



SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

2008

RTP
REGIONAL TRANSPORTATION PLAN

Making the Connections

***Executive
Summary***

DRAFT

DECEMBER 2007

EXECUTIVE SUMMARY



Success in transportation and transportation planning is about making the connections, whether it's connecting from bike to bus or truck to rail; relating the travel choices we make with environmental consequences; ensuring that land-use and transportation planning go hand-in-hand, or more equitably linking our transportation financing mechanisms to those who benefit directly from use of the system. The 2008 Regional Transportation Plan (RTP) connects the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties to a future vision in which innovative solutions address the daunting challenges we face today.

The 2008 RTP presents the transportation vision for this region through the year 2035 and provides a long-term investment framework for addressing the region's transportation and related challenges. The Plan is the culmination of a multi-year effort focusing on maintaining and improving the transportation system through a balanced approach that considers system preservation, system operation and management, improved coordination between land-use decisions and transportation investments, and strategic expansion of the system to accommodate future growth.

Leadership, vision, and progress are three main components of the Southern California Association of Government's (SCAG) Mission Statement that apply to the RTP development process. In demonstrating a commitment to leadership, SCAG identified regional goals that reflect a balanced approach to transportation planning and decision-making. In providing a vision, the SCAG Regional Council adopted policies to guide the development of the RTP and identified transportation priorities for the region. Lastly and most importantly, in its commitment to demonstrate progress, SCAG continues to rely extensively on performance measurement as a means to identify the most beneficial investments for the region (see Table 1). Together, these elements contribute to a strong and focused RTP.

TABLE 1 RTP GOALS AND RELATED PERFORMANCE OUTCOMES

RTP Goals	Mobility	Accessibility	Reliability	Productivity	Safety	Sustainability	Preservation	Cost-Effectiveness	Environmental	Environmental Justice
Maximize mobility and accessibility for all people and goods in the region	✓	✓						✓		✓
Ensure travel safety and reliability for all people and goods in the region	✓		✓		✓					
Preserve and ensure a sustainable regional transportation system						✓	✓		✓	✓
Maximize the productivity of our transportation system	✓			✓						
Protect the environment, improve air quality and promote energy efficiency						✓			✓	✓
Encourage land use and growth patterns that complement our transportation investments	✓	✓							✓	
Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies*										

* SCAG does not yet have an agreed-upon security performance measure; therefore it is not included in this table.

This forward-looking Plan consists of two sections: a financially constrained plan and a strategic plan. While the constrained plan includes strategies that have committed, available, or reasonably available revenue sources, the strategic plan identifies further needs that require further study and consensus



building before difficult decisions can be made as to whether the region is willing to commit funds to include them in a future RTP's constrained plan.

Transportation Planning Challenges

The SCAG Region is one of the largest and most complex metropolitan areas in the nation, and its transportation challenges are equally large and complex. Growth trends and travel patterns in the SCAG Region pose difficult challenges for our multimodal transportation system.

THE SHAPE AND PATTERN OF FUTURE GROWTH

Southern California is running out of land to support low density future growth. The ocean and mountains pose natural barriers to development. Environmentally sensitive areas, such as coastal wetlands and natural habitat areas, hem in the region and dot the urbanized area. A significant amount of land is also owned by the state and federal government for the public benefit and is off-limits to development. The centrifugal force of growth continues to

push the development footprint of the urbanized area outward. At the same time, pushing back on dispersed development are natural barriers, financial constraints to pay for outward expansion, and public resistance to unsustainable “leap frog” growth into green fields and sensitive habitat areas. Nearly all natural locations for urban development have been consumed, leaving us with hard choices about how we are to grow and change to meet the demands of the future.

The SCAG Region is the second most populated metropolitan area in the United States. Nearly one-half of all Californians live in the SCAG Region, and 1 in 17 people living in the entire United States reside here. By July 1, 2007, the region's population had reached 18.6 million residents, having grown by 2 million residents (12 percent) from just seven years ago. Furthermore, the region saw greater population growth between 2000 and 2007 (2 million residents) than that which occurred throughout the 1990s (1.9 million residents). By the year 2035, the region is projected to be home to 24 million residents.

As the region grows, the share of the elderly population will grow dramatically as the “baby boomers” come of age. Hispanics will become the majority ethnic group while the share of other ethnic minorities, primarily more recent immigrants, will grow as well. These shifting demographic patterns will influence future travel behavior as the elderly tend to travel less and immigrants tend to use public transportation more than other population groups.

MOBILITY CHALLENGES

The projected growth is expected to place even greater demands on the transportation system. The SCAG Region is served by an extensive multimodal transportation system addressing all aspects of travel in the region, including commuters, shoppers, public transit patrons, truckers delivering goods both regionally and locally, such as groceries to the local supermarkets, as well as fire, police, and other emergency personnel. The roadway and freight rail networks serve the largest maritime ports system in the United States (the Ports of Long Beach, Los Angeles, and Hueneme) and a number of large airports, including the fifth-largest airport in the world (Los Angeles International Air-

port – LAX). But as impressive as this system may seem, it has not kept pace with population growth and transportation demand.

Although the region's population has doubled since 1970, capital investments in the roadway system have actually decreased since then. As a result, traffic delays have nearly tripled over the last twenty years, and 5.7 million person-hours are lost each day to traffic delays. Additionally, traffic bottlenecks (caused by merges, weaves, lane drops, stalls, accidents, and other factors) result in reduced roadway productivity. This "lost" capacity in the AM peak period, attributable to a large extent to non-recurring incidents such as accidents, weather conditions, stalled vehicles, etc. could have the effect of the loss of approximately 286 lane miles of freeway capacity when it is needed the most. The cost of physically adding this lost capacity by widening existing facilities would exceed \$4 billion.

Beginning in the 1980s, a major shift occurred away from building roadways and into transit projects and services. Between 2000 and 2005, regional transit use increased by over 16 percent, and in 2005, our region reached the highest ridership per capita in about 20 years. However, as we are far from having a "complete" public transportation system with frequent service, extensive coverage, and good connectivity, less than 3 percent of all trips and person-miles traveled are taken on public transit.

AGING INFRASTRUCTURE

The need to preserve our transportation assets adequately was brought to the nation's attention after the Minnesota I-35W bridge collapse during the summer of 2007. We must recognize that our roadway network and transit systems developed over the past decades are aging. These regional assets represent hundreds of billions of dollars of investments that must be protected in order to serve us and future generations. Without these assets, or even a portion of these assets, the region's mobility would be significantly compromised.

Unfortunately, our region's roadways, especially the State Highway System, owned and operated by Caltrans, have not been maintained adequately. De-

ferred maintenance leads to higher costs. Whereas pavement surface damage requires an investment of \$64,000 per lane mile to bring it to a state of good repair, the costs escalate significantly if these investments are not secured in a timely manner. The costs for minor damage repair escalate more than fivefold to \$387,000, and the costs for major damage repair escalate to an astronomical \$900,000 per lane mile.

EXPLOSIVE GROWTH IN GOODS MOVEMENT

The SCAG region's goods movement system serves as the gateway for both international and domestic commerce. Supported in part by its geographical advantages such as deep-water marine ports, highly developed network of highways and railways, availability of transloading facilities, and its large internal market, goods movement is the fastest-growing segment of the region's transportation sector. Every state in the nation receives goods that pass through Southern California, and the region is a cornerstone of the nation's global competitiveness.

The San Pedro Bay Ports, which include the Los Angeles and Long Beach Ports, currently handle approximately 40 percent of the volume imported into the country and approximately 24 percent of the nation's exports, and one out of every seven jobs in Southern California depends on this trade. Container volume processed by the San Pedro Bay Ports grew by almost 60 percent in volume between the years 2000 and 2006, and is expected to nearly triple by 2030.

As the only deep-water port between Los Angeles and San Francisco, the Port of Hueneme in Ventura County is a major shipping point for automobiles, fresh fruit, and produce. Approximately \$7 billion in cargo traverses through this Port annually, and trade-related activity generated by the Port contributes significantly to the local economy.

Cross-border trade activity also contributes to the region's international trade growth, with the growth in Mexico's manufacturing industry increasing truck trips through Calexico East in Imperial County by 77 percent between 1994 and 2005.

More than 60 percent of the containers processed by the ports will involve a truck trip within the SCAG region, either to a rail intermodal facility, a warehouse, or a transload facility. These trucks contribute to the existing congestion in the region and will contribute to future congestion even more as the number of trucks is projected to more than double for several major freeways.

Recent projections included in SCAG's Inland Empire Railroad Main Line Study suggest that the number of freight trains on most Burlington Northern Santa Fe (BNSF) and Union Pacific (UP) lines will more than double between 2000 and 2025 in response to a tripling of container volume at the San Pedro Bay Ports. Although freight rail does not add to freeway congestion, it does pose serious quality of life issues for many communities. Some towns and cities witness 100 trains per day that literally split their communities into two sections for extended periods of time.

AVIATION CAPACITY AND GROUND ACCESS CONSTRAINTS

The SCAG Region supports the nation's largest regional airport system in terms of number of airports and aircraft operations, operating in a very complex airspace environment. These airports support both growing passenger and freight movement, and there are significant challenges in meeting the future airport capacity needs of Southern California. Work on SCAG's 2004 RTP concluded that an Aviation Decentralization Strategy is needed to meet the forecast doubling of air passenger demand by 2030, from the current 90 million annual passengers (MAP) to 170 MAP (according to the 2004 RTP). This is because the four urban air carrier airports in Los Angeles and Orange Counties are all highly constrained. Their collective acreage amounts to 5,540 acres, which is less than 17 percent of the 34,000 acres of Denver International, and less than the 7,700 acres of Chicago O'Hare. At 3,500 acres, LAX is a very small international airport despite being the third-busiest airport in the country and fifth-busiest in the world in terms of passengers served. All of these urban airports have little room to expand because of severe encroachment by surrounding communities.

AIR QUALITY, CLIMATE CHANGE, AND ENERGY CHALLENGES

The SCAG Region continues to have the worst air quality in the nation, even despite improvements gained in the last two decades. The recently documented health impacts of air pollution on people living in the South Coast Air Basin are staggering. Of all the people nationwide that are exposed to PM2.5 levels that exceed the federal health-based standard, 52 percent live here. Of all the people statewide that are exposed to these levels, 82 percent live here. This is estimated to result in 5,400 premature deaths and 980,000 lost work days per year.

Much of the region continues to exceed the National Ambient Air Quality Standards (NAAQS) identified in the Clean Air Act. Most of the SCAG Region is classified as non-attainment areas for some criteria pollutants. Further, as demonstrated by the recent Air Quality Management Plan (AQMP)/State Implementation Plan (SIP) efforts of local air districts and the Air Resources Board (ARB), the region's efforts to attain the NAAQS continue to be challenging, as the South Coast Air Basin, the Ventura County portion of the South Central Coast Air Basin, and the Mojave and Antelope Valley Air Basins will all be "bumping up" to worse ozone non-attainment designations since they cannot achieve the NAAQS in the time previously assumed. Further, the attainment plan to meet the ozone standard in the South Coast Air Basin includes undefined long-term ("black box") measures of approximately 200 tons per day of nitrogen oxides (NOx), which is a daunting amount of as-yet-unidentified emission reductions. Of additional concern are the upcoming 24-hour PM2.5 standards, which will require even greater reductions as well as possibly more stringent ozone standards. Consequently, the ARB, SCAQMD, and SCAG are committed to producing a white paper that identifies strategies to address the shortfall issues. Furthermore, there are strategies and programs in this Plan that will be incorporated into the white paper.

In addition to the aforementioned challenges, efforts to reduce greenhouse gases (GHG) will present another tremendous challenge to the transportation sector. Transportation is the largest source of GHG emissions in California, representing 41 percent of emissions, and emissions from the transportation

sector have grown more rapidly than from other sources over the past ten years.¹ California is the second largest emitter of GHG emissions in the United States and the twelfth largest emitter in the world, exceeding most nations.

At the same time, environmental and geopolitical factors are causing energy experts to question the long-term viability of a fossil fuel-based energy future. Travel demand forecasts are generally based on the assumption that the future will include an abundant and relatively inexpensive supply of transportation fuels. If transportation fuel prices continue to increase, it would have a ripple effect on numerous areas including construction costs, gas tax revenue, travel and aviation demand, air emissions, mode choice and growth patterns. One area of uncertainty is how commuters may respond to higher gasoline prices. For example, a recent study suggests that with a ten percent increase in the gas price, there is a less than one percent change in gas consumption, while other data show that an increase in gas prices coincides with an increase in transit ridership. In addition, growth patterns may alter future demand for transportation fuels. Mixed land uses (i.e., residential developments near work places, restaurants, and shopping centers) with access to public transportation have been shown to save consumers up to 512 gallons of gasoline per year. Energy uncertainty requires serious consideration and further study.

TRANSPORTATION FINANCE CHALLENGES

While this region does not lack the creativity and resolve to develop innovative solutions to our problems, we continue to face shortfalls in transportation funding. As the critical factor that often determines whether beneficial projects can be implemented, transportation finance is perhaps the region's most imminent challenge. The following briefly describes current and projected challenges that are likely to impact transportation revenues within the 2008 RTP time frame.

Over the past four decades, transportation revenues (from gasoline taxes collected per gallon) in California have not kept pace with the state's ever-evolv-

¹ United States Department of Transportation, Federal Highway Administration. Transportation and Global Climate Change: A Review and Analysis of the Literature. (June 1998). DOT-T-97-03.



ing demographic characteristics. Indicators such as vehicle miles traveled, population, and personal income growth have all outpaced the rate of transportation revenue growth. In addition, gas taxes are collected in cents per gallon. Without periodic adjustment or indexing, these funds will not keep pace with needs. Although the passage and recent renewal of local "self-help" transportation sales taxes have greatly improved funding for transportation, gasoline tax revenues continue to decline in value due to inflation.

The viability of the State Highway Account also remains a critical issue. The state's gasoline tax revenues are now exclusively dedicated to funding the needs of the State Highway Operation and Protection Program (SHOPP)—at a level, however, that is considerably less than actual needs. Continued under-investment in the rehabilitation and maintenance needs of the state highway system has serious ramifications—rapidly increasing the number of

distressed lane miles on the state highway system and eroding the condition of the state's bridges. In recent years, transportation has relied heavily on the State General Fund to pay for capacity enhancing projects. Reliance on the State General Fund means that transportation funding is subject to the state's annual budget process, which can be lengthy and unpredictable.

The need to establish a reliable and sustainable transportation funding source is even stronger, as the Federal Highway Trust Fund may not have enough resources to meet all of its obligations by the end of the decade. Expenditures authorized under SAFETEA-LU have outstripped revenues generated by the federal per-gallon gasoline tax. Accordingly, the viability of the Highway Trust Fund will be a critical issue in the discussions for the next round of the federal transportation reauthorization legislation, which will start in 2009.

Finally, over the last four years, construction costs in California and the nation have increased at an unprecedented rate and much faster than general inflation. The recent run-up in construction prices is due to a variety of factors, including a residential and commercial building boom as well as higher demand for construction materials in developing countries, most notably, China. Although these trends are likely to fluctuate, they have caused many transportation projects to exceed their budgets in the short term and made long-term project cost forecasting uncertain.

Transportation Strategy

SECURITY AND SAFETY FIRST

The SCAG Region is vulnerable to many types of catastrophic events including earthquakes, floods, fires, hazardous material incidents, dam failures, civil unrest, transportation accidents, tsunamis and terrorism. Through hard experience, California has in place an emergency and response structure designed to be innovative to the different locations and types of emergency. There are many agencies that will participate in the response to a disastrous event and ensure that their jurisdictions are prepared to respond to these hazards. This Plan details ten measures that SCAG, as a planning agency, will undertake

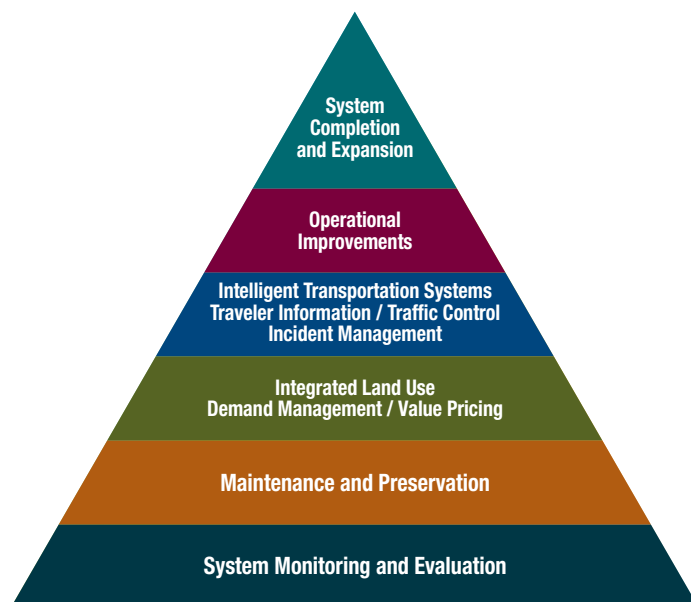
to enhance the region's ability to achieve and sustain at risk target levels of capability to prevent, protect against, respond to, and recover from major human-caused or natural events in order to minimize the threat and impact to lives, property, and the region.

The mantra, "Safety First," applies to our transportation system no less than to any other sector of our region. When examined historically, fatal and injury collisions (rate per million vehicle miles traveled) have steadily decreased in California since the 1930s. As SCAG and Caltrans both recognize the continuation of this positive trend as a priority, in 2007, the region fully funded highway collision reduction and emergency response needs, estimated at \$317 million and \$110 million, respectively. In addition, this Plan commits \$10 billion for safety related projects and services. Furthermore, in 2005, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), required that each state develop a Strategic Highway Safety Plan (SHSP), which this RTP must be and is consistent with. These actions emphasize the level of collaboration among SCAG, Caltrans, and its stakeholders to examine safety on a system basis so that the region can use all the tools available to decrease traffic injuries and fatalities.

MANAGING OUR TRANSPORTATION SYSTEM WISELY

Since our challenges are multifaceted, our approach to tackling them must be as well. The region recognizes that maintaining and/or improving mobility will no longer depend solely on expanding its transportation system. Given our fiscal constraints, an integrated approach is needed to maximize mobility. State transportation stakeholders have developed a tiered approach based on the simple concept of making the most out of the existing system before doing anything else. Represented by the pyramid below, this approach frames the following discussion.

FIGURE 1 MOBILITY PYRAMID



SYSTEM MONITORING AND EVALUATION

First, it is imperative that we understand the problem in order to fix it. We must have an in-depth understanding of how our system performs and why it performs that way so that we can identify the optimal mix of strategies and projects that yield the highest returns on the region's investments. The base of the mobility pyramid, entitled "System Monitoring and Evaluation," is the foundation of sound system management. Towards this end, SCAG has developed performance measures to track and monitor the progress of the transportation system so that the region can make informed decisions regarding transportation investments. For example, the Freeway Performance Measurement System (PeMS), developed by UC Berkeley, Caltrans, and the California Partners for Advanced Transit and Highways (PATH), has the ability to measure freeway speeds, delay, and reliability for the regional freeway system. Additionally, transportation professionals and decision-makers have recently committed to improving the region's ability to properly fund the investments

needed to comprehensively monitor and evaluate system performance. These investments include detection, closed circuit television systems, bus global positioning systems, and automatic ridership counting systems. Although funding is modest for these activities, they lead to more informed decisions.

MAINTENANCE AND PRESERVATION

Over the decades, the region has invested hundreds of billions of dollars in our multimodal transportation system. Preserving these assets is a critical priority, especially as preservation needs have been historically underfunded in our region. On top of existing funding for preservation and maintenance, our highway system needs an additional \$30 billion through 2035, and our arterial and transit system needs another \$10 billion.

Recognizing that every dollar expended today towards maintenance and preservation will save much more in the future, this Plan commits \$8 billion of new funding to preservation.

INTEGRATED LAND USE AND DEMAND MANAGEMENT

Integrated Land Use

With the growing population, transportation infrastructure planning and technological innovation are essential to improving air quality as people drive more often, more cars get on the road, and trip lengths increase. However, these strategies alone will not be enough to mitigate the potential effects on regional mobility and air quality. Through the integration of land use planning and transportation infrastructure investments, land use strategies can encourage development patterns which increase transportation options and the use of alternate modes of travel to reduce vehicle miles traveled.

Using an integrated forecasting approach and a consensus-built growth visioning process, SCAG developed growth policies that shape the 2008 RTP Policy Growth Alternative in order to influence development patterns that reduce driving. The growth assumptions, vision, and policies were all de-



veloped in coordination with technical analyses, local input, land use and growth experts, and on-the-ground “reality checks.” The resulting 2008 RTP Policy Growth Alternative indicates that modified growth patterns based on these policies are modeled to show a direct positive impact on air quality in the region. SCAG’s Compass Blueprint Program, in addition to legislative efforts, shapes the implementation program for enacting these policies and programs through partnerships with and services offered to cities, counties, subregions and county transportation commissions to ensure these positive effects on air quality.

Compass Blueprint Growth Vision

SCAG’s Compass Blueprint Growth Vision, one of the first large-scale regional growth visioning efforts in the nation, seeks to integrate land use and transportation with the goal of accommodating the six million additional residents expected by 2035, while improving mobility for all residents, fostering liv-

ability in all communities, enabling prosperity for all people, and promoting sustainability for future generations.

The policies at the foundation of the 2004 Growth Vision Alternative encourage changes to the urban form that improve accessibility to transit, and create more compact development, thereby yielding a number of transportation benefits to the region. These included reductions in travel time, vehicle miles traveled, vehicle hours traveled, and vehicle hours of delay. Concurrently, the alternative yielded increased transit use and mode share, and all of these effects lead to both mobility and air quality improvements.

Policies

Based on the land use assumptions developed by SCAG and its local partners, the Regional Council adopted the following set of policies to be incorporated into Compass Blueprint and used in developing the 2008 RTP Policy Growth Alternative. These policies were founded upon the Compass Principles developed through the regional growth visioning efforts in preparation for the 2004 RTP. Refinements were made in accordance with changing dynamics in the region, as well as stakeholder discussions, demonstration project results, workshop input and the “reality check” analysis done throughout the region. The following policies have proven to be both regionally beneficial relative to their transportation performance, and in tune with the emerging public policy, development patterns and community needs throughout the region.

- Identify regional strategic areas for infill and investment
- Structure the plan on a three-tiered system of centers development
- Develop “complete communities”
- Develop nodes on a corridor
- Plan for additional housing and jobs near transit
- Plan for a changing demand in types of housing
- Continue to protect stable existing single-family areas
- Ensure adequate access to open space and preservation of habitat

- Incorporate local input and feedback on future growth
- Promote land use patterns supportive of goods movement and logistic industries

Travel Demand Management (TDM)

In an effort to address travel demand, TDM strategies are designed to influence an individual's travel behavior by making alternatives to the single-occupant automobile more attractive, especially during peak commute periods, or by enacting regulatory strategies. Some examples of TDM strategies are carpools and vanpools, public transit, non-motorized modes, congestion pricing, and providing the public with reliable and timely traveler information.

In total, this Plan dedicates \$2.2 billion to TDM investments.

Increasing Rideshare (Carpool and Vanpool)

The SCAG Region continues to invest heavily in High Occupancy Vehicle (HOV) infrastructure that provides incentives for commuters to share rides with others. While HOV utilization is growing over time, the percent of total travelers using carpools and vanpools is not. SCAG and its partners will strengthen their efforts to encourage this efficient mode, which reduces travel time and improves air quality.

Increasing Work-at-Home

Increasing the number of workers who work-at-home (self-employed, home-based business owners) or who telework/telecommute (wage and salary employees conducting some or all of their work from home) decreases home-based work trips, vehicle-miles of travel, congestion, and vehicle emissions. National and regional surveys of those who telecommute indicate that it is a lack of support and trust from "management," rather than the provision of equipment or the desire of workers to telecommute, that hampers the growth of telecommuting. Therefore, this Plan recommends formalizing and expanding partnerships among public and private sector stakeholders, and to promote telecommuting to increase opportunities for workers regionally to telecommute in lieu of daily commuting.

Non-Motorized Transportation

Bicycling and walking play an important role in our transportation system. According to the 2001 National Household Travel Survey, 50 percent of all trips made nationwide in urban areas were shorter than 3 miles, and 28 percent of all trips were under 1 mile. These trips are ideal for biking, walking, and transit or a combination of those modes of travel.

Region-wide, however, our average commute distance to work is 19.2 miles, too far for many bicyclists and all pedestrians. However, the integration between bicycle and transit nodes offers the opportunity to extend the commuting range of bicyclists. Bicycle transportation infrastructure has a role in regional mobility and air quality improvements. Every automobile driver that switches to an alternative transportation choice (walking, bicycles, transit) reduces air pollution, congestion, the need for increasing roadway capacity, and improves public health.

Bicycle and pedestrian improvements are included as part of many larger street maintenance and construction projects, and should always be included in general plan updates, which SCAG can assist in the development of through the Compass Blueprint Program. These investments and the supporting policies all aim to maximize the benefits of this efficient mode of transportation. In addition, this Plan supports several policies that aim to work with local governments and increase the safety, convenience, and attractiveness of bicycling and walking as modes of travel.

MAXIMIZING TRANSPORTATION SYSTEM PRODUCTIVITY

Beyond managing our travel demand, this region needs to invest in maximizing the productivity of our existing system and increase its efficiency. The region has built a vast and expensive transportation system, which can be tweaked and modernized to carry more people and goods in a day or during peak commute conditions. Such investments include implementing advanced traffic control strategies such as signal coordination and ramp metering, im-

proved incident management, and smaller physical infrastructure modifications such as auxiliary lanes.

Recognizing that funding productivity improvements provide a higher return on investments than most other transportation projects, this Plan allocates an additional \$2 billion, representing 20 percent of the region's operations improvement shortfall. As these allocations are programmed and implemented, SCAG hopes that the benefits will become apparent to decision-makers and the public, and that additional funding can be secured to address the remaining shortfall.

Strategic Transit Service Policies

In an effort to maximize transit productivity, this Plan calls upon regional transit operators to address significant challenges to achieve better operational efficiency, maintain a discipline of cost recovery through a consistent fare policy, embrace the use of performance metrics to better serve their existing customer base, and attract new transit users. The Plan encourages the regional transit operators to work cooperatively to offer complementary services, with ease of transfer between modes and operators. It further encourages utilization of new intelligent transportation system (ITS) technologies that measure system performance and offers its customers reliable "on-time" performance and real-time information.

SYSTEM COMPLETION AND EXPANSION

After the preceding strategies and improvements have been evaluated, we are left with the realization that the past and future growth in transportation demand calls for the expansion of our existing transportation system. More than half of the available transportation revenues in the region are dedicated to the completion and expansion of our people and goods movement transportation systems.

Highway Improvements

Major categories of highway improvements included in this Plan are HOV lanes and connectors, mixed flow (or general purpose) lanes, toll facilities and

High Occupancy Toll (HOT) lanes, and strategic arterial improvements. A significant number of system expansion projects have already been committed through SCAG's Regional Transportation Improvement Program (RTIP) for the highway network. These priority projects close critical gaps in the system, relieve significant bottlenecks, and address inter-county travel needs.

HOV Gap Closures and Connectors

Southern California has invested heavily in HOV lanes, producing one of the nation's most comprehensive HOV networks and highest rideshare rates. Several experiments involving HOV lanes are being conducted throughout the region in an effort to improve the functionality of this already proven TDM strategy. In 2007, the first continuous-access HOV lanes opened on SR-22 in Orange County. In Moreno Valley in Riverside County, Caltrans has proposed a temporary conversion of the existing HOV lanes to part-time operation. Since the HOV lane system is a regional network, operations should be coordinated across jurisdictional boundaries to optimize performance and minimize confusion. SCAG supports further study and evaluation of these proposed operational changes to the HOV lane system to fully understand the mobility, safety, and air quality impacts, as well as any implications for a proposed regional HOT lane system.

This Plan includes many additional investments to extend the HOV network, strategically close gaps in the HOV network, and construct additional direct freeway-to-freeway connectors to maximize the overall system performance by minimizing weaving conflicts and maintaining travel speeds.

Mixed Flow

Since mixed flow lanes carry more traffic than any other component of our transportation system, mixed-flow capacity enhancements are also necessary to address traffic bottlenecks and relieve congestion on heavily traveled corridors. This is especially true in areas outside of the urban core where transit service and the HOV network are not fully developed. This Plan includes a variety of mixed flow lane additions, mostly outside of Los Angeles County.

Toll and High Occupancy Toll (HOT) Lane Corridors and Facilities

This Plan also includes an expansion of the existing HOT lane and toll road system in Orange County to address the congested commuter corridor between housing-rich Riverside County and job-rich Orange County. Additionally, improvements to several major corridors in other parts of the region are proposed to be financed by tolls, including the I-710 Tunnel Gap Closure and the High Desert Corridor.

Transit

The RTP's Integrated Land Use and Transit policies and strategies work hand-in-hand to improve mobility and air quality. The investment in new rail and bus transit corridors has spawned investment throughout the region in new housing, retail, and business development at and near transit stations. Since 2003, the region has experienced substantial growth in daily regional transit trips as transit has become an increasingly integral mode of transportation for the movement of people to and from home, work, school, shopping, cultural, and recreational activities.

This Plan recommends closing critical gaps in the transit system to improve service, and extending routes to serve a greater number of passengers. In addition, the coordination of development in and around transit stations and corridors, improved service reliability and performance, and a highly focused transit capital investment program appear to yield the best results within the budget limitations that the region faces.

Heavy and light rail projects are planned for Los Angeles County, while Orange County focuses on several new bus rapid transit (BRT) corridors. Riverside and San Bernardino Counties are planning a mix of new rail and BRT projects.

Aviation

SCAG's Regional Aviation Decentralization Strategy is very similar to the 2030 decentralized regional aviation system adopted for the 2004 RTP. It respects all legally-enforceable policy and physical capacity constraints at urban airports. It also assumes much more willingness on the part of the airlines to



invest in new flights at new and emerging airports, and a package of market and ground access incentives to promote decentralization at under-utilized suburban airports.

Airport Ground Access

The Regional Aviation Decentralization Strategy calls for making substantial airport ground access improvements throughout the region, in both the short term and long-term.

The short term program emphasizes relieving immediate bottlenecks around airports through arterial, intersection and interchange improvements, and increasing transit access to airports. To this end, SCAG is working closely with Los Angeles World Airports (LAWA) on planning and programming a regional system of FlyAways, based on the very successful Van Nuys FlyAway where passengers park their cars and take a bus to LAX. The locations of the proposed new FlyAways can be optimized by taking advantage of the region's

developing high-occupancy vehicle (HOV) and light and heavy rail networks that can provide direct linkages to Ontario and Palmdale as well as LAX. Making seamless HOV and rail connections with enhanced service to those and other suburban airports will also compose SCAG's short- and medium-range airport ground access strategy. The FlyAway, HOV and rail improvements to the suburban airports will help establish a pattern of decentralization, by attracting a critical mass of passengers and airline service at those emerging airports. SCAG is also working with the newly-reactivated Southern California Regional Airport Authority (SCRAA) in its ongoing efforts to restructure and redefine its mission, with the focus of helping to implement the Regional Aviation Decentralization Strategy through facilitating key airport ground access improvements.

In the long run, however, the region will need a high-speed rail system, discussed below, to reach our adopted air passenger and air cargo forecasts. The speed, reliability, and predictability of high-speed airport access will be needed to overcome the increasing unpredictable traffic congestion. For example, the Initial Operating Segment (IOS) of SCAG's proposed HSRT system from West Los Angeles to Ontario will take only 33 minutes to travel from end to end. Therefore, the regional high-speed rail system is an integral component of the 2008 RTP Preferred 2035 regional aviation demand forecast.

High-Speed Regional Transport

SCAG has advanced a vision of regional transport based on high performance, high-speed, and environmentally sensitive alternative(s). A High-Speed Regional Transport (HSRT) system has the potential for relieving both airport and freeway congestion in urbanized areas by providing an alternative to the automobile as well as making less congested airports more accessible to air travelers, and providing alternative capacity for freight movement in the region.

The HSRT system is a long-term vision connecting the region's ports, airports, and urban activity centers. The system can be constructed in multiple stages that can each be financially viable. The financial performance will be enhanced as the system is extended throughout the region and the volume of

users increases. The HSRT plan is constructed on three core components: a goods movement/logistics component to connect the San Pedro Bay Ports with an inland port facility via the high-speed, high-capacity link; an aviation system component to create a direct and reliable link capable of connecting airports and urban centers; and a surface transport system component to link urban activity centers throughout the region.

Another high-speed regional transport project being studied is a magnetically levitated train between Las Vegas and Anaheim by the California-Nevada Super Speed Train Commission (CNSSTC) that would include a critical Anaheim-Ontario segment, which would further the airport decentralization strategy for the region. Also, the California High-Speed Rail Authority (CHSRA) is charged with planning, designing, constructing, and operating a high-speed steel wheels on steel rails train system that would connect northern and southern California. This system contains 210 miles planned in the SCAG Region, including a 30-mile segment between Orange County and LA Union Station.

Goods Movement Strategies

To enable the region to handle the dramatic growth in the goods movement sector, the Plan calls for approximately \$13 billion in freight rail investments,



nearly \$18 billion in a freight HSRT system, and over \$5 billion in highway investments. These investments integrate air quality mitigation into the goods movement system improvements, yielding substantial air quality benefits and reducing its current and long-term impacts on public health and the environment.

Dedicated Lanes for Clean Technology Trucks

Over the past several RTP updates, the region has been exploring dedicated truck-lane facilities and continues to refine the concept of such user-supported corridors to improve the flow of goods. More recent effort has focused on adding dedicated truck lanes for clean technology vehicles along truck-intensive corridors in Southern California. Operationally, such a corridor would be aligned to connect freight-intensive locations such as the Ports, warehousing/distribution center locations, and manufacturing locations. These dedicated facilities would have fewer entrance/egress locations than typical urban interstates to smooth the flow of goods.

This proposal has the potential to relieve many of the negative truck impacts in Southern California such as recurrent delay, pavement deterioration, safety, emissions, and design deficiencies. Dedicated truck lanes would also increase reliability in the freeway system. Despite these benefits, substantial financial constraints as well as environmental impact considerations could hinder project implementation. Recognizing these challenges, the 2008 RTP funds the I-710 segment as the first phase of a comprehensive system that addresses truck-related issues in the region. This segment includes roughly 78 lane-miles (two lanes in each direction) of dedicated lanes for clean technology trucks along alignments extending from the Ports to the SR-60 interchange. This represents an investment of over \$5 billion.

The region's longer term strategic vision would include an East-West Corridor and the I-15 freeway, serving strategic distribution centers in Barstow. Major corridor studies have already been completed for the I-710, SR-60, and I-15. An EIR/EIS and preliminary engineering are currently underway for the I-710. The technical analysis for the 2008 RTP assumes the implementation of dedi-



cated truck lanes accommodating clean technology vehicles along the I-710 corridor until a preferred alternative is identified by the EIR/EIS.

Regional Freight Rail Investment and Emission Reduction Package

Freight rail investments consist of additional mainline capacity, grade separations, and locomotive engine upgrades. About half of the rail-related investments are for grade crossing separations, which reduce traffic congestion, improve safety, and reduce pollution. Substantial air quality benefits can be realized by accelerating fleet modernization with cleaner technologies.

The UP and BNSF mainlines east of downtown Los Angeles will reach capacity before the end of the decade and will need to be triple-tracked or even quadruple-tracked in some segments. Investments in this Plan include \$3.2 billion in mainline rail capacity improvements, \$6.0 billion to build an estimated 131 highway-rail grade separations east of downtown Los Angeles, and a total of \$3.8 billion for accelerating upgrades to cleaner diesel locomotive engines—namely, Tier 4 engines.

In March of 2007, the US Environmental Protection Agency (EPA) proposed new standards to reduce emissions from diesel locomotives: Tier 3 and Tier 4 exhaust emission standards for newly built engines with high-efficiency catalytic after-treatment technology. Tier 3 engines will be available in 2009 and the associated estimated reduction in emissions is less than 50 percent of current conditions. The reduction in emissions from Tier 4 engines is estimated at 90 percent of current conditions. This Plan assumes nearly \$2 billion in federal EPA funding to subsidize the deployment of Tier 4 engines in the region.

Alternative Technology-Based Goods Movement/Logistics

The region is also exploring new alternative technology-based systems that can provide greater throughput and reliability with near zero emissions (the emissions would be only those associated with electricity generation). A recent analysis carried out by the IBI Group considered the application of an HSRT system for the movement of containers (logistics and systems technology) to and from the San Pedro Bay Ports. This container movement system would provide a high-capacity, fast, and efficient method of moving containerized cargo from the Ports to an inland port facility in San Bernardino. The system capitalizes on the inherent savings of multiple uses on a single infrastructure by operating on shared alignments with the HSRT passenger system. The technology permits operation of HSRT freight vehicles on a shared guideway with passenger vehicles even during peak hour service. Freight vehicle trips can be interspersed with passenger trips while still meeting required passenger vehicle headways. Additionally, full utilization of the freight line can be achieved during the passenger system's off-peak hours. The deployment of the HSRT system would create value in associated components which could in turn contribute to the HSRT's total financial performance.

The connection for the HSRT system would begin at the Ports and join up with the IOS² at a point just east of Los Angeles Union Passenger Terminal (LAUPT). This alignment runs north-south and is assumed to follow a route parallel to

the I-710/Alameda Corridor. After connecting to the IOS and other segments, the freight-only service would be interspersed with passenger service.

TABLE 2 SUMMARY OF SYSTEM COMPLETION AND EXPANSION PROJECT TYPES

Project Type	Cost
Highway Improvements	\$90.7 billion
Mixed Flow Lanes and Interchanges/Ramps	\$25.1 billion
HOV	\$8.0 billion
Toll Lanes	\$40.0 billion
Arterial	\$17.6 billion
Transit Improvements	\$34.1 billion
Commuter Rail	\$5.9 billion
Heavy Rail	\$5.2 billion
Light Rail	\$1.7 billion
Bus Rapid Transit	\$0.6 billion
Bus	\$17.5 billion
Other Transit	\$3.2 billion
High-Speed Regional Transport	\$52.7 billion
Goods Movement Strategies	\$36.3 billion
Mainline Rail Capacity Improvements	\$3.2 billion
Highway-Rail Grade Separations	\$6.0 billion
Upgrade to Tier 4 engines	\$3.8 billion
Alternative Technology-Based Goods Movement System	\$17.9 billion
Dedicated Lanes for Clean Technology Trucks	\$5.1 billion
Truck Climbing Lanes	\$0.3 billion
Total	\$213.8 billion

² Initial Operating Segment or IOS is discussed in further detail in the supplemental HSRT Report and Appendices.

MITIGATING ENVIRONMENTAL IMPACTS

California law requires SCAG to prepare and certify a Program Environmental Impact Report (PEIR) prior to adopting the RTP. The PEIR evaluates the environmental impacts of the RTP and proposes specific measures to mitigate impacts to the maximum extent feasible. Although this RTP, in and of itself, is a plan to mitigate the transportation related effects of population growth, such as traffic congestion and poor air quality, because the transportation improvements can result in additional growth, the PEIR goes further by recommending additional environmental mitigation at the program level for those resource areas that would be affected by the plan (and associated growth) such as land use, open space, biological resources, water and energy. The section below summarizes the mitigation program. A list of all the mitigation measures included in the 2008 RTP PEIR will be included in the Environmental Mitigation Report of the Final 2008 RTP.

The general purpose of the mitigation measures included in the PEIR and summarized below, is to identify how to protect the environment, improve air quality, and promote energy efficiency in concert with the proposed transportation improvements and related planning. They provide a framework through which implementing agencies and subregions can address the environmental impacts of RTP projects, while implementing RTP goals and policies. The PEIR provides three different types of mitigation measures. The first type can be implemented by SCAG at the regional level. These measures are generally aimed at gathering additional information that can assist in measuring impacts and determining appropriate mitigation and promoting policies that reduce impacts. The second type of measures are to be implemented at the local level by implementing agencies, and individual cities and counties. These measures can strengthen planning documents to ensure for provision of mitigation in the planning process. The third type of measures are project specific and seek to reduce impacts for the myriad different types of projects anticipated in the region. As a programmatic document, many of the measures in the PEIR refer to performance standards because site-specific conditions are not reasonably evaluated at the programmatic level.



SUMMARY OF THE ENVIRONMENTAL MITIGATION PROGRAM

This Plan discusses mitigation for the following areas:

- Open Space
- Energy
- Air Quality and Climate Change
- Transportation
- Population and Housing
- Land Use
- Aesthetics
- Public Services
- Biological Resources
- Geology, Soils, and Seismicity
- Cultural Resources
- Water Resources
- Hazardous Materials
- Safety and Security
- Noise

Financial Plan

The 2008 RTP financial plan identifies how much money is available to support the region's surface transportation investments including transit, highways, local road improvements, system preservation and demand management goals. It also addresses the need for investment in goods movement infrastructure. Improving ground access in and around major goods movement facilities, and enhancing major highways and railways are critical to maintaining the health of Southern California's economy. The 2008 RTP calls for traditional and non-traditional revenue sources for implementing a pro-

gram of infrastructure and environmental improvements to keep both freight and people moving.

The 2008 RTP financial plan identifies a number of new revenue sources to provide additional funding beyond existing transportation dollars. The SCAG region's financially constrained plan includes a core revenue forecast of existing local, state, and federal sources along with new funding sources that are reasonably available over the time horizon of the RTP. The plan also includes action steps to obtain the revenues necessary for implementing the region's transportation vision.

In developing the financial plan, SCAG followed a few basic principles to guide its regional financial forecast:

- Incorporate financial planning documents developed by local county transportation commissions and transit operators in the region where available;
- Ensure consistency with both local and state planning documents;
- Utilize published data sources to evaluate historical trends and augment local forecasts as needed; and
- Recommend new funding sources that target beneficiaries of transportation investments.

REASONABLY AVAILABLE REVENUES

There are several new funding sources that are reasonably expected to be available. These sources will increase the revenues available for the 2008 RTP. The region also expects to leverage innovative financing strategies.

Table 3 presents twelve categories of funding sources and financing techniques that were evaluated for the RTP. They were selected as a result of their use in other areas of the state, the burgeoning potential, historical precedence and likelihood of implementation within the timeframe of the 2008 RTP. These funding sources are considered to be reasonably available and are included in the financially constrained plan. For each funding source, SCAG has ex-

TABLE 3 NEW REVENUE SOURCES AND INNOVATIVE FINANCING STRATEGIES (IN NOMINAL DOLLARS, BILLIONS)

Revenue Source	Description	Amount	Actions to Ensure Availability	Responsible Party
Value Capture Strategies	Various techniques assumed: formation of special districts, including Benefit Assessment Districts, Mello-Roos Community Facility Districts, as well as tax increment financing and joint development to provide gap financing for specific transit investments (Gold line extension, Purple line extension, and the HSRT system). SCAG also assumes one-time proceeds from the sale of Caltrans-owned property within the I-710 tunnel vicinity.	\$3.7	Pursue necessary approvals for special districts by 2012 (Benefit Assessment Districts require majority approval by property owners; Mello-Roos tax requires two-thirds approval); work with private entities for joint development opportunities; also, work with Caltrans to utilize proceeds from real estate sales to partially fill funding gap for the I-710 tunnel; pursue legislation to enable sales and to establish escrow account for the proceeds	MPO, transit operators, local jurisdictions, property owners along project corridors, developers, Caltrans
Local Option Sales Tax Extension	Half-cent sales tax measure extension for Imperial County—existing Measure D expires in 2010	\$0.8	Local sales tax measure to be placed on ballot by 2010	Imperial County
Highway Tolls (includes toll revenue bond proceeds)	Toll revenues generated from I-710 tunnel, I-710 dedicated truck lanes, High Desert Corridor, and CETAP Corridor	\$26.0	Region was granted authority under AB 1467 (2006) to impose tolls and work with private entities for the financing of goods movement related facilities including the I-710 dedicated truck lanes; additional state legislative approval needed for I-710 tunnel	MPO, local county transportation commissions (LACMTA, SANBAG, RCTC), State Legislature
State and Federal Gas Excise Tax Adjustment to Maintain Historical Purchasing Power	Estimate equivalent to additional ten cent per gallon gasoline tax imposed by the state and federal government starting in 2012—extrapolation of historical trend	\$17.0	Congressional and state legislative approval	MPO, State Legislature, Congress
Container Fees (includes container fee bond proceeds)	Charge imposed on containerized cargo moving through the Ports of LA/LB (includes railroad user-fees for rail capacity improvement program); fees are directly linked to specific goods movement projects	\$41.5	Negotiated by Ports, shipping community, regional stakeholders or state legislative approval (upon passage of SB 974 or other legislative effort)	Ports, shippers, goods movement stakeholders (MPO, railroads, local county transportation commissions), State Legislature
Private Equity Participation	Public Private Partnership arrangement whereby a private entity designs, finances, builds, operates, and maintains a facility under a lease arrangement for a fixed period of time	\$8.4	Region was granted authority under AB 1467 (2006) to work with private entities for the financing of freight related projects; additional state legislative approval needed for I-710 tunnel	MPO, local county transportation commissions, private consortium, State Legislature

Revenue Source	Description	Amount	Actions to Ensure Availability	Responsible Party
Private Activity Bonds (PAB)	Interest savings from the issuance of tax-exempt private activity bonds	\$0.4 (included in container fees)	Work with railroads and other regional stakeholders to receive federal PAB allocation	MPO, freight railroads, local county transportation commissions, US DOT
U.S. Environmental Protection Agency (EPA) funding for clean freight rail technology	EPA subsidies to help mitigate locomotive emissions per the 2007 State Implementation Plan (SIP)	\$1.9	Work with railroads, AQMD, ARB and US EPA for federal clean technology funding allocation	MPO, freight railroads, AQMD, ARB, US EPA
Interest Earnings	Interest earnings from toll bond proceeds (High Desert Corridor, CETAP, I-710 tunnel, and I-710 truck lanes)	\$0.4	See Highway Tolls	See Highway Tolls
Riverside County Measure A (Bond Anticipation Notes)	Short-term debt to help fund the CETAP Corridor in anticipation of the sale of Measure A revenue bonds	\$4.7	Issuance of debt subject to RCTC Board policy	RCTC
Transportation Infrastructure Finance and Innovation Act (TIFIA) Loan	The TIFIA Loan program provides credit assistance for transportation investments of national/regional significance; TIFIA loan assumed for the CETAP Corridor	\$1.7	Work with USDOT and RCTC to evaluate applicability of the TIFIA loan program for the CETAP Corridor; further feasibility work necessary to assess traffic and revenue potential on CETAP Corridor	MPO, RCTC, USDOT TIFIA Office
HSRT Passenger System (Private Contribution & User Fee)	User-fee supported initiative for HSRT system. Assumes private sector development: design, finance, build, operate and maintain. See HSRT Report for further details	\$26.2	For the IOS: form JPA, finalize development of a comprehensive business plan; work with private entity to ensure commitment	MPO, Private Consortium, local/regional stakeholders
		\$23.6	For the Orangeline High Speed Maglev: Execute adopted business plan for securing participation of remaining cities in the existing Orangeline Development Authority (JPA) - ARCADIS partnership, secure right-of-way commitments; secure funding/financing for and complete Phase 2 Preliminary Engineering; secure financing for construction	Orangeline Development Authority - ARCADIS partnership

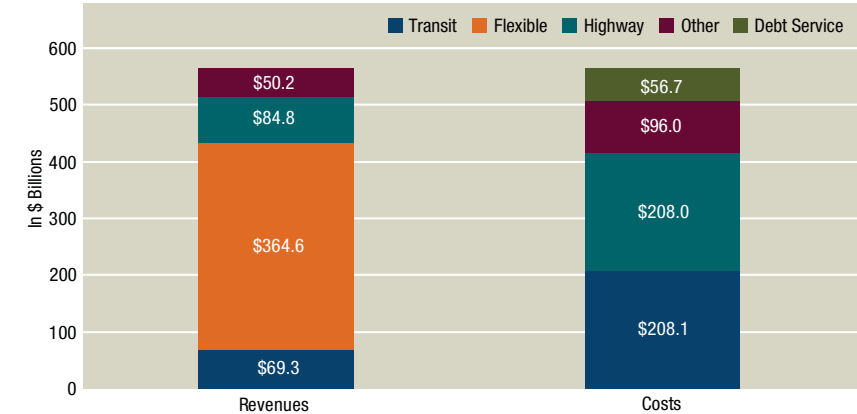
amined the policy and legal context of implementation and has prepared an estimate of the revenue potential.

SUMMARY OF REVENUE SOURCES AND EXPENDITURES

The SCAG region’s financially constrained RTP includes revenues from both the core and reasonably available revenue sources. A summary of these forecasted revenues and expenditures is presented in Figures 2 and 3. As shown in these figures, the SCAG region’s budget over the next 30 years totals an estimated \$568.9 billion.

As shown in Figure 1, transit and highway expenditures are comparable at roughly 37 percent of the RTP costs for each category. About 16 percent of costs are attributable to an “other” category reflecting proposed investments in HSRT systems as well as freight rail capacity and grade separation improvements. Consistent with historical practice, agencies in the region are expected to bond against future revenues to provide additional funding in the early years of the plan. As a result, debt service equal to historical payments and future bonding needs have been included as part of the RTP. Anticipated debt service payments make up 10 percent of total costs.

FIGURE 1 REVENUES COMPARED TO COSTS BY MODE



Note: Numbers may not add due to rounding

FIGURE 2 2008 RTP REVENUE SOURCES
\$568.9 BILLION (IN NOMINAL DOLLARS) FY2007-FY2036

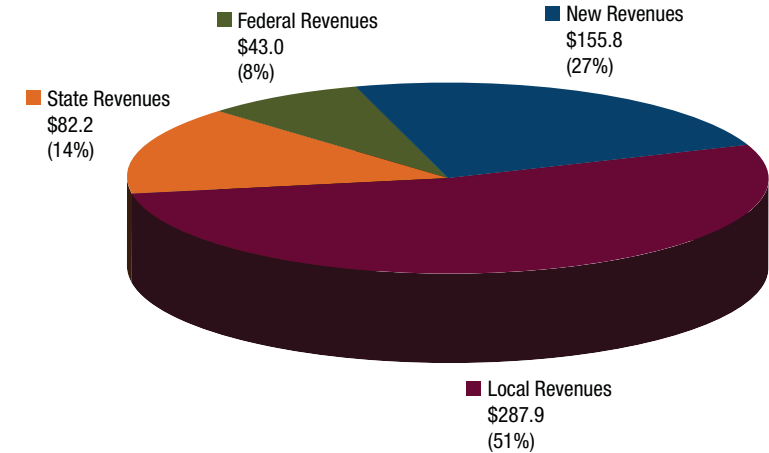


FIGURE 3 2008 RTP EXPENDITURE SUMMARY
\$568.9 BILLION (IN NOMINAL DOLLARS) FY2007-2036

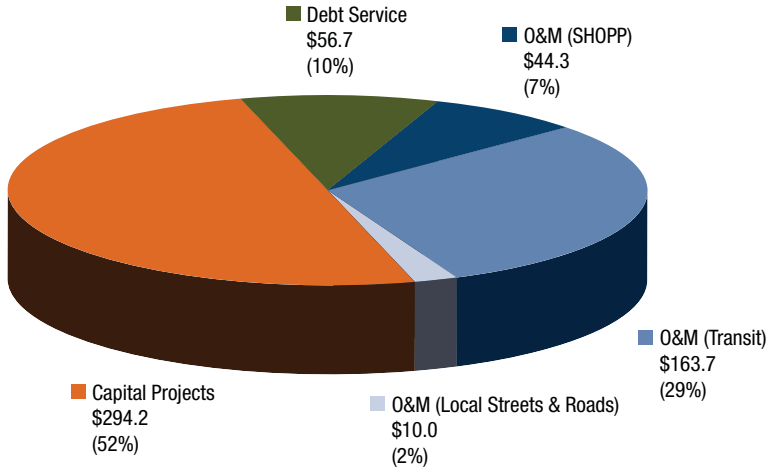


TABLE 4 PERFORMANCE MEASURES

Performance Measure	Measure(s)	Definition	Performance Target	Performance Outcome Summary
Mobility	Speed Delay	Speed – experienced by travelers regardless of mode Delay – excess travel time resulting from the difference between a reference speed and actual speed Delay per capita can be used as a supplemental measure to account for population growth impacts on delay.	Improvement over Base Year	Between the Baseline and Plan scenarios: <ul style="list-style-type: none"> • Speed increases by 8 percent • Total daily person delay decreases by 18 percent • Daily delay per capita decreases by 18 percent
Accessibility	Percent PM peak period work trips within 45 minutes of home Distribution of work trip travel times		Improvement over Base Year	Between the Base Year and Plan scenarios: <ul style="list-style-type: none"> • Accessibility increases by 5 percent
Reliability	Percent variation in travel time	Day-to-day change in travel times experienced by travelers. Variability results from accidents, weather, road closures, system problems and other non-recurrent conditions.	Improvement over Base Year	Between the Base Year and Plan scenarios: <ul style="list-style-type: none"> • Percent variation decreases in both the AM and PM peak periods by approximately 10 percent
Productivity	Percent capacity utilized during peak conditions	Transportation infrastructure capacity and services provided. Roadway Capacity – vehicles per hour per lane by type of facility Transit Capacity – seating capacity by mode	Improvement over Base Year	Between the Base Year and Plan scenarios: <ul style="list-style-type: none"> • Lost lane miles decreases in both the AM and PM peak periods by 20 percent
Safety	Accident rates	Measured in accidents per million vehicle miles by mode for: <ul style="list-style-type: none"> • Fatalities • Injuries • Property 	“0” for all accident types and modes	Between the Base Year and Plan scenarios: <ul style="list-style-type: none"> • Fatalities, injuries, and property damage per million persons decreases by at least 2 percent
Sustainability	Total cost per capita to sustain system performance at Base Year levels	Focus is on overall performance, including infrastructure condition. Preservation measure is a subset of sustainability.	Improvement over Base Year	Between the Base Year and Plan scenarios: <ul style="list-style-type: none"> • Reliability, productivity, safety, and preservation improve
Preservation	Maintenance cost per capita to preserve system at Base Year conditions	Focus is on infrastructure condition. Subset of sustainability.	Improvement over Base Year	Between the Base Year and Plan scenarios: <ul style="list-style-type: none"> • Percent of lane miles requiring rehabilitation decreases by 14 percent • Percent of bridges requiring rehabilitation decreases by 45 percent
Cost-Effectiveness	Benefit to Cost (B/C) Ratio	Ratio of benefits of travel alternatives to the costs of travel including infrastructure, maintenance, travel time, environmental, accident, and vehicle operating costs. This can be used to evaluate impacts of mode split changes resulting from RTP investments.	Improvement over Base Year	The Plan provides \$2.30 return for every \$1.00 invested.
Environmental	Emissions generated by travel	Measured/forecast emissions include CO, NOX, PM2.5, PM10, SOX, and VOC. CO2 as secondary measure to reflect greenhouse gas emissions.	Meet SIP Emission Budgets & Transportation Conformity requirements	The draft conformity analysis indicates a positive conformity finding for the Draft Plan based on the draft emission budgets received by the Air Resources Board and the other required tests. The formal conformity finding will be based on the finalized emission budgets analyzed in comparison to the RTP as prepared for adoption.
Environmental Justice	Distribution of benefits and costs Accessibility Environmental Emissions Noise	Share of net benefits and costs by mode, household income, race/ethnicity: <ul style="list-style-type: none"> • RTP expenditures • Taxes paid (e.g., income, sales & use, gas) • Access to jobs (See “Accessibility”) • Travel time savings by mode • Environmental impacts from PEIR 	Equitable distribution of benefits and costs	The Plan results in no disproportionate negative impacts on the ground of income, race, color, or national origin.

Plan Performance

This Plan follows the success of recent RTPs in the use of the following system performance measures to demonstrate the effectiveness of this Plan:

- Mobility
- Accessibility
- Reliability
- Productivity
- Safety
- Sustainability
- Preservation
- Cost-Effectiveness
- Environment
- Environmental Justice

Using quantifiable performance measures, three scenarios are compared to determine the performance of the Plan:

- Base Year 2003 scenario—Existing conditions based on the transportation network as of 2003
- Baseline 2035 scenario—Future conditions in 2035 based on the existing transportation system and near-term constrained projects
- Plan 2035 scenario—Future conditions in 2035 based on the existing transportation system, near-term constrained projects, and long-term constrained projects

In every category, the Plan 2035 scenario shows improvement over the Baseline 2035 scenario (Table 4).

TRANSPORTATION CONFORMITY ANALYSIS

Transportation conformity is required under the federal Clean Air Act (CAA) to ensure that federally supported highway and transit project activities are consistent with (“conform to”) the purpose of the SIP³. Conformity to the purpose of the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant NAAQS. Conformity applies to areas that are designated non-attainment, and those re-designated to attainment after 1990 (“maintenance areas”) for the following transportation-related criteria pollutants: ozone, particulate matter (PM_{2.5} and PM₁₀), carbon monoxide (CO), and nitrogen dioxide (NO₂).

This Plan must pass the following tests and analyses to meet the requirements for a positive conformity finding:

- Regional Emission Analysis
- Timely Implementation of Transportation Control Measures (TCMs) Analysis
- Financial Constraint Analysis
- Interagency Consultation and Public Involvement Analysis

Due to recent litigation relative to U.S EPA’s Eight-hour Ozone Phase 2 Rule, EPA has instructed ARB to revise the established method of demonstrating Reasonable Further Progress (RFP) in ozone non-attainment areas that utilize reductions from other areas to demonstrate attainment (e.g., upwind areas). In the SCAG region, such areas include the Ventura County portion of the South Central Coast Air Basin (SCCAB), the Western Mojave Desert Air Basin (MDAB) (Antelope Valley and a portion of San Bernardino County), and the Coachella Valley portion of the Salton Sea Air Basin (SSAB). Therefore, at this time, there are no AQMPs or SIPs and, thus, no 8-hour ozone transportation

³ To comply with the CAA in achieving the NAAQS, the ARB develops SIPs for federal non-attainment and maintenance areas. In California, SIP development is a joint effort of the local air agencies and ARB working with federal, state, and local agencies (including the MPOs). Local Air Quality Management Plans (AQMPs) are prepared in response to federal and state requirements.

emission budgets for these areas. SCAG has worked closely with the ARB and EPA to resolve this issue. As agreed upon by ARB and EPA, ARB will adopt early progress plans (i.e., emissions inventories and transportation emission budgets) for areas that need upwind reductions to show RFP. The early progress plans will be the vehicle to establish transportation emission budgets while EPA decides how to respond to the RFP issue raised by the litigation. ARB plans to release the early action plans for public review in mid-December 2007 for adoption in January 2008. ARB and SCAG have requested that EPA parallel process their review of the transportation emission budgets to expedite approval. As instructed by ARB, the Draft 2008 RTP conformity analysis uses the transportation activity data provided to ARB as the basis for the emission budgets for these areas.

The draft conformity analysis indicates a positive conformity finding for the Draft 2008 RTP based on the draft emission budgets received by the Air Resources Board and the other required tests. The formal conformity finding will be based on the finalized emission budgets analyzed in comparison to the RTP as prepared for adoption. The detailed transportation conformity analyses for the 2008 RTP are included in the 2008 RTP Conformity Report.

ENVIRONMENTAL JUSTICE

As a government agency that receives federal funding, SCAG is responsible for implementing Title VI of the Civil Rights Act of 1964 and for conforming to federal Environmental Justice (EJ) principles, policies, and regulations. As part of meeting these requirements, SCAG has performed an EJ analysis to demonstrate responsiveness to potential imbalances caused by the development of the plans, programs, and policies in the 2008 RTP.

The intention of the EJ analysis is to demonstrate that SCAG's planning processes and methods are responsive to imbalances caused by the development of the plans, programs, and policies in the 2008 RTP. SCAG's EJ analysis examined performance measures to determine any disproportionate negative impacts. Performance measures provide a way to quantitatively assess the impact of the Plan. In the development of the Plan, SCAG utilized a number of

performance measures designed to assess the overall equity. An overview of the findings is listed below:

- **Accessibility:** The results indicate that accessibility to jobs by auto will remain relatively constant for all income groups. Improvement in accessibility by transit is higher for the lower income groups. All income groups should benefit from improvements in accessibility due to the 2008 RTP.
- **Plan Expenditures/Investments:** Under the Plan, transportation investments would go to modes likeliest to be used by lower-income groups. Also, Plan expenditures will be distributed more equitably on the basis of system usage by ethnic/racial groups.
- **Costs:** Overall, tax burdens are anticipated to fall heavily on higher-income groups. Thus, those with limited financial means will not pay a disproportionate amount of overall taxes.
- **Time Savings:** Overall, the benefits of time savings will be enjoyed by the lower income groups, who pay a smaller share of taxes.
- **Travel Distance Reductions:** The results indicate that the lowest quintile group will have the least amount of benefit accounting for 12 percent of auto travel distance savings, while the highest quintile group will benefit the most. However, the taxes paid by the highest income group are anticipated to exceed their share of benefits.
- **Environmental Impact Analyses:** Overall, the region as a whole will generally experience an improvement in air quality via reductions in transportation-related emissions due to ongoing mobile source emission controls and investments in the Plan. Generally, change in air emissions due to the proposed investments in this Plan will not disproportionately affect minorities and low-income groups. However, minority and low-income groups may be disproportionately impacted by aviation and highway noise. This reflects a somewhat higher concentration of minority and low-income population around airports and along transportation corridors where improvements are needed. The Plan proposes mitigat-

ing these impacts to the extent possible, for example, by requiring new soundwalls where freeway expansions are proposed. In addition, the Plan also proposes grade crossings, new technologies, and other clean technologies for goods movement corridors.

Future Connections: The Strategic Plan

The strategies in the constrained Plan represent the region's collective vision for addressing our transportation needs within the constraints of committed, available, or reasonably available revenue sources. Despite the substantial commitments contained in the RTP, this level of financial investment does not meet the overall needs identified through the RTP development process. If we truly want to address the needs set forth in this RTP, then we must look towards additional strategies and investments to get us there. Often this will entail controversial and difficult choices that will push the envelope and test the boundaries of what is politically acceptable. For now, these elements are contained in the Strategic Plan with the recognition that they merit further study and that, over time and with further consensus building, these programs and policies may move forward into the constrained RTP.

Supplemental Reports (Appendices)

Additional detail on the various topics discussed in this Plan is contained in 18 standalone reports that also act as the appendices for the 2008 RTP. The reports include all backup data that support assumptions made in the development of the Plan, as well as additional information on areas of interest in regards to our regional transportation system.

