comments and concerns prior to drafting the plan. Once the draft CTP is approved for release, Caltrans will distribute the draft CTP for review, and solicit comments through public hearings, meetings, interviews, electronic mail, and the postal service. The following describes the pre-draft public participation program.

Preparation for an aggressive public participation effort included researching federal requirements, reviewing other agencies and other states' public participation programs, establishing a multi-discipline team charged with developing guidelines for the CTP and its supporting public participation program. Additionally, Caltrans formed a customer survey team and contracted with a private consultant to develop and execute an effective customer survey.

These efforts, comprised of the following components, resulted in a successful CTP public participation program that was broad, diverse, cooperative, and informative:

A. FEDERAL TITLE VI INFORMATION

The Code of Federal Regulations, Federal Title VI, requires states to conduct a broad and diverse outreach, with an emphasis on traditionally underserved groups. Attendance at state public meetings must be documented and is subject to audits by federal and state Title VI representatives. Caltrans developed a Title VI information card to collect voluntary information regarding the participants' gender, age, ethnicity, income, first and second language, disability, and zip code. Participants were also asked if they represented a low-income, minority, or persons with disabilities organization. This information is stored in a database and available for reports when needed.

B. CUSTOMER SURVEY

The CTP customer survey was comprised of two elements, 1) a series of focus groups, and 2) a random statewide telephone survey.

Focus Groups

The series of partner and customer focus groups perhaps provided the most productive public participation effort out of the many techniques used to develop the CTP. Specific focus groups were established by public agency, ethnicity, income, mode of travel, age group, traveling conditions, and other specific categories

Participants in the transportation customer focus groups were provided financial incentives to participate, and compensation for a meal, daycare, and transportation to the sessions. In addition, the sessions for transportation customers were generally held in the evenings to accommodate work or school schedules.

A total of 54 completed focus group sessions with 10 to 15 participants were held throughout the state, in urban and rural settings. Recruitment was done at random, generally in neighborhoods close to the facility site. In addition to English, focus groups were conducted in Spanish and Asian languages.

A professional consultant facilitated all of the focus group sessions. A series of general transportation topics, used for each focus group session, were explored to test participants for reaction and opinions. Focus group input was categorized into themes, prioritized and used to develop questions for the telephone survey. The participants expressed concern about the following top four areas:

- Participants felt that traffic congestion will worsen over the next 20 years.
- Participants felt that land-use decisions affect transportation.
- Participants felt the transportation system lacks modal connectivity.
- Participants felt better coordination is needed in transportation planning among federal, state, and local levels.

Telephone Survey

Caltrans conducted the statewide customer telephone survey to enable quantifiable analysis of the focus group themes. To conduct regional survey analysis, we divided the state into eight geographically unique areas:

- Region 1: Eastern California (the Sierras, deserts)
- Region 2: North Valley (Lassen, Quincy)
- Region 3: Sacramento/Stockton Area
- Region 4: San Joaquin Valley (Fresno, Bakersfield)
- Region 5: San Francisco Bay Area
- Region 6: California Coast (San Luis Obispo, Eureka)
- Region 7: Los Angeles Basin
- Region 8: San Diego Area

To ensure equal input into the survey results, 400 completed surveys were required in each region, for a total of 3,200 completed surveys statewide. Calls were placed at random to residences in each region. If the first attempt at response was

unsuccessful, additional calls were made to the same residence at different times of the day to ensure adequate opportunities to respond. On-call translation services were available in the event respondents did not speak English as a primary language.

As with the focus group results, the telephone survey results were compiled and tabulated. The table below lists key findings received from the majority of the residents surveyed and how they served to shape the Goals identified in the CTP:

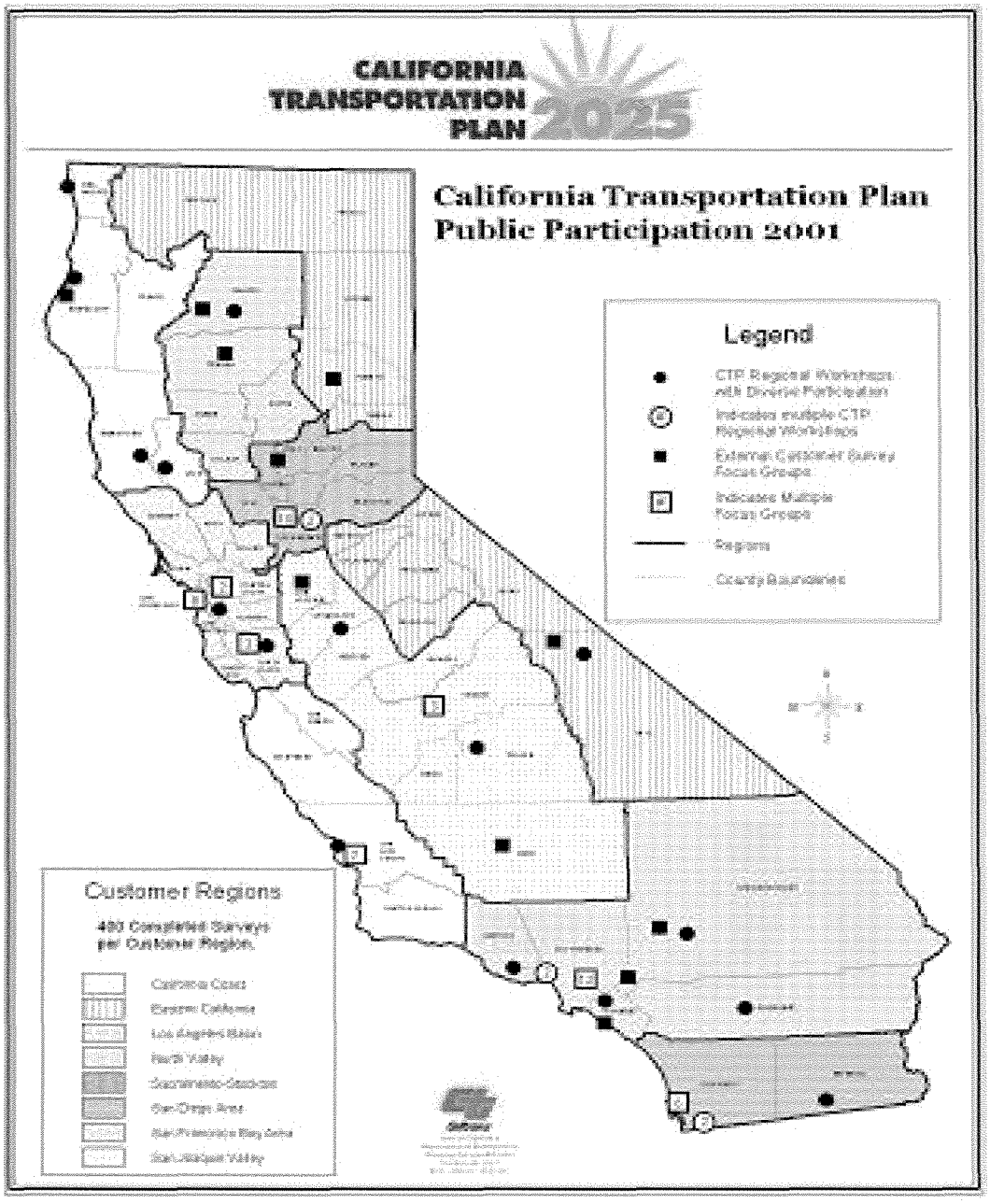
Survey Findings	CTP Goal
Traffic congestion will be a major problem in the future; make systems connect better	Improve mobility and accessibility.
Coordinated community planning is needed to help address poor land use.	Reflect community values
Road repair and maintenance will be a major problem in the future.	Preserve the transportation system.
Feeling safe and secure while traveling is the highest priority.	Enhance public safety

C. CTP Regional Workshops

The first phase of public participation input into the CTP concluded with twenty-four CTP regional workshops. As with the customer survey focus groups, the CTP regional workshops were conducted throughout the state.

Regional transportation planning agencies and Caltrans district planning staff co-sponsored the regional workshops. The general format for the workshops allowed for smaller, multiple breakout sessions or town hall formats to discuss transportation issues of interest to the participants and their communities. Workshops were held during the day, evening hours, and on weekends, in regional transportation offices, business conference facilities, on college campuses, and at community centers.

The CTP regional workshops were well attended, with representatives from federal, state, and local governments, transportation advocacy and provider groups, business and demographic group representatives, and system users. Generally, the input received on transportation issues from the CTP regional workshops substantiated the results received from the customer focus groups and customer telephone survey.



D. MATERIALS AND MEDIA

Caltrans created a web page to inform the public about CTP activities, a calendar of events and to solicit input on the draft goals and strategies. This web page was translated into Spanish and made available in text format to reach out and accommodate the needs of our diverse customers.

The website is directly linked to an e-mail address for anyone interested in sending comments regarding the CTP. Future products relating to the development of the CTP such as newsletters, draft documents, etc. will be posted on this website. The address for this page is: www.dot.ca.gov/hq/tpp/Offices/OSP/OSP.htm

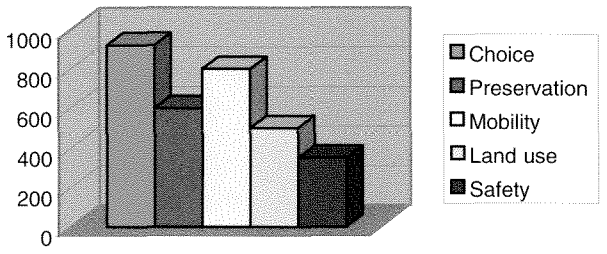
Brochure and Questionnaire

Caltrans developed the introductory brochure, "Tell us ... Where do we go from here?" The brochure included a detachable postage paid questionnaire providing the system user an opportunity to voice their opinion and to prioritize important transportation issues.

In addition to English, the brochure/questionnaire was available in Spanish, Chinese, and Vietnamese, and was transcribed to Braille to allow for diverse participation. Over 22,000 copies were distributed during Summer 2001, at workshops, database mail-outs, meetings, transit facilities, and newspaper mailings.

Figure 6

Most Frequent Questionnaire & Comment Card Responses



District 5 Caltrans staff, San Luis Obispo, partnered with Amtrak to provide a transportation information booth at the Mid-State Fair. Staff distributed over 500 brochures and questionnaires during the event.

Workshop Comment Card

Staff distributed return-addressed and postage-paid comment cards at workshops and meetings. Participants were encouraged to complete the card during the event or post them at a later date. They were also encouraged to take comment cards to share with friends and family. The comment card gave transportation system users an opportunity to submit their concerns and to provide contact information for inclusion in our CTP public participation database.

To date, we have received over 1,100 comment cards and questionnaires expressing transportation users concerns and recommendations regarding the state's transportation system. Respondents were asked to name their three top areas of concerns. The top five are shown in the figure above.

Media

Caltrans prepared news releases informing the public about upcoming CTP workshops, including date, times, and locations. These news releases were widely distributed through newspapers ads, public notices, radio, and TV. Ethnic media such as La Voz Latina, The Lang Magazine, Hispanic Business Journal, KEST-AM Chinese World Radio, Azteca News, etc. were also notified. Additionally, Caltrans staff participated in radio and newspaper interviews prior to and during the regional workshops.

CTP Public Participation Database

Caltrans developed a database to capture contact information about our customers and partners interested in the development of the CTP. The database allows for the recording of comments received through brochure questionnaires, comment cards, e-

mails, letters, and public events. The database will helps Caltrans answer the "who, what, when, where, and how" comments received. The database contains nearly 4,000 contacts and will be expanded during the draft CTP public review and comment period.

E. Rural Cities and Surrounding Rural Area Issues

Caltrans is committed to developing a CTP that represents the views of all Californians, including those residing in the rural areas of our state. The importance placed on public participation from rural areas was demonstrated by:

- CTP External Customer Survey Focus Groups – held in Quincy, Eureka, Bakersfield, Marysville, Bishop, Red Bluff , Redding, and Victorville.
- CTP External Customer Telephone Survey – Four of the eight telephone survey regions were predominately rural in composition. With 400 completed telephone surveys per region, each region had an equal voice in providing quantifiable input into the survey results.
- CTP Regional Workshops – 11 of the 22 CTP Regional Workshops were held in rural cities, allowing rural residents the opportunity to provide input into the draft CTP goals, issues, policies, and strategies.
- CTP commentary from rural regions – approximately 25 percent of the comment cards, questionnaires, letters, and e-mails were submitted by residents in rural towns or surrounding rural areas.

The input received from rural region's public participation efforts was critical in shaping the Rural Issues section of the CTP.

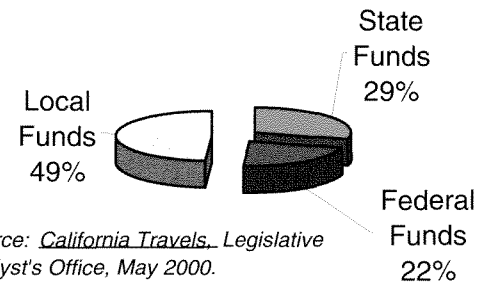
APPENDIX V

TRANSPORTATION REVENUE AND EXPENDITURES

REVENUES

According to the Legislative Analyst's Office, in Fiscal Year 1999-2000, California spent about $15.5 billion in public funds on transportation.[1] In addition, the private sector spends billions of dollars to purchase and operate the vehicles that travel over the transportation network and to build, operate, and maintain privately owned railroads, ports, and airports. The following provides a brief overview of public transportation fund sources and allocations.

Figure 7 **California Transportation Revenue Source 1999-00**



Source: California Travels, Legislative Analyst's Office, May 2000.

Transportation in California is funded from a variety of state, local, private, and federal fund sources. State funds consist primarily of the state excise tax on gasoline and diesel fuels (18¢ per gallon) and truck weight fees. Additional fund sources include most of the state sales tax on diesel fuel, bond proceeds user fees, and private revenues (AB 680) and appropriations of General Fund revenue. Until recently, only a small portion of the state sales tax on gasoline was allocated to transportation. In 2000, the Governor's Traffic Congestion Relief Program (TCRP) dedicated the state's portion of the sales tax on gasoline to transportation purposes for five years. The TCRP is discussed further in Appendix VI.

Californians approved Proposition 42 in March 2002. This measure places in the State Constitution provisions of current law related to TCRP requiring that from Fiscal Year 2003-04 to 2007-08, gasoline sales tax revenues be used for specified transportation purposes. In addition, the measure requires that starting in 2008-09, the gasoline sales tax revenue continue to be used for state and local transportation purposes. The measure will generate approximately $1.3 - $1.5 billion per year, and will be allocated as follows:

- 20 percent to public transportation
- 40 percent to transportation improvement projects funded in the State Transportation Improvement Program (STIP)
- 40 percent to local streets and roads improvements, with half the amount allocated to cities and half allocated to counties.

Federal transportation funds are apportioned to California based on the state's contribution to the federal Highway Trust Fund through federal taxes on transportation

[1] California Travels - Financing Our Transportation, Legislative Analyst's Office, May 2000.

fuels. Federal excise tax on gasoline is 18.4¢ per gallon, 24.4¢ on diesel, and 3.4¢-9.8¢ on gasohol.

The state receives about 65 percent of the revenues from the state gasoline and diesel excise taxes, while cities and counties receive about 35 percent for local streets and roads. The state's share, along with truck weight fees, are deposited in the State Highway Account.

In accordance with California State Constitution Article XIX, state gasoline tax monies may only be used to plan, construct, maintain, and operate public streets and highways; and to plan, construct, and maintain mass transit tracks and related fixed facilities. Gasoline tax revenues cannot be used to operate or maintain mass transit systems or to purchase or maintain rolling stock (trains, buses or ferries).

Local funds constitute about half of all public funds spent on transportation. Over one-third of local funds for transportation are derived from optional local sales taxes on all sales and dedicated for transportation purposes, the balance is made up from the Local Transportation Fund, transit fares, fees, assessments, and other local funds.

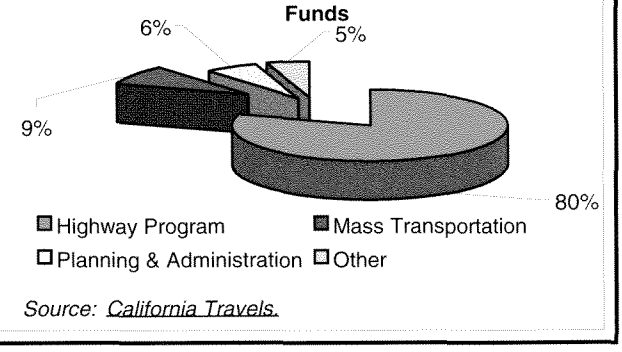
EXPENDITURES

Approximately 80 percent of state transportation expenditures are allocated to maintaining, rehabilitating, operating and improving the highway system. Mass transportation constitutes about 9 percent of total state transportation expenditures, planning and administration 6 percent, and the balance is directed to equipment and the Aeronautics Program.

About half the highway expenditures are for capital outlay projects and another 15 percent for project design, engineering, and environmental review. Local Assistance constitutes about 17 percent of highway expenditures and maintenance 12 percent.

Figure 8

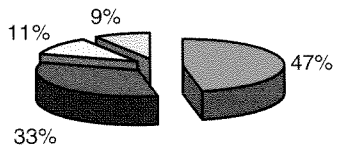
1999-00 Expenditures from State & Federal Funds



Source: California Travels.

Figure 9

Local Streets & Roads Expenditures



Rehab, Construction & Lighting
Maintenance
Engineering & Admin
Storm Drain, Bike & Pedestrian

Source: California Travels.

Funding for the four-year State Highway Operation and Protection Program (SHOPP), and ten-year Plan, comes off the top of the capital outlay portion. SHOPP projects are limited to capital improvements relative to maintenance, safety, and rehabilitation of the state highways and bridges that do not add a new traffic lane to the system. The updated SHOPP adopted by the CTC in May 2000 identifies $11 billion in rehabilitation and operations projects over

the next ten years.

The balance of the capital outlay category funds the STIP. STIP funding is allocated 25 percent to Caltrans for the inter-regional road system and intercity rail, and 75 percent to the regional transportation planning agencies.

Nearly half of local street and road expenditures are spent on street rehabilitation, construction, and lighting projects. Maintenance receives about one-third of the annual expenditures, engineering and administration account for about 11 percent, and storm drain repair, pedestrian, and bicycle facilities receive the remaining 9 percent.

ENFORCEMENT

In addition to fuel taxes, Californians pay vehicle registration fees and driver license fees in order to operate vehicles. Revenue generated from these fees can only be used for the state administration and enforcement of traffic and vehicle laws. The 2000-01 budget included $1.2 billion for traffic enforcement purposes, 70 percent of which support the California Highway Patrol.

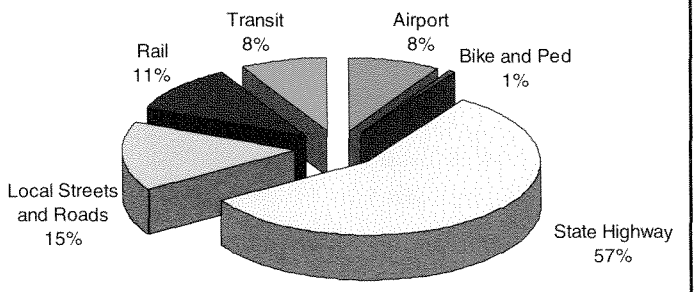
APPENDIX VI

PLANNED PROJECTS

20-YEAR TRANSPORTATION PLANS

The California Transportation Investment System database (described in this Appendix) includes planned projects taken from the Regional Transportation Plans approved as of January 2000 and projects from state level system plans, including the Interregional Transportation Strategic Plan and California Aviation System Plan. Combined with project data from the 2000 State Transportation Investment Program and State Highway Operations and Protection Program, just under $70 billion in investment is planned for the transportation system within the next 20 years.

Figure 10 **Planned Transportation Investments in California**



Sources:
Planned Projects from CTIS v1.2
Programmed Projects from CTIPS April 2001

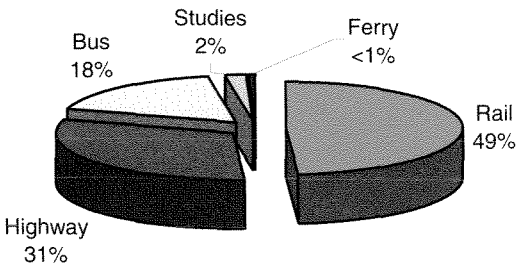
Total Investment:
$69,425,722,000

The following chart displays percentage of investment by project type. Fifty-seven percent of the investment is planned for the state highway system and, when combined with the local streets and roads projects, totals to 72 percent of all investment targeted to California's roadways.

GOVERNOR'S TRAFFIC CONGESTION RELIEF PROGRAM

In July 2000, Governor Gray Davis signed Assembly Bill 2928 (Chapter 91 Statutes of 2000), implementing the TCRP. The plan's purpose is to relieve congestion, improve goods movement, and provide intermodal connectivity. As enacted, the plan provides $5 billion in new funds to 141 high priority projects and another $1.4 billion for local streets and road maintenance, transit operations, and STIP projects over seven fiscal years. The 141 projects focus on the most congested corridors in the state and include highway, transit, and rail projects.

Figure 11
TCRP Distribution of Capital & Planning Funds by Mode



Source: Office of Traffic Congestion Relief Program

Funds for the Traffic Congestion Relief Program are from the state sales tax on gasoline that normally goes to the General

Fund. These funds are not subject to State Constitution Article XIX restrictions, as discussed in Appendix IV.

The Governor's Traffic Congestion Relief Program provides funding for projects as follows:

1. *To "jump start" projects that currently lack funding.* Funds provided will enable studies to begin and secure project consensus. Completion of studies, better scope definition, and consensus obtained will facilitate securing the remaining funding needed to implement each project.

2. *To fully fund projects so that the project may be implemented or construction can begin.* Full funding will accelerate the implementation or construction of a project by making funding available earlier than it may have been otherwise. This includes funding the design phase so that design can be completed, or providing funding to secure the needed right-of-way for a project.

3. *To provide funds for projects that would be restricted by or difficult to pursue due to Article XIX.* Because the sales tax on gasoline is not subject to the restrictions of Article XIX, the Traffic Congestion Relief Program funds are more flexible and therefore can be used for the purchase of buses and rolling stock.

APPENDIX VII

ONGOING WORK

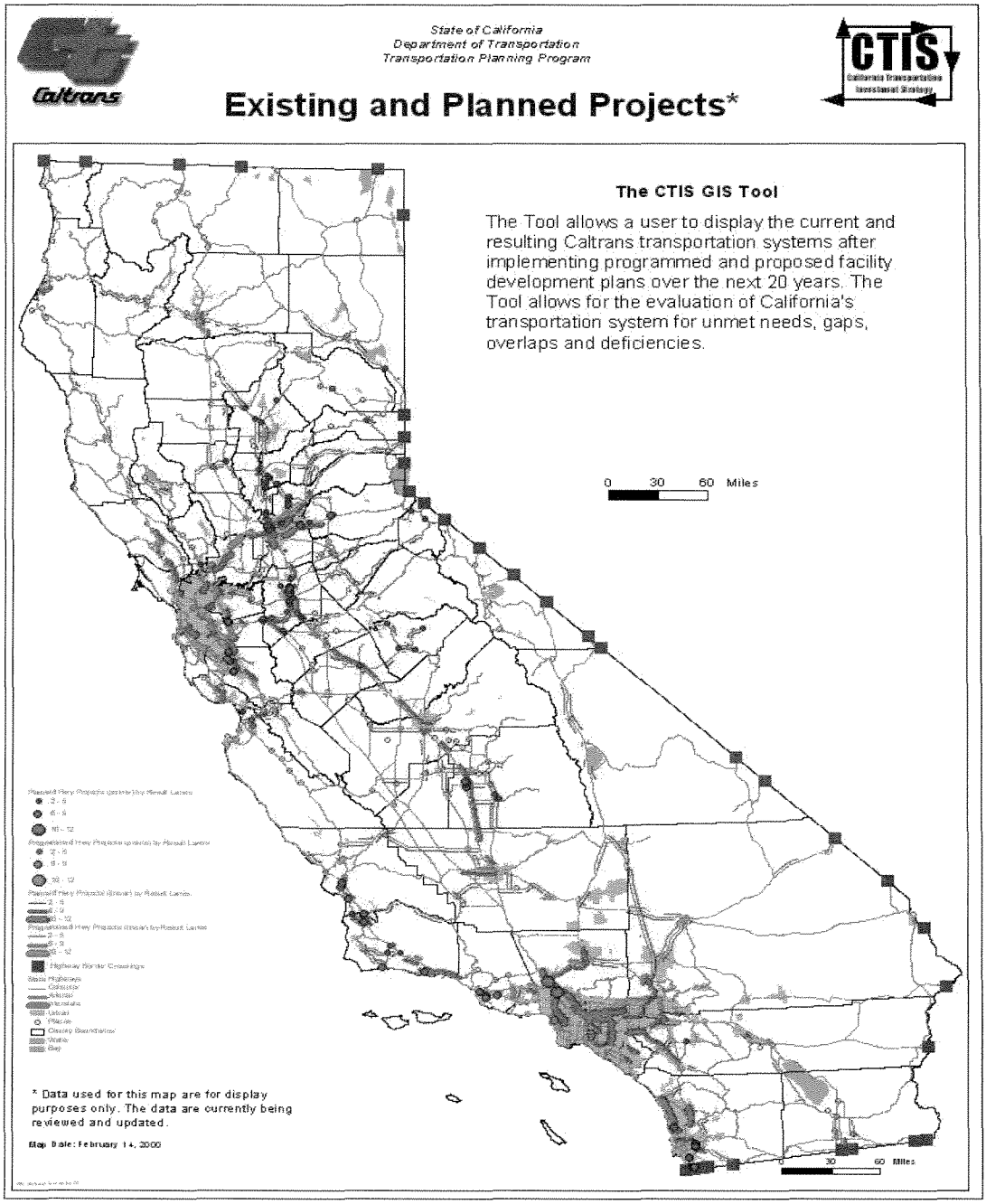
A. California Transportation Investment System
Geographic Information System Tool

Background

In December 1998, as a first step in initiating the update of the CTP 2025, a team comprised of Caltrans staff and regional partners identified the need to integrate existing long-range plans of both Caltrans and regional transportation planning agencies by creating a Geographic Information System (GIS) tool of the current and planned transportation system. The resulting product is a customized ESRI ArcView project co-developed by Caltrans' Office of State Planning (OSP) and the GIS Services Branch of the Division of Transportation System Information, with input from both a policy and a technical advisory committee comprised of internal and external partners. In January 2001, the first official version (v1.1) of the California Transportation Investment System (CTIS) GIS tool was released, along with supporting documentation including a user's guide, data dictionary, and metadata. The tool was posted to Caltrans' website in May, making it available for downloading by external agencies.

Purpose

The goal of the CTIS tool is to present a comprehensive map of transportation projects in progress and planned in the next 20 or more years by the state and our regional transportation planning partners on California's transportation system. The tool maps highway, local road, rail, and airport projects. Bicycle, pedestrian, and planning projects are also included within the tool, but are not mapped.



The CTIS tool can be used to view spatial data and perform basic analyses on the transportation projects, such as total dollars to be invested on highway facilities by project purpose. This sketch level tool also serves as a communication tool facilitating initial dialogues between agencies regarding what is planned in a given geographic area. CTIS is intended to improve decision-making by assisting Caltrans and regional planners in identifying and assessing gaps, overlaps, and inconsistencies in planned transportation projects, and opportunities for improved timing and coordination of projects, as well as providing a comprehensive representation of existing system plans as input to the CTP 2025 and subsequent Plan updates.

Project Status

After the tool's release in January 2001, a statewide marketing campaign was launched to present the tool to internal staff and staff from partnering agencies. These presentations culminated in the formation of a workgroup, comprised of regional transportation planning agency representatives and staff from related Caltrans divisions to develop an update process and cycle for the tool data, and to make recommendations to better integrate various project-related databases and improve compatibility of GIS data and tools.

While the long-term update process is being designed, staff has developed a relational database to update the tool's programmed project data with the 2000 STIP projects. This update, which is near completion, will result in version 1.3 of the tool.

Near Future and Ultimate Vision

Following the release of version 1.3, the update of the planned project data will be initiated. The regional transportation plans (RTPs), the source of the majority of the planned projects, are currently in the process of being updated to reflect the new requirements contained in the RTP Guidelines released last year. The project data from these new RTPs will be entered into the CTIS database as they become available. Project data from state level system plans, including aviation, interregional, and passenger and freight rail projects will also be added.

The ultimate vision of the tool is that it will be web-based, allowing access without the necessity for the user to have GIS software. It will be possible for the owners of the project data to update the tool's attribute (or descriptive) data, spatial (location) data, and even the project location by simply "pointing and clicking" on a map. The tool will be dynamically linked to other Caltrans databases, such as the California Transportation Improvement Program System (CTIPS) database of programmed projects, allowing users to access up-to-date information. The tool will display location of all modes of projects, including bicycle, pedestrian, and transit projects, which are currently only viewable in table format. Also, local roadway and rail projects will be displayed as linear events (with to and from locations) rather than as a single point (at the main facility and cross street).

B. California Transportation Plan Trends and Demographic Study

The objectives for the California Transportation Plan Trends and Demographic Study were to identify trends and population changes that will affect California's transportation system, travel behavior, and the development of policies and strategies. The findings were based upon emerging social, economic, and business trends, and California's projected demographic composition and distribution as derived from the 2000 National Census. The results of the study will assist transportation planners and providers to develop strategies to address California's transportation needs in ten and twenty years (2015 and 2025). The project included issue papers, a final report, and a Geographic Information System tool to geographically display the projected population changes. The study was completed in Fall 2002.

University of California, Berkeley Professor Elizabeth Deakin developed the background papers for the first phase of the study. The trends identified in these papers included increases in automobile usage and ownership, population growth, and an increasing proportion of younger and older Californians. Other issues that were discussed in the papers are housing location, employment patterns, technological advances, freight transportation, and environmental considerations. The issue papers are posted on the University of California Transportation Center's website at: www.uctc.net/trends/.

The research team conducting the remainder of the study was led by Professors Randall Crane and Abel Valenzuela from the University of California, Los Angeles, Christopher Williamson from the Solimar Research Group, and University of Southern California Professor Dowell Myers. This phase of the study involved examining population changes and analyzing transportation trends and issues that will impact California over the next 20 years.

During the first part of this phase, tract level population projections were prepared for the years 2015 and 2025. These projections were generated using existing demographic data and the 2000 Census, in conjunction with demographic projections from the Department of Finance and Metropolitan Planning Organizations. The population projections were then mapped using a Geographic Information System program.

Additionally, the research team examined supplemental data to enhance the knowledge of the relationships between race, ethnicity, transportation choices, and immigrant status. This included consideration of specific segments of the labor market such as domestic workers, day laborers, and migrant farm workers.

After the data was assembled, the research team formulated and calibrated a statewide travel demand model. The model considered population changes, travel behavior, and land-use patterns to illustrate possible demand levels on California's transportation system in 2025.

Caltrans will continue to update and enhance the data as information is made available from the 2000 Census and other sources.

C. THE 2000 – 2001 STATEWIDE TRAVEL SURVEY

Caltrans maintains a statewide travel database which is used to estimate, model, and forecast travel throughout the State. The database is periodically updated with information gathered from statewide household surveys and in conjunction with the national census. Caltrans, working with the consulting firm NuStats, recently completed an extensive 2001 statewide travel survey that acquired travel and socioeconomic data on 17,000 California households selected at random through telephone interviews. This origin and destination study provides transportation planners, analysts, and engineers with a comprehensive perspective of where trips start and end. It can be compared to the data collected in the 1991 Travel Survey to examine regional and statewide changes in trip rates per household and per vehicle, travel mode, trip length information, and vehicle occupancy rates.

D. JOB ACCESS AND REVERSE COMMUTE STUDY

A study entitled "Job Access and Reverse Commute in California: Markets, Needs, and Policy Prospects" is underway to determine the impacts of decentralization of employment on urban residents. The study, conducted by the Institute of Transportation Studies, University of California, Berkeley, will evaluate the level of demand for reverse commute transportation services, the spatial patterns of trip-making, the socio-demographic breakdown of reverse commuters, commuter mode choice, and institutional factors in large and small metropolitan areas and rural counties.

APPENDIX VIII

CALIFORNIA COMMISSION ON BUILDING FOR THE 21ST CENTURY

INVEST FOR CALIFORNIA
STRATEGIC PLANNING FOR CALIFORNIA'S FUTURE PROSPERITY AND QUALITY OF LIFE

In 1999, Governor Gray Davis established a 48-member Commission on Building for the 21st Century through an Executive Order. The Commission, co-chaired by Maria Contreras-Sweet, Secretary, BT&H, and Cruz M. Bustamante, Lieutenant Governor, was charged with exploring infrastructure issues that affect tens of millions of Californians each day.

The Commission evaluated the eight building blocks of California infrastructure:

- Educational facilities
- Energy
- Housing
- Land-use
- Public facilities
- Technology
- Transportation
- Water.

It also identified the challenges of financing infrastructure and provided new options. The Commission's report is available at: http://www.bth.ca.gov/invest4ca/

The draft CTP is consistent with the Commission's findings and recommendations for transportation. Additionally, the Commission's Transportation Committee developed the following set of criteria and performance measures for evaluating transportation proposals, geared toward improving project delivery and maximizing investments. The criteria are listed in alphabetical order.

Congestion Relief: The extent to which the project would reduce commute travel times and costs of delay in urban areas during the rush hour peaks.

Connectivity: The extent to which the facility bands and coordinates with other transportation facilities, various transportation modes, user needs (such as pick-up and drop-off points), non-transportation facilities, other regions of the state, and international and national trade routes.

Convenience/Comfort: Factors include the ability of the traveler to get to the facility at the beginning of the trip and continue to travel (if necessary) after exiting the facility; enjoyability of the travel; comfort on the facility; privacy; noise; odors; protection from heat, cold, rain, etc.; and the ability to perform functions other than operating the vehicle during the trip (such as reading, using a computer, conversing, listening to music, watching television, using the telephone, etc.).

Cost: The internal and external costs to the public for planning, designing, constructing, maintaining, operating, and using the facility. The present value of any future cost and whether other sources of funding could be obtained and leveraged to increase the overall investment.

Efficiency: The effectiveness of the facility as measured by its use, such as cost per trip, time or speed per trip, cost per person or person-mile, cost/speed of goods movement, reliance on other facilities, etc.

Evolving Technology: The extent to which the facility can be enhanced and improved in the future if anticipated new technology is developed; the feasibility or probability of such technology being developed, the cost of developing or applying such technology, and the extent to which such technology will improve or add benefit to the facility.

Flexibility: The continued usefulness of the facility based on ability to adjust to changes in future transportation needs, destinations, modes, and facilities; environmental considerations, and ability to move one or a number of people and goods.

Individual Mobility: The facility's ability, by itself or in coordination with other facilities, to enable the individual traveler to go where and when he/she wants, with or without luggage or equipment, including the ability to engage in side trips or multiple stops for varying lengths of time.

Longevity: The extent to which an incremental capital, operational, or maintenance investment can extend the useful service life of a facility; forestall the need for its replacement and thus reduce future capital outlay costs and system degradation.

Potential Future Disruption: Sensitivity and susceptibility of the facility to labor stoppages, sabotage, earthquakes and other natural disasters, future fuel or material shortages, deterioration, maintenance problems and cost versus durability, etc.

Project Delivery: The steps that would be required to implement the project from planning through post-construction operation, the feasibility or likelihood of ultimate implementation, and the elapsed time until the facility is usable.

Public Acceptance: The extent to which the public supports, accepts, is concerned about, or opposes the mode of transportation, the cost, the funding mechanism, or other factors.

Quality of Life Impacts: The extent to which the facility adds to or reduces air and other pollution, its appearance, its contribution to improved or deteriorating quality of life, its contribution to economic growth, and other opportunities.

Safety: Personal and vehicular safety in accessing the facility at the start of the trip and traveling on at the end of it; safety of the vehicle/facility from accidents and other hazards; and safety of the individual traveler while using the facility.

Speed/Travel Time: The total time required for individuals to begin and end their trips, including waiting and travel time for connecting facilities. This should be compared to the total travel time if the facility is not constructed and/or if another alternative facility were implemented. Total trip time, not just time spent on the proposed facility, should be evaluated.

Use of Existing Capacity: The extent to which the facility adds to or enhances existing facilities and increases the usage of underutilized facilities.

APPENDIX IX

GLOBAL GATEWAYS DEVELOPMENT PROGRAM SUMMARY

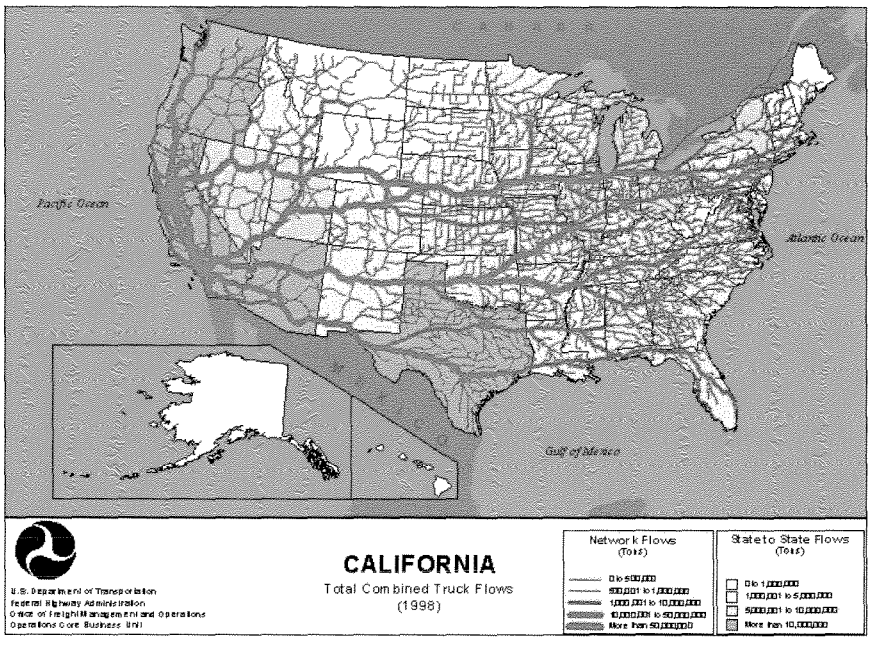
The Global Gateways Development Program is a reflection of stakeholder perspectives on the urgency and options to facilitate the movement of goods in California. The report suggests that goods movement is an economic and transportation priority and calls for actions to enhance the capacity and improve the efficiency of California's global goods movement system.

The plan focuses on facilities that deal with the highest freight volumes and transportation challenges including: international airports, seaports, trade corridors, border crossings, major intermodal transfer facilities, and goods movement distribution centers. A major objective of this program is to identify goods movement projects with the greatest transportation, economic, community and environmental benefits that would be targets for state, federal, regional, local, and private funding.

The program is designed to generate discussion among policy makers, the transportation industry, and the public so that the state's most pressing transportation and community livability problems can be solved.

THE BENEFITS

The program's potential benefits are substantial. More than 1 in 7 jobs in California are tied to domestic and international trade. By reducing congestion and delay, the program will improve and provide more reliable access to international and domestic markets by California's businesses, carriers, and shippers. The bottom-line will be lower transportation and inventory costs, enhanced productivity, profits, growth, and competitiveness. The consumer will also benefit from lower product costs, reduced congestion, improved safety, and greater community livability.



Not only will Californians benefit from the program, but its impacts will be felt nationally. California's global gateways, such as the ports of Los Angeles, Long Beach, and Oakland, international airports at Los Angeles, San Francisco, and Oakland,

and its trade corridor highways, rail lines, and border crossings, represent the largest trade transportation complex in the United States. The nation relies heavily on this system, particularly for access to the Pacific Rim. Millions of jobs nationwide rely on California's transportation system.

THE CHALLENGES

The goods movement challenge is both substantial and immediate. Congestion and delays are mounting. The development of the state's gateway facilities and freight transportation infrastructure has not kept pace with the economic and trade growth. As a result, congestion, delays, accidents, and freight transportation costs have increased. Port container traffic and air cargo volumes are expected to triple by 2020, while overall goods movement volume is projected to jump 56 percent from 1996 to 2016. If the growing demand is not addressed, it could have dire impacts on the state's ability to remain competitive economically and drastically hurt California's ability to create new jobs and retain existing businesses. By bringing together the public and private sectors in a collaborative approach that reflects shared goals and understandings, the Global Gateways Development Program can serve as a focal point for statewide coalition building.

GATEWAY IMPROVEMENT NEEDS

Among California's top priority in global gateway issues are six ports (Long Beach, Los Angeles, Oakland, Hueneme, Sacramento and Stockton), five international airports (Los Angeles, San Francisco, Oakland, Ontario, and San Diego), and two border crossings (Otay Mesa and Calexico). Key international trade corridors identified include eight interstates, as well as substantial portions of seven others. Also identified are four U.S./State Routes and sections of eleven others, as well as the main lines of the Burlington Northern Santa Fe Railway and the Union Pacific Railroad. These support the key gateways in the origin and receipt of international trade, including the Los Angeles, San Francisco, Central Valley, and California/Mexico International Border regions.

For international airports, truck access is also a critical problem. Urbanization, ground-access limitations, air quality restrictions, and local opposition hinder expansion of California's largest airports. Both major railroads face capacity, environmental, and community-related problems. On California's highways, congestion is becoming a major challenge for commuters and truck drivers alike. The system must be maintained and expanded, and its operational efficiency must be improved, if these congestion problems are to be mitigated.

FUNDING

Most stakeholders believe that funding to improve California's gateways and goods movement system will need to come from both innovative public-private partnerships, and modifications of existing state and federal programs. California provides ongoing funding through the State Transportation Improvement Program, the State Highway Operation and Protection Program, and the California Aid to Airports Program. Existing innovative financing programs such as the Transportation Congestion Relief Program,

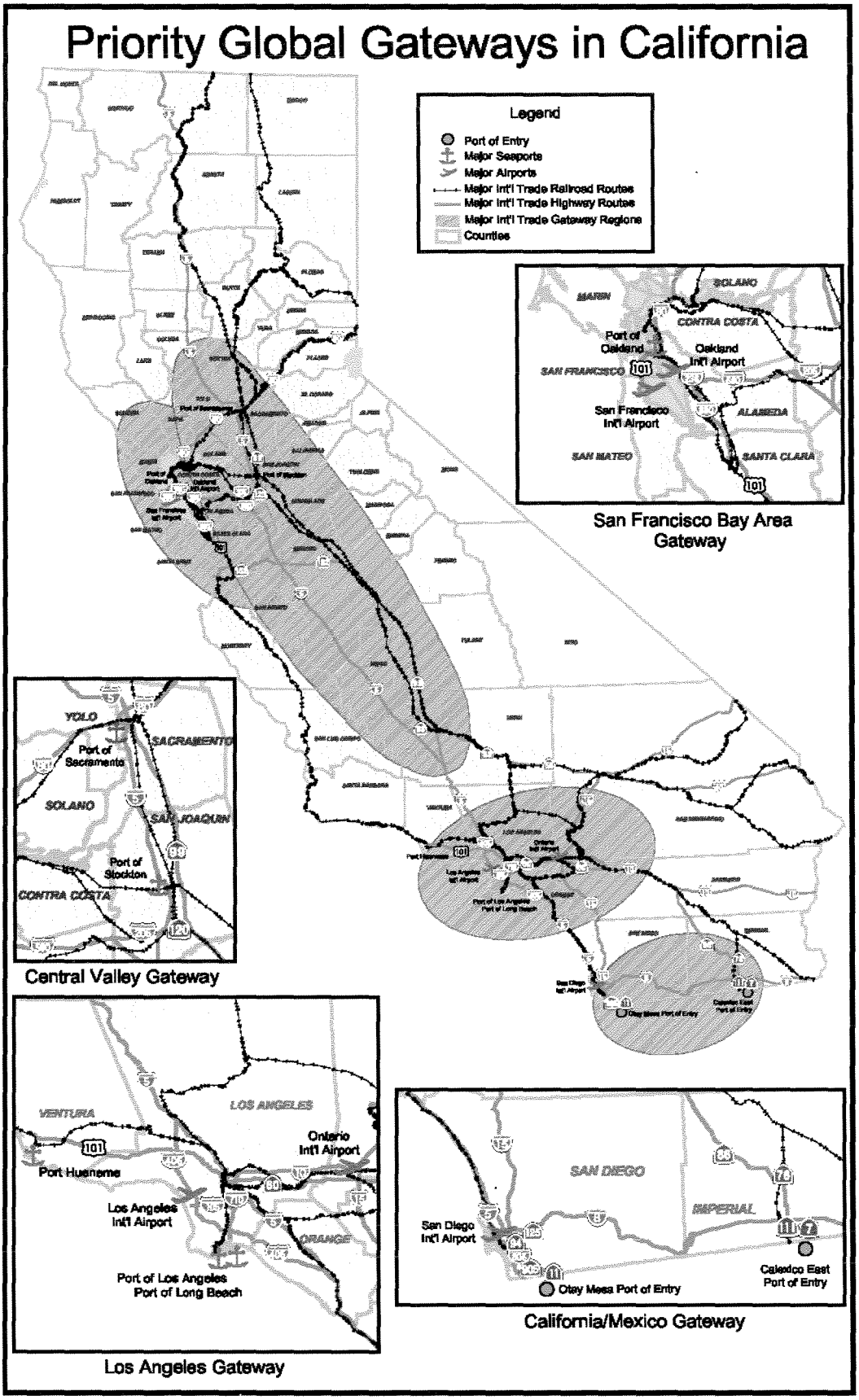
the State Highway Account, Grant Anticipation Revenue Vehicles, the Transportation Finance Bank, and the California Infrastructure and Economic Development Bank need to be modified to be fruitful funding sources. Increases in regional participation in the funding of major goods movement projects must also occur to a much larger degree.

The federal government, through the Transportation Equity Act for the 21st Century (TEA-21), provides funding that can be used for goods movement. However, in practice, only limited amounts of these funds have been used specifically for goods movement projects. Federal programs often feature restrictive eligibility requirements, rules, and other limitations.

STAKEHOLDER OPTIONS FOR GOODS MOVEMENT IMPROVEMENTS:

The stakeholders offered the following options for policy makers to consider to improve the flow of goods movement through California's gateways:

- The state, regional transportation planning agencies, and other local agencies should take an aggressive role in planning, funding, developing, operating, and maintaining critical public portions of the goods movement transportation system
- The state should also take the lead in securing federal cooperation in meeting California's goods movement needs. During the TEA-21 reauthorization process in 2003, the state should seek a stronger goods movement emphasis and greater funding flexibility in the use of traditional federal transportation funding programs.
- The state should actively pursue improving the operating efficiency of the state's major gateways. California should actively pursue the implementation of Intelligent Transportation System applications and should work as a leader, negotiator, broker, and partner to bring about other efficiency improvements.
- The state should provide greater flexibility in the use of state funds.


Priority Global Gateways in California
Legend
Port of Entry
Major Seaports
Major Airports
Major Int'l Trade Railroad Routes
Major Int'l Trade Highway Routes
Major Int'l Trade Gateway Regions
Counties
MARIN
SOLANO
CONTRA COSTA
Port of Oakland
Oakland Int'l Airport
SAN FRANCISCO
San Francisco Int'l Airport
ALAMEDA
SAN MATEO
SANTA CLARA
San Francisco Bay Area Gateway
YOLO
SACRAMENTO
Port of Sacramento
SOLANO
SAN JOAQUIN
Port of Stockton
CONTRA COSTA
Central Valley Gateway
VENTURA
LOS ANGELES
Ontario Int'l Airport
Port Hueneme
Los Angeles Int'l Airport
ORANGE
Port of Los Angeles
Port of Long Beach
Los Angeles Gateway
SAN DIEGO
IMPERIAL
San Diego Int'l Airport
Otay Mesa Port of Entry
Calexico East Port of Entry
California/Mexico Gateway

APPENDIX X

REGIONAL TRANSPORTATION PLANS

Regional Transportation Planning Agencies (RTPA) are responsible for developing and adopting a 20-year regional transportation plan every three years in urban areas, and every four years in non-urban. There are 43 designated RTPAs in California. Sixteen of these are federally recognized and funded Metropolitan Transportation Organizations (MPO) with urbanized areas with population in excess of 50,000. The 29 non-urban RTPAs are funded primarily with state funds.

Regional transportation plans (RTP) are required by California Government Code Section 65080 et seq., and United States Code, Title 23, Sections 134 and 135 et seq. As per state law, each RTPA shall prepare and adopt an RTP directed at achieving a coordinated and balanced regional transportation system, including, but not limited to, mass transportation, highway, railroad, maritime, bicycle, pedestrian, goods movement, and aviation facilities and services. Additionally, the RTP shall be action-oriented and pragmatic, considering both the short-term and long-term time periods.

The RTP Guidelines adopted by the CTC states there should be consistency among the CTP, the RTP, and other transportation plans developed by cities, counties, districts, private organizations, tribal governments, and state and federal agencies.

Unlike the CTP, the RTPs identify projects. The CTC cannot program projects that are not consistent with an adopted regional transportation plan.

Air quality is a major consideration in the development of RTPs. Federal legislation requires that the RTP conform to the State Implementation Plan. Conformity is demonstrated by meeting to emissions levels where they apply, to meeting other emissions tests as they apply, and by implementing transportation control measures as required by the State Implementation Plan.

Additionally, the MPOs shall provide an analysis of and consider the likely social and environmental effects upon; housing, employment, community development, land use, central city development goals, etc.

APPENDIX XI

GLOSSARY & LIST OF SELECTED ACRONYMS

GLOSSARY

Advanced Transportation Systems – Use of advanced technology to manage and operate the transportation system; provide traveler information; improve vehicle and system safety; and improve construction and maintenance. Vehicle- and infrastructure-based advanced transportation systems apply to transit and goods movement as well as privately owned vehicles.

Affordable Housing – Housing that costs no more than 30 percent of a resident's monthly-adjusted gross income. With the enactment of the National Affordable Housing Act (NAHA), state and local government officials have been challenged to devise programs that develop or rehabilitate neighborhood housing that meets that definition.

Amtrak's California Passenger Rail System 20-Year Improvement Plan – This plan, released in March 2001, calls for faster, more frequent and more convenient passenger rail service to all of the state's major population centers. It establishes goals for the state's existing and emerging rail corridors and proposes a vision enabling ridership to grow by 300 percent over the next 20 years.

Business, Transportation and Housing Agency (BT&H) – BT&H is part of the Executive Branch of California government and its Secretary is a member of the Governor's cabinet. BT&H oversees the activities of 14 departments, including Caltrans, California Highway Patrol, and Office of Traffic Safety, and has a collective budget of $12.4 billion and more than 47,000 employees.

California Aviation System Plan (CASP) – Caltrans prepares this plan, in consultation with transportation planning agencies. The plan provides a framework to guide continuous system planning for the future development and preservation of the statewide system of airports and aviation facilities.

California Infrastructure and Economic Development Bank (CIEDB) – Created in 1994 to promote economic revitalization, enable future development, and encourage a healthy climate for jobs in California, the CIEDB operates pursuant to the Bergeson-Peace Infrastructure and Economic Development Bank Act contained in the California Government Code Sections 63000 et seq. The CIEDB is located within the California Technology, Trade and Commerce Agency and is governed by a three-member Board of Directors.

California Transportation Commission (CTC) – Established by Assembly Bill 402 in 1978, consists of nine members appointed by the Governor, which serve staggered four-year terms, and include two non-voting ex-officio members, one each from the State Senate and State Assembly. The Commission is responsible for programming and allocating funds for Capital projects throughout California. The Commission also advises and assists the Secretary of Business, Transportation and Housing Agency and

the Legislature in formulating and evaluating state policies and plans for California's transportation programs.

California Transportation Investment System (CTIS) – A spatial data viewer and basic query tool designed by the Office of State Planning (OSP) staff. The purpose of this sketch-level tool is to display on a map where transportation investment is currently underway (programmed) and where it is planned over the next 20 years. The Tool attempts to display all modes of transportation projects including highway, local, rail, aviation, transit, bicycle, and pedestrian.

California Transportation Plan (CTP) – Federal and state regulations require each state to develop a state plan with, at a minimum, a 20-year horizon. The plan is required to be multi-modal and comprehensive and to be developed in coordination with Metropolitan Planning Organizations, local elected officials, and Indian Tribal Governments.

Capital Outlay Projects – Projects that replace, improve, or build new facilities. Does not include operating and maintenance costs.

Clean Fuel Vehicles – Vehicles that run on sources that are certified to meet federal Clean Fuel Vehicle emissions standards. Clean fuels include alternative fuels, oxygenated fuels, reformulated gasoline, hybrid, and low-emission conventional gasoline.

Community Values – Common beliefs shared by a community as a result of relationships within families, social institutions, religious organizations, and the educational system overlaid by more general understandings defined by consensus in the broader communities of life. In reference to transportation, it is incorporating these beliefs via community input in the design and construction of transportation facilities.

Commuting Sheds – The distance measured in a radius from a center that people commute to for employment purposes.

Congestion – The FHWA definition of congestion is when an Interstate highway exceeds 13,000 vehicles per-lane-mile daily, or 5,000 vehicles per-lane-mile on principal arteries.

Context Sensitive Solutions – Context Sensitive Solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders.

Demographics – A broad social science discipline concerned with the study of human populations. Demographics deal with the collection, presentation, and analysis of data relating to the basic life-cycle events and experiences of people: birth, marriage, divorce, household and family formation, employment, aging, migration, and death. The demographic studies include changes in the human condition, such as health and morbidity, family systems and family structure, the role of women, the value of children, and society, culture, and institutions.

Economic Prosperity – The ability to sustain and prosper economically based upon several factors including demographics, labor force, income, inflation, real estate markets, gross state and national product, industry, exports, imports, and the overall economy.

Employment Centers – An area that provides a concentration of jobs.

Environmental Quality – Refers to the factors that affect our air, water, and land, and how much of an impact those factors have on our ability to live in clean and healthy surroundings.

Farebox Return – Refers to the revenue received from the sale of tickets from operating public transit in relation to the cost of providing the service.

Federal Highway Administration (FHWA) – An agency of the U.S. DOT that directly administers a number of highway transportation activities including standards development, research and technology, training, technical assistance, highway access to federally owned lands and Indian lands, and commercial vehicle safety enforcement. FHWA also works in partnerships with state and local agencies to facilitate development and maintenance of state and local transportation systems of the national intermodal transportation system.

Fiscalization of Land Use – A policy environment in which land-use decisions are made mostly or entirely based on fiscal considerations, rather than with an eye toward healthy and balanced communities. In California, local governments' revenue source is largely from sales tax that influences land-use toward retail development.

Gateways – Refers to major freight gateways in California that include airports, seaports, international ports of entry, major intermodal transfer facilities, goods movement distribution centers, and trade corridors.

Geographic Information System (GIS) – An organized collection of computer hardware, software, geographic data, and personnel designed to efficiently capture, store, update, manipulate, analyze, and display all forms of geographically referenced information. GIS can help answer questions, address problems or display information relating to location, proximity, conditions, trends, and patterns.

Goods Movement – The general term referring to the flow of commodities, modal goods movement systems, and goods movement institutions.

Governor's Office of Planning and Research (OPR) – The Office of Planning and Research (OPR) is a part of the Governor's Office. It assists the Governor and the Administration in land-use planning, research, and liaison with local government, small business advocacy, rural policy, environmental justice, and various interagency task forces. OPR is looked to by other state agencies as the coordinator for several environmental and state planning programs.

Grant Anticipation Revenue Vehicles (GARVEE) – A debt-financing instrument that permits its issuer to pledge future federal highway funds to repay investors.

Greenhouse Gas Impacts – The earth's climate is predicted to change because human activities are altering the chemical composition of the atmosphere through the buildup

of greenhouse gases – primarily carbon dioxide, methane, and nitrous oxide. Although uncertainty exists about exactly how earth's climate responds to these gases, global temperatures are rising, according to the U.N.'s Environmental Programme and the World Meteorological Organization's Inter-governmental Panel on Climate Change. Rising global temperatures are expected to raise sea level, and change precipitation and other local climate conditions. Fossil fuels burned to run cars and trucks, heat homes and businesses, and power factories are responsible for about 98 percent of U.S. carbon dioxide emissions, 24 percent of methane emissions, and 18 percent of nitrous oxide emissions. In California, 58 percent of fossil fuel emissions of carbon dioxide are related in some way to transportation, according to the California Energy Commission's Greenhouse Gas Inventory Update, 2001.

High Density Development – The definition of "high density" can vary, depending on the existing density characteristics of the community and can include both multi-family and single-family housing. The goal is to increase the amount of housing that can be built on any given site or amount of land.

High Speed Rail Plan – The California High Speed Rail Authority was created by the state legislature to develop a plan for the construction, operation, and financing of a statewide intercity high-speed passenger rail system. The plan describes a 700-mile-long high-speed train system capable of speeds in excess of 200 miles per hour on dedicated, fully-grade separated tracks serving the major metropolitan centers of California by 2020.

Impermeable Surfaces – Surfaces that do not allow filtration of storm water, causing the water to collect and flow through a storm drainage system. This runoff may end up in local streams and rivers along with pollutants that may have accumulated in the water.

Intelligent Transportation System (ITS) – The application of advanced sensor, computer, electronics, and communication technologies and management strategies to increase the safety and efficiency of the surface transportation system. ITS systems may be vehicle- and infrastructure-based and apply to privately owned vehicles, transit, and goods movement.

Intercity Rail – Operates largely between several regions of the state, using the Railroad Mode. Amtrak funds Basic system trains. Both the state and Amtrak fund state-supported trains.

Intercity Transportation – Transportation of any mode between two distinct incorporated cities, towns, or inhabited residential clusters that are neither adjoining nor within the same or contiguous urbanized areas.

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) – Legislative initiative by the U.S. Congress that restructured funding for transportation programs. ISTEA authorized increased levels of highway and transportation funding and an increased role for regional and metropolitan planning commissions in funding decisions. The Act also requires comprehensive regional and statewide long-term transportation plans and places an increased emphasis on public participation and transportation alternatives.

Intermodal Transportation System – Applying a system's approach to transportation in which goods or people are transported in a continuous and efficient manner between origin and destination, using two or more modes in the most efficient manner, and by providing connectivity between transportation options.

International Migration – The influx of people from different countries into California with the intention of remaining in the state.

Interregional Road System – A series of interregional state highway routes, outside the urbanized areas, that provides access to, through, and links between, the state's economic centers, major recreational areas, and urban and rural regions.

Interregional Transportation – Travel to and through the state and between regions (adjacent or non-adjacent) as defined under "Region."

Interregional Transportation Improvement Program (ITIP) – Funds capital improvements on a statewide basis, including capacity increasing projects primarily outside of an urbanized area. Projects are nominated by Caltrans and submitted to the CTC for inclusion in the State Transportation Improvement Program. The ITIP is a four-year program of projects that represents 25 percent of the STIP funding.

Interregional Transportation Strategic Plan (ITSP) – The ITSP identifies six key objectives for implementing the Interregional Improvement Program and strategies and actions to focus improvements and investments. This document also addresses development of the interregional road system and intercity rail in California, and defines a strategy that extends beyond the 1998 State Transportation Improvement Program.

Livable Community – Characterized by mixed land uses; compact development; range of housing choices; walkable neighborhoods; sense of place; preservation of open space and farmland; rehabilitation and redevelopment in existing communities; and variety of transportation choices.

Local Government Commission (LGC) – A nonprofit, nonpartisan, membership organization composed of elected officials, city and county staff, and other interested individuals. The LGC members are committed to developing and implementing local solutions to problems of state and national significance. Serving as a complement to the League of California Cities and the California State Association of Counties, the LGC provides peer-networking opportunities, acts as an interface between city and county officials, and provides practical policy ideas for addressing serious environmental and social problems.

Low Density Development – The definition of "low density" can vary, depending on the existing density characteristics of the community but usually includes single-family housing and the absence of compact housing on a site or the land.

Metropolitan Planning Organization (MPO) – A planning organization created by federal legislation that establishes a forum for cooperative decision-making. Each MPO represents an urbanized area with a population of over 50,000 people.

Metropolitan Transportation Plan (MTP) – A 20-year plan that is updated every three years. It has policy, financial, and action elements and is the result of both local and

regional planning efforts. To receive federal or state funding, projects nominated by cities, counties, and agencies must be consistent with the action element of the MTP.

Mitigate – To avoid, minimize, rectify, or compensate for an impact upon.

Mixed Land Use – Developing land that provides for a high density of uses including residential, commercial, and employment.

Multi-Modal Transportation System – The availability of transportation options using different modes within a system.

National Freight Partnership – A coalition of transportation experts from various Metropolitan Planning Organizations (MPOs), local private sector businesses, state transportation officials, and federal representatives from the U.S. DOT created for the purpose of addressing freight issues. Public officials and industry consider both: (1) priority needs for federal and state planning and assistance programs that can enhance freight productivity and mobility in the next decade and beyond; and (2) ways to increase the growing partnership efforts between the public and private sectors that can improve intermodal freight transportation performance and efficiency.

Open Space – Land set aside for purposes of preservation, recreation, or public benefit. Can be categorized as agricultural land, wetlands, scenic views, bodies of water, riparian lands, wildlife habitat, rangeland, forests and woodlands, parks, coastal lands, urban open space, or any other such land that has special geological or aesthetic qualities.

Paratransit – Programs that provide door-to-door, or curb-to-curb, transportation for people who may be elderly, disabled, or minors who do not have private transportation and who are unable to use public transportation to meet their needs.

Public Transportation – Transportation service to the public on a regular basis using vehicles that transport more than one person for compensation, usually but not exclusively over a set route or routes from one fixed point or another. Routes and schedules may be determined through a cooperative arrangement. Subcategories include public transit service, and paratransit services that are available to the general public.

Qualitative Indicators – A measurement that provides evidence that a certain condition exists or certain results have or have not been achieved. Indicators enable decision-makers to assess progress towards the achievement of intended outputs, outcomes, goals, and objectives.

Regional Transportation – Transportation within a specified region that can be single-county or multi-county.

Regional Transportation Improvement Program (RTIP) – A list of proposed transportation projects submitted to the CTC by regional transportation planning agencies (Metropolitan Planning Organizations and Regional Transportation Planning Agencies) for state funding. The RTIP has a four-year planning horizon and is updated every two years by the CTC.

Regional Transportation Plan (RTP) – A state-mandated document prepared every three years by all urban regional transportation-planning agencies, and every four years for non-urban. The RTP describes existing and projected transportation needs, conditions, and financing affecting all modes within a 20-year horizon.

Regional Transportation Planning Agency (RTPA) – A state-designated agency (multi-county or county-level agency), responsible for regional transportation planning to meet state planning mandates. RTPAs can be Local Transportation Commissions, Councils of Government, MPOs, or statutorily created agencies.

Rural Area – FHWA currently uses rural/urban definitions as found in the Section 101, Title 23 of U.S.C. which states that areas with less than 50,000 inhabitants in a specified boundary is considered rural.

Smart Cards – A plastic card about the size of a credit card, with an embedded microchip that can be loaded with data, used for telephone calling, electronic cash payments, and other applications, and then periodically refreshed for additional use. Smart Cards are used in the transportation sector for transit fare, tolls, and parking fees.

Smart Growth – Definition of this term varies among geographic regions. It could be generally defined as an effort to strike a balance between unplanned, haphazard, anything goes growth, and no growth at all. However, smart growth should be defined at a local and regional level so that the definition will be responsive to a region's unique economic, political, social, and environmental conditions. Specifically, sustainable communities programs are more likely than livable communities or smart growth programs to include or emphasize issues like global warming, endangered species protection, renewable energy development, or green design and building.

Soil Percolation – The downward movement of water through soil.

Spaceports – A facility from which a vehicle can be launched to carry a payload into space.

Stakeholders – Those who have an interest in a particular decision, either as individuals or representatives of a group. This includes people who influence a decision, or can influence it, as well as those affected by it.

State Highway Account (SHA) – An account established by federal regulations that holds revenues generated from state and federal taxes, fees, and federal appropriations for the purpose of funding transportation projects.

State Highway Operation and Protection Plan (SHOPP) – A program created by California State Legislature, which includes projects needed to maintain the integrity of the state highway system, primarily associated with safety and rehabilitation, and operational improvements. SHOPP projects do not expand the transportation system. SHOPP is a four-year program of projects, approved by the CTC separately from STIP.

State Passenger Rail Plan – A 10-year state plan required by Government Code Section 14036 and created in partnership with Amtrak, Caltrans, regional intercity joint powers boards, the freight railroads, and corridor task forces. This plan prioritizes investment

strategies and outlines costs and benefits of investment in passenger rail and freight rail.

State Transportation Improvement Program (STIP) – A list of transportation projects proposed in the RTIPs and ITIPs, which are approved for funding by the CTC.

Surface Transportation Policy Project (STPP) – The STPP is a national coalition of over 200 organizations working to promote transportation policies that protect neighborhoods, provide better travel choices, and promote social equity.

Sustainable Communities – Sustainable communities are closely associated with livable communities or smart growth programs. Sustainable community concepts are distinct in that they often include an explicitly global ("think globally, act locally") and long-term dimension ("...without compromising the ability of future generations to meet their own needs"). They tend to involve a more explicit view of the community as an important part of the larger world within which it functions, and they generally see the community as both having responsibility as a "global citizen" and as being significantly impacted by what happens on a global long-term basis.

System Connectivity – The ability to smoothly transition from one mode of transportation to another, and one jurisdiction to another with minimum delay and difficulty.

System Providers – Those who provide transportation services, equipment, or the infrastructure necessary for the public to travel. A system provider may be in the public or private sector, and may be at the local, regional, state, or federal level.

System Users – Those who use the transportation network in any form. This includes drivers who use highways and local roads, pedestrians, bicyclists, and those who use any form of public transit.

Telecommuting – An employee who works from a home office for either a portion of or all of the work week. He or she maintains a presence in the office electronically via phone, fax, pager, and e-mail and is usually, at a minimum, required to participate in some quarterly, monthly, or weekly meetings at the work location.

Traffic Congestion Relief Program (TCRP) – As enacted, the TCRP provides $5.3 billion for 141 specific projects ($4.9 billion) and to cities and counties for deferred maintenance ($400 million in fiscal year 2000/2001). Continued funding (approximately $1.5 billion) is also provided over a seven-year period to continue funding for local street and road maintenance purposes, to augment STIP programming, and to provide for transit operations.

Transit Oriented Development (TOD) – Transit Oriented Development (TOD) is a moderate to higher density development located within an easy walk of a major transit stop. It generally includes a mix of residential, employment, and shopping opportunities designed for pedestrians, without excluding the auto. TOD can be a single building, several buildings, or the redevelopment of existing buildings whose design and orientation facilitate transit use.

Transportation Equity Act for the 21st Century (TEA-21) – The successor to the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, TEA-21, which was

enacted June 9, 1998, authorizes highway, highway safety, transit, and other surface transportation programs through 2003.

Transportation Finance Bank (TFB) – The National Highway System Designation Act of 1995 created a State Infrastructure Bank (SIB) pilot program for the purpose of making loans, enhancing credit, subsidizing interest rates, and providing other assistance to public and private entities for eligible transportation projects. As one of 10 states selected for this pilot, California was authorized to create the Transportation Finance Bank (TFB).

Transportation Infrastructure – The basic facilities, services, and installations needed for the functioning of a transportation system. Infrastructure includes roads, fixed guideways, air, sea and spaceports, bicycle and pedestrian facilities, right-of-way, transit and maintenance facilities, and communication systems.

Transportation Mode – The type of transportation used for travel.

Transportation Providers – Those who serve the public by providing some form of transport.

Urban Sprawl – Leap-frog development. Haphazard growth or extension outward, especially that resulting from new housing on the outskirts of a city.

Value Pricing – A user charge based on a user's perceived cost when entering the traffic stream and the actual congestion cost created by the traveler's entry onto the system. Also called congestion pricing, its results are believed to make more efficient use of limited road capacity by encouraging those who value their trips at less than their full cost to shift to off-peak periods, mass transit, or car-pooling, and/or to less congested routes.

Vehicle Miles Traveled (VMT) – Used in trend analysis and forecasts. (1) On highways, a measurement of the total miles traveled in all vehicles in the area for a specific time period. It is calculated by the number of vehicles multiplied by the miles traveled in a given area or on a given highway during the time period. (2) In transit, the number of vehicle miles operated on a given route or line or network during a specific time period.

LIST OF SELECTED ACRONYMS

BT&H	Business, Transportation and Housing Agency
Caltrans	California Department of Transportation
CASP	California Aviation System Plan
CIEDB	California Infrastructure and Economic Development Bank
CTC	California Transportation Commission
CTIPS	California Transportation Improvement Program System
CTIS	California Transportation Investment System
CTP	California Transportation Plan
FHWA	Federal Highway Administration
GARVEE	Grant Anticipation Revenue Vehicles
GIS	Geographic Information System
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITIP	Interregional Transportation Improvement Program
ITS	Intelligent Transportation System
ITSP	Interregional Transportation Strategic Plan
LGC	Local Government Commission
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan
NAFTA	North American Free Trade Agreement
NAHA	National Affordable Housing Act
OPR	Governor's Office of Planning and Research
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
SHA	State Highway Account
SHOPP	State Highway Operation and Protection Plan
SIB	State Infrastructure Bank
STIP	State Transportation Improvement Program
STPP	Surface Transportation Policy Project
SUV	Sport-Utility Vehicle
TCRP	Traffic Congestion Relief Program
TEA-21	Transportation Equity Act for the 21st Century
TFB	Transportation Finance Bank
TOD	Transit Oriented Development
U.N.	United Nations
U.S. DOT	U.S. Department of Transportation
VMT	Vehicle Miles Traveled