TRANSPORTATION FINANCE
APPENDIX

REGIONAL TRANSPORTATION PLAN
2012–2035 RTP
SUSTAINABLE COMMUNITIES STRATEGY
Towards a Sustainable Future

Southern California Association of Governments

PROPOSED FINAL
APRIL 2012

TRANSPORTATION FINANCE

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Introduction

This appendix highlights the financial planning component of the 2012–2035 RTP/SCS for the six-county SCAG region. The financial plan identifies how much money is available to support the region's surface transportation investments, including transit, highways, local road improvements, system preservation, and demand management goals. It also addresses the need for investment in goods movement infrastructure. Improving ground access in and around major goods movement facilities and enhancing major highways and railways are critical to maintaining the health of Southern California's economy. The RTP/SCS calls for traditional and non-traditional revenue sources for implementing a program of infrastructure improvements to keep freight and people moving.

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

SCAG acknowledges the considerable challenges associated with financing transportation investments. The plan highlights the importance of finding new and innovative ways to pay for transportation, including our ever-expanding backlog of investment needs just to maintain the existing system. Nationally, we are facing a very real, near-term insolvency crisis with the Federal Highway Trust Fund as fuel tax receipts continue to take a precipitous decline. Additionally, the viability of California's State Highway Account remains in question, as only a fraction of our needs are funded through state sources.

To backfill limited state and federal sources, our region continues to rely upon local initiatives (74 percent of core revenues) to meet transportation needs. With a total of 7 sales tax measures throughout the region, including the passage of Measure R in Los Angeles County since the adoption of the 2008 RTP, we are increasingly becoming self-reliant. However, the national purpose served by Southern California's transportation system—particularly in the movement of goods—points to the need for stronger state and federal commitment. Our transportation system is the responsibility of all levels of government.

In the SCAG region, our decision-makers continue to take a leadership role in advancing innovative transportation solutions. The 2012–2035 RTP/SCS establishes a framework toward a more sustainable funding future with emphasis on continued research and development for transitioning our fuel tax-based system to a more direct, user fee approach. Such a change requires additional investigation and legislative action by state and federal leaders over the time horizon of the 2012–2035 RTP/SCS. Our region has undertaken numerous policy and technical studies in recent years and will continue to make a commitment toward further examining and demonstrating user fee systems, including toll networks and mileage-based user fees.

We have successfully implemented toll systems in the past with the Transportation Corridor Agencies' network of toll roads and the SR-91 Express Lanes in Orange County. This kind of innovation in transportation continues and offers further opportunities to leverage, including public-private partnerships, as neighboring counties within our region consider a broader network of toll systems. Moreover, federal programs have recently supported demonstration initiatives in the region (e.g., I-110 and I-10 Congestion Reduction Demonstration Program in Los Angeles County). We have secured the necessary resources identified to support transportation investments proposed in past RTPs. This plan will continue to meet the necessary milestones for implementation.

The rest of this appendix outlines our financial strategies and provides documentation of the financial assumptions and methodologies used for forecasting revenues and expenditures.

Revenue Assumptions

A regional revenue model was developed to forecast the revenues over the RTP/SCS time horizon. The revenue model supports analysis by county or funding source. The region's revenue forecast timeframe for the RTP/SCS is FY2011 through FY2035. Consistent with federal guidelines, the financial plan takes into account inflation and reports statistics in nominal (year of expenditure) dollars.

The underlying data are based on financial planning documents developed by the local county transportation commissions and transit operators. The revenue model also uses information from the California Department of Transportation (Caltrans) and the California Transportation Commission (CTC). A complicating factor in the SCAG region is that individual county transportation commissions develop revenue forecasts consistent with their obligations under county sales tax measures. The regional forecasts incorporate the county forecasts and fill data using a common framework. This ensures consistency between the SCAG forecast and the planning documents of the county transportation commissions. When there are gaps in the financial projections in the outer years between

the county forecasts and the RTP/SCS time horizon, growth assumptions are extrapolated from historical trends based on published data. For the 2012–2035 RTP/SCS, Monte Carlo simulation was also conducted to ensure the assumptions are reasonable and to understand the risks of different assumptions.

The basic process for developing the revenue forecast is to:

- Build on the revenue forecasts provided by the county transportation commissions.
- Add data where needed using assumptions based on historical data.
- Compare historical data to short-range transit plans and other agency documents.
- Conduct Monte Carlo sensitivity testing of assumptions.
- Work with the transportation commissions to modify assumptions and forecasts as needed.

The next few sections describe specific economic assumptions and challenges in developing the regional revenue forecasts.

Economic Conditions

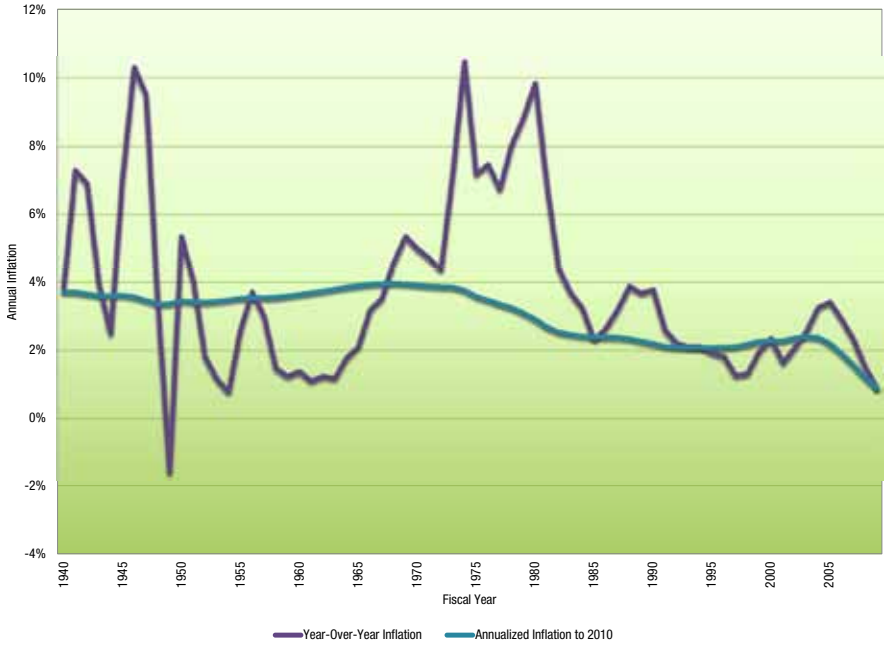
Overall economic conditions play a large role in determining the level of revenues available for transportation through 2035. SCAG's financial model takes a conservative approach when forecasting the latter years of the RTP/SCS planning horizon. The approach also reflects historical growth trends and reasonable future expectations for key revenue sources, including locally generated sales tax revenues as well as state and federal gas excise tax revenues. The inability of existing excise taxes to keep pace with increasing transportation needs and the detrimental effects of increasing fuel economy on traditional revenue sources are key considerations in the financial plan.

Inflation

SCAG's revenue model takes into account historical inflation trends measured by the Gross Domestic Product (GDP) Price Deflator—an approach consistent with the one used by the Federal Office of Management and Budget in preparing the Budget of the United States Government. Inflation can have a profound effect over the long term, particularly during the final years of the plan, when inflation has had nearly 25 years to erode the value of money.

FIGURE 1 shows the trends in inflation since World War II as measured by the GDP Price Deflator. Inflation rates have varied considerably over the time period. However, inflation has dropped dramatically since the late 1970s, when the Federal Reserve needed to adopt measures to "tame" inflation. The recession has put additional downward pressure on the inflation rate and caused some economists to worry about the potential eroding effects of deflation, but inflation has remained positive. Over the long term, inflation has trended between 2 and 4 percent. On the basis of this information, a 2.9 percent inflation rate is used to adjust constant dollar (revenue) forecasts into nominal (or year-of-expenditure) dollars.

FIGURE 1 Historical Inflation Trends



Source: Office of Management and Budget, Budget of the United States Government, Fiscal Year 2011 Budget (FY11)

Retail Sales Growth

Changes in personal consumption, population, available land, and retail locations are the biggest contributors to the growth in retail sales. The recession has dealt a blow to retail sales, which reached their peak in FY2007. Retail sales have begun to improve and are expected to rise over the RTP/SCS planning period. Over the 30-year period from FY1979 to FY2009, retail sales grew 1.4 percent in real terms (when the effects of inflation are eliminated). However, the growth was uneven. The financial plan assumes uneven growth will continue to occur, with retail sales growth ranging from 1.2 percent to 3.9 percent in real terms.

Fuel Consumption

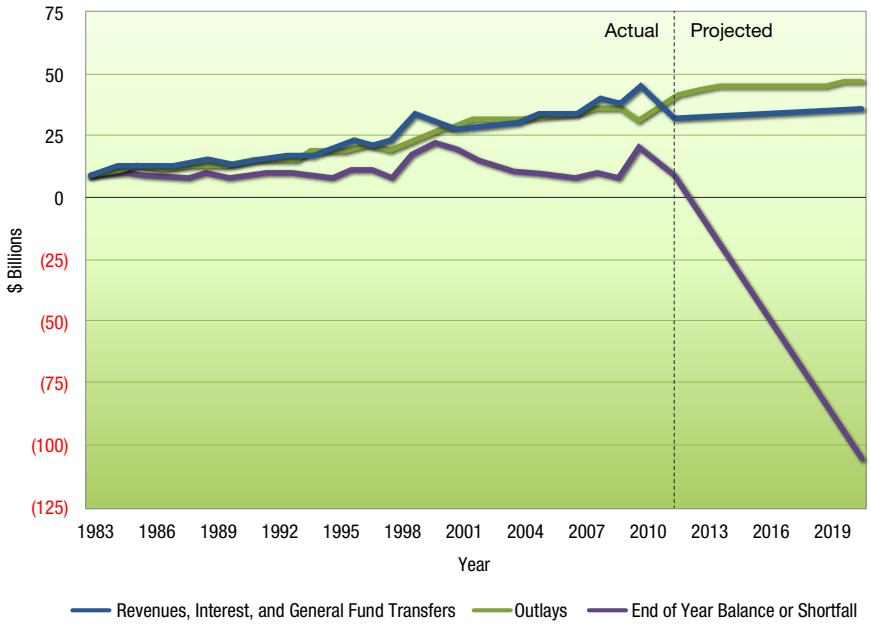
Excise taxes on gasoline and diesel fuels are the basis of most available federal and state transportation funding sources. Since these taxes are levied on a cents-per-gallon basis, they are dependent solely on fuel consumption and are not indexed to inflation or construction costs. Over the last several decades, total fuel consumption and the excise taxes generated grew due to increases in vehicle miles traveled (VMT). While changes in VMT will continue to play a role during the RTP/SCS planning period, increases in conventional fuel economy and the adoption of alternative fuel vehicles will reduce overall fuel consumption. The financial plan assumes that increases in vehicle fuel efficiency will reduce fuel consumption by 1 percent per year during the planning period.

Status of the Federal Highway Trust Fund

The Federal Highway Trust Fund (HTF) provides federal highway and transit funding from a nationally imposed 18.3-cent-per-gallon gasoline excise tax. The health of the HTF is of significant concern. Expenditures authorized under the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) have outstripped revenues generated by the excise tax. Since 2008, the HTF has failed to meet its obligations and has required the Congress to authorize $34.5 billion in transfers from the General Fund to keep it solvent.

FIGURE 2 shows a chart from a recent Congressional Budget Office (CBO) analysis of the HTF. The negative balances shown on the chart illustrate the projected inability of the HTF to pay its obligations into the highway account as incurred by the states. Since the Trust Fund cannot incur negative balances under current law, the difference would need to be made up by General Fund transfers or slower spending on programs financed by the HTF.

FIGURE 2 Status of the Federal Highway Trust Fund



Source: Congressional Budget Office

At the time of the RTP/SCS, Congress is on its eighth extension to SAFETEA-LU without substantive agreement on a long-term solution to provide adequate funding for the HTF despite two national commissions established under SAFETEA-LU that called for immediate action to increase fuel taxes and index as appropriate in parallel with transitioning to a mileage-based user fee over the longer term. The financial plan assumes that Congress will reach agreement on maintaining solvency of the HTF over the RTP/SCS planning period. However, the core revenues available from the HTF are expected to decline due to increasing fuel efficiency.

Status of the State Highway Account

The viability of the State Highway Account (SHA) remains another critical issue. Despite a recent "Gas Tax Swap," the effective state excise rates have remained unadjusted for more than 15 years. The excise tax revenues, however, remain the only source of funding for the State Highway Operation and Protection Program (SHOPP), which finances projects to maintain the State Highway System.

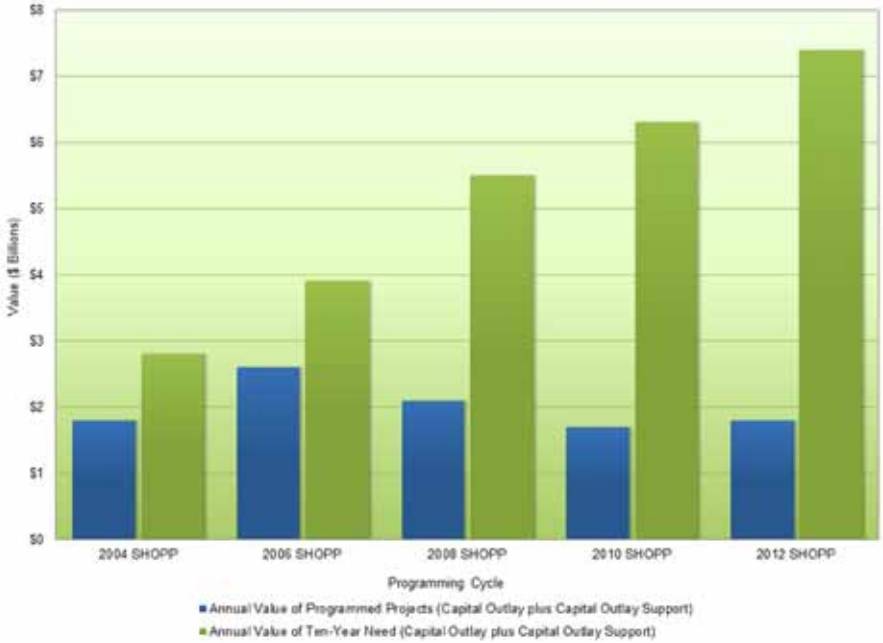
Despite the entire SHA being dedicated to the SHOPP in some years, previous levels of funding have been considerably less than actual needs (see **FIGURE 3**). Continued underinvestment in the rehabilitation and maintenance needs of the State Highway System has serious ramifications—rapidly increasing the number of distressed lane-miles on the State Highway System and eroding the condition of the State's bridges. As a result, the cost of bringing the highway assets back to a state of good repair is expected to grow exponentially.

The 2011 Ten-Year SHOPP Plan identifies $7.4 billion in statewide annual needs, while expenditures programmed for the next four years are only $1.8 billion annually. Increased fuel efficiency will further erode State Highway Account funding available over the RTP/SCS planning period.

State Gas Tax Swap

In 2010, state gasoline sales tax revenues were "swapped" for an increased state excise tax. Effective July 1, 2010, the gasoline excise tax increased by 17.3 cents. On July 1, 2011, sales taxes on diesel fuel increased by 1.75 percent and the excise tax decreased by a corresponding amount. To partially backfill the State Transit Assistance funding to local transit operators, their share increased from two-thirds to 75 percent. Each year, the California State Board of Equalization is required to adjust the excise tax, so the state Gas Tax Swap remains revenue neutral. As a result, the financial plan assumes that the state Gas Tax Swap generates the same revenues as generated under the prior state sales tax on gasoline.

FIGURE 3 Status of the State Highway Operation and Protection Program



Source: California Department of Transportation, 2011 Ten-Year SHOPP Plan

Air Quality Attainment

Air quality determines the amount of Congestion Mitigation and Air Quality (CMAQ) funding available to the SCAG region. SCAG expects that the region will be in attainment for a number of pollutants and the severity level for other pollutants will lessen as a result of air quality initiatives. The financial plan assumes that CMAQ funding will decline by 25 percent in 2020 and another 25 percent in 2025 as a result of these air quality improvements.

Local Sales Tax Measures

As a means of backfilling declining federal and state sources, the SCAG region continues to rely heavily on local sales tax measures for the timely delivery of transportation projects. Most counties in the region voted to support local sales taxes to fund transportation projects. Ventura County is the only county in the region without a dedicated sales tax for transportation. While most counties impose a 0.5 percent sales tax to fund transportation projects, Los Angeles County levies a permanent 1 percent tax (a combination of two half-cent sales taxes).

Since the 2008 RTP, voters in Los Angeles County have passed Measure R, which imposes an additional 0.5 percent sales tax to fund transportation projects. Unlike the other Los Angeles County sales taxes, Measure R is not permanent and expires in 2039.

Additionally, several local sales taxes have been renewed in recent years. Prior to the 2008 RTP, Orange, Riverside, and San Bernardino Counties extended their sales tax measure through 2039 or beyond. Since the 2008 RTP, Imperial County has renewed its Measure D through 2050. As a result of these extensions, revenues from the local sales tax measures will be available for the entire RTP/SCS planning period.

Core and Reasonably Available Revenues

For the 2012–2035 RTP/SCS, SCAG prepared two types of revenue forecasts. Both are included in the financially constrained plan:

- Core revenues
- Reasonably available revenues

The *core revenues* identified are those that have been committed or historically available for the building, operation, and maintenance of the current roadway and transit systems in the SCAG region. Essentially, these revenues are existing transportation funding sources projected to FY2035. The core forecast does not include future increases in state or federal gas excise tax rates (other than the pro forma increases in the state excise tax due to the state gasoline sales tax swap) or adoptions of regional gasoline taxes, vehicle miles traveled (VMT) taxes, and new tax measures. These revenues provide a benchmark from which additional funding can be identified.

The region's *reasonably available revenues* include new sources of transportation funding likely to materialize within the 2012–2035 RTP/SCS timeframe. These sources include adjustments to existing state and federal gas tax rates based on historical trends and recommendations from two national commissions (National Surface Transportation Policy and Revenue Study Commission and National Surface Transportation Infrastructure Financing Commission) created by Congress; further leveraging of existing local sales tax measures; value capture strategies; potential national freight program/freight fees; as well as passenger and commercial vehicle tolls for specific facilities. Reasonably available revenues also include innovative financing strategies, such as private equity participation. In accordance with federal guidelines, the plan includes strategies for ensuring the availability of these sources.

Core Revenues

TABLE 1 shows the core revenues in five-year increments by county.

TABLE 1 Core Revenue Forecast FY2011–FY2035 (in Nominal Dollars, Billions)

County	FY2011–FY2015	FY2016–FY2020	FY2021–FY2025	FY2026–FY2030	FY2031–FY2035	Total
Imperial	$0.3	$0.3	$0.4	$0.4	$0.5	$1.9
Los Angeles	$29.4	$32.7	$38.5	$46.2	$53.4	$200.2
Orange	$7.3	$8.1	$9.5	$11.3	$13.4	$49.6
Riverside	$4.2	$4.6	$5.1	$5.9	$6.8	$26.6
San Bernardino	$3.4	$4.0	$4.4	$5.0	$5.6	$22.4
Ventura	$0.8	$0.8	$0.9	$1.0	$1.2	$4.6
Total	**$45.3**	**$50.3**	**$58.7**	**$69.7**	**$80.9**	**$305.3**

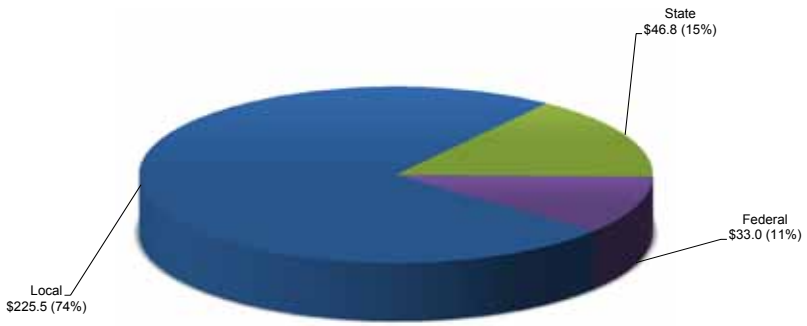
Source: SCAG Revenue Model 2011
Note: Numbers may not sum to total due to rounding

As shown in **FIGURE 4**, the majority of revenues in the SCAG region come from local sources. The share of state sources (15 percent) has declined since the 2008 RTP (20 percent) as a result of the forecasted decline in fuel consumption and the increased share of local funds resulting from adoption of an additional sales tax in Los Angeles County.

FIGURE 5 shows the breakdown of revenues by county. With the adoption of Measure R, Los Angeles accounts for nearly two-thirds (65 percent) of the funding available in the SCAG region. This is an increase from the 56 percent share in the 2008 RTP.

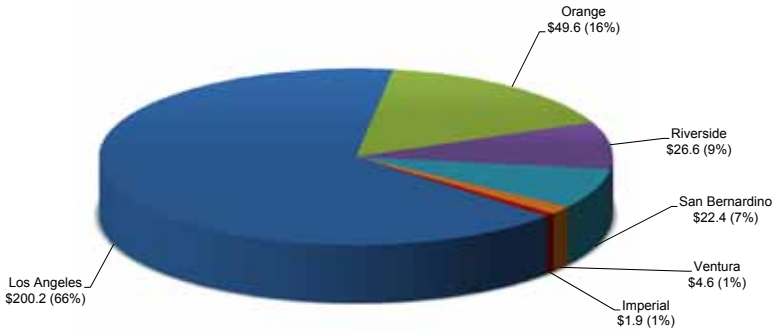
Local option sales taxes provide the largest single source of local funding, as shown in **FIGURE 6**. When local sales taxes in all five counties with such measures are included, these taxes account for more than half (53 percent) of local sources and nearly two-fifths (39 percent) of overall funding for the RTP/SCS. Local sales tax revenues have been boosted by the adoption of Measure R, which provides a further 0.5 percent sales tax in Los Angeles County through 2039. In addition, Imperial County extended its tax measure through 2050.

FIGURE 4 Core Revenues (in Nominal Dollars) $305.3 Billion Total



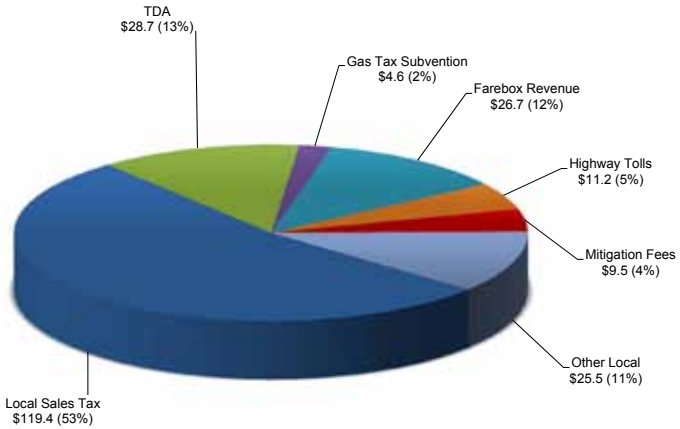
Source: SCAG Revenue Model 2011
Note: Numbers may not sum to total due to rounding

FIGURE 5 Core Revenues by County (in Nominal Dollars) $305.3 Billion Total



Source: SCAG Revenue Model 2011
Note: Numbers may not sum to total due to rounding

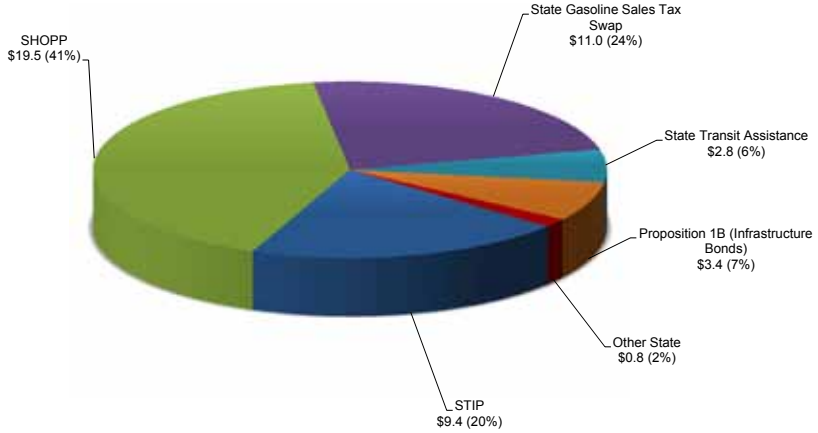
FIGURE 6 Core Revenues, Local Sources (in Nominal Dollars) $225.5 Billion Total



Source: SCAG Revenue Model 2011
Note: Numbers may not sum to total due to rounding

State sources generate a smaller share of revenues than in the 2008 RTP, due mostly to the assumption that fuel consumption declines in the future as a result of increased fuel efficiency. As shown in **FIGURE 7**, the State Transportation Improvement Program (STIP), the State Highway Operations and Protection Program (SHOPP), and the State Gasoline Sales Tax Swap account for the largest portions of the state funding available. The adjustments to the State Transit Assistance (STA) available under the Gas Tax Swap are included in the State Gasoline Sales Tax Swap category.

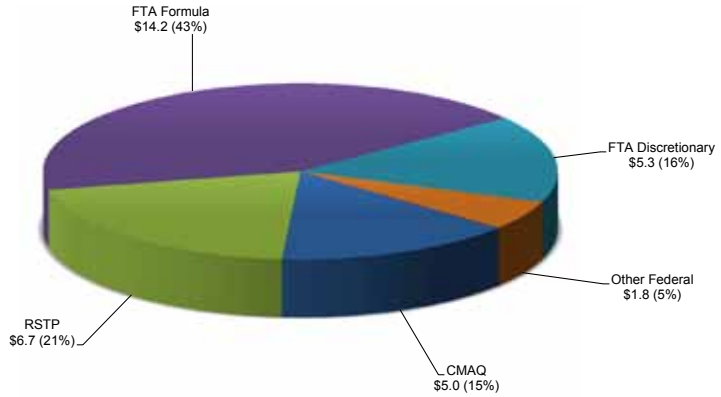
FIGURE 7 Core Revenues, State Sources (in Nominal Dollars) $46.8 Billion Total



Source: SCAG Revenue Model 2011
Note: Numbers may not sum to total due to rounding

As shown in **FIGURE 8**, federal sources are anticipated to represent a small portion of overall transportation funds ($33.0 billion). The Federal Highway Trust Fund is expected to remain solvent, but as with state funding, federal funding will decline due to increases in fuel efficiency. Federal Transit Administration (FTA) funding represents a larger share of federal funding due to large-scale New Starts in the SCAG region and a recent emphasis on transit allocations. The financial plan also assumes that CMAQ funding will decline in 2020 and 2025 due to the region achieving attainment for a number of pollutants and reducing the severity level of other pollutants.

FIGURE 8 Core Revenues, Federal Sources (in Nominal Dollars) $33.0 Billion Total



Source: SCAG Revenue Model 2011
Note: Numbers may not sum to total due to rounding

Reasonably Available Revenues

There are several new funding sources that are reasonably expected to be available for the 2012–2035 RTP/SCS. SCAG considered a set of key guiding principles as a foundation for identifying regionally appropriate revenues that are reasonably available in developing the RTP/SCS financial strategies as follows:

- Establish a user-based system that better reflects the true cost of transportation, provides firewall protection for transportation funds, and ensures an equitable distribution of costs and benefits.
- Promote national and state programs that include return-to-source guarantees while maintaining flexibility to reward regions that continue to commit substantial local resources.
- Leverage locally available funding with innovative financing tools (e.g., tax credits and expansion of Transportation Infrastructure Finance and Innovation Act [TIFIA]) to attract private capital and accelerate project delivery.
- Promote funding strategies that strengthen federal commitment to the nation's goods movement system, recognizing the pivotal role that our region plays in domestic and international trade.

Based on these guiding principles, SCAG evaluated a number of revenue options. Various combinations of these options were considered as potential revenue packages. **TABLE 2** presents 10 categories of funding sources and financing techniques that were evaluated for the RTP/SCS. These were selected on the basis of their use in other areas of the state, the burgeoning potential, historical precedence, and their likelihood of implementation within the timeframe of the 2012–2035 RTP/SCS.

These funding sources are considered to be reasonably available and are included in the financially constrained plan. For each funding source, SCAG has examined the policy and legal context of implementation and has prepared an estimate of the potential revenues generated.

Assumptions by Revenue Source

TABLE 3 describes the specific revenue assumptions used for the financially constrained 2012–2035 RTP/SCS. A more detailed discussion of revenue sources is included in Appendix B.

The California Transportation Commission (CTC) releases the Fund Estimate every two years. The estimate covers a five-year period and estimates how much money each region can expect to receive from various sources. This estimate is guided by statutory requirements that direct how the funds are divided throughout the state. The federal funding categories of Interstate Maintenance (IM) and National Highway System (NHS) are included within the CTC's State Transportation Improvement Program (STIP) allocation. The federal funds cannot be separated from the CTC's overall fund estimate and the resulting regional allocation from the STIP. For this reason, the federal categories of Interstate Maintenance (IM) and National Highway System (NHS) are not shown on the revenue data table under federal sources nor are they specifically documented and described here.

TABLE 2 New Revenue Sources and Innovative Financing Strategies (in Nominal Dollars, Billions)

Revenue Source	Description	Amount	Actions to Ensure Availability	Responsible Party(ies)
Bond Proceeds from Local Sales Tax Measures	Issuance of debt against existing sales tax revenues: Los Angeles, Orange, Riverside, and San Bernardino Counties. (Note: although revenue estimates do not include new sales tax measures, this plan recognizes future opportunities including the potential for a sales tax measure in Ventura County if approved by the voters.)	$25.6	Issuance of debt subject to county transportation commissions' respective board policies.	County Transportation Commissions—CTCs (LACMTA, OCTA, RCTC, SANBAG)
State and Federal Gas Excise Tax Adjustment to Maintain Historical Purchasing Power	Additional $0.15 per gallon gasoline tax imposed at the state and the federal levels starting in 2017 to 2024—to maintain purchasing power.	$16.9	Requires action of State Legislature and Congress. Strategy is consistent with recommendations from two national commissions to move immediately with augmenting fuel tax resources through conventional Highway Trust Fund mechanisms.	State Legislature, Congress
Mileage-Based User Fee (or equivalent fuel tax adjustment)	Mileage-based user fees would be implemented to replace gas taxes—estimated at about $0.05 (in 2011 dollars) per mile starting in 2025 and indexed to maintain purchasing power.	$110.3 (est. increment only)	Requires action of State Legislature and Congress. Strategy is consistent with recommendations from two national commissions to move toward a mileage-based user fee system. Immediate steps necessary to take include coalescing state and national partners to fund further RD&D (research, development, and demonstration) in advance of 2025 broad-based implementation.	State Legislature, Congress
Highway Tolls (includes toll revenue bond proceeds)	Toll revenues generated from SR-710 Transportation Improvement Options, I-710 South Freight Corridor, East-West Freight Corridor, segment of the High Desert Corridor, and Regional Express/HOT Lane Network.	$22.3	Assembly Bill (AB) 1467 (Nunez) Chapter 32, Statutes of 2006 authorized Caltrans and regional transportation agencies to enter into comprehensive development lease agreements with public and private entities or consortia of those entities for certain types of transportation projects. Further, AB 521 (Runner) Chapter 542, Statutes of 2006 modified provisions in AB 1467. Senate Bill Second Extraordinary Session 4 (SBX2 4) Chapter 2, Statutes of 2009 (Cogdill) established the legislative authority until January 1, 2017, allowing for regional transportation agencies and Caltrans to enter into an unlimited number of public-private partnerships (P3) and deleted the restrictions on the number and type of projects that may be undertaken. Chapter 474, Statutes of 2009 (AB 798) established the California Transportation Financing Authority (CTFA). Highway projects that meet planning and environmental review requirements are eligible for tolling subject to meeting requirements of the CTFA. AB 798 also lifts the requirement for High Occupancy Toll (HOT) lane projects authorized under AB 1467 to have separate legislative approval.	MPO, CTCs, Caltrans, CTFA, and FHWA as may be applicable

Revenue Source	Description	Amount	Actions to Ensure Availability	Responsible Party(ies)
Private Equity Participation	Private equity share as may be applicable for key initiatives: e.g., toll facilities; also, freight rail package assumes railroads' share of costs for main line capacity and intermodal facilities such as SCIG and ICTF modernization.	$2.7	Region has authority as noted above. Further, current funding plans for specific intermodal facilities assume private sources.	MPO, CTCs, private consortium, State Legislature, and Union Pacific/BNSF as appropriate for specific facilities
Freight Fee/National Freight Program	A national freight program is anticipated with the next federal reauthorization of the surface transportation act. The National Freight Program described in Senate-proposed transportation reauthorization bill (MAP-21) would establish federal formula funding for infrastructure improvements supporting the national freight network. Early estimates indicate roughly $2 billion per year nationally. Regional estimate assumes a conservative percentage of national totals.	$4.2	Current efforts at the local/regional level continue to endorse a federal program for freight. A national program may be formula-based as outlined in the recently proposed MAP-21. Other mechanisms to ensure the establishment of a funding program for freight may entail working with local/regional, state, and federal stakeholders to assess a national freight fee. Freight fees could be assessed in proportion to relative impacts on the transportation system.	Congress and potentially State Legislature as well as local/regional stakeholders
E-Commerce Tax	E-commerce sales refers to the sale of goods and services where an order is placed or price and terms of the sale are negotiated over the Internet or other online system. Potentially, the revenue could be used for transportation purposes, given the relationship between e-commerce and the delivery of goods to California purchasers.	$3.1	The State estimates that most residents do not report use tax and this resulted in $1.1 billion in forgone use tax revenue during 2010. The State cannot compel out-of-state retailers to pay a sales or use tax, as federal law requires that retailers have a physical presence in the State. In its FY2012 budget, the State attempted to compel out-of-state retailers that are part of a commonly controlled group or that work with affiliates to pay a use tax (through ABX1 28). In September 2011, the State repealed ABX1 28 and enacted AB 155, which includes many of the same provisions as ABX1 28, but delays implementation until September 2012.	State Legislature and potentially Congress
Interest Earnings	Interest earnings from toll bond proceeds.	$0.2	See Highway Tolls.	See Highway Tolls
State Bond Proceeds, Federal Grants & Other for California High-Speed Rail Program	State general obligation bonds authorized under the Bond Act approved by California voters as Proposition 1A in 2008; federal grants authorized under American Recovery and Reinvestment Act and High-Speed Intercity Passenger Rail Program; potential use of qualified tax credit bonds; and private sources.	$33.0	Estimate for Southern California segments based on statewide system total per November 1, 2011, Draft California High-Speed Rail Business Plan. Further coordination anticipated with the California High-Speed Rail Authority in finalizing business plan; additionally, the High-Speed Rail Authority will pursue private-sector participation as a source of system financing.	MPO, California High-Speed Rail Authority, local/regional stakeholders, private-sector partners
Value Capture Strategies	Assumes formation of special districts (infrastructure financing districts) including use of tax increment financing for specific initiatives: e.g., East-West Freight Corridor.	$1.2	Pursue necessary approvals for special districts by 2016. Benefit assessment districts require majority approval by property owners; community facility districts require two-thirds approval; work with private entities for joint development opportunities as may be applicable.	MPO, CTCs, local jurisdictions, property owners along project corridors, developers

TABLE 3.1 Core and Reasonably Available Revenue Projections—Local Revenue Sources (in Nominal Dollars, Billions)

Revenue Source	Revenue Projection Assumptions	Revenue Estimate
LOCAL REVENUE SOURCES		
Local Option Sales Tax Measures	**Description:** Locally imposed ½ percent sales tax in four counties (Imperial, Orange, Riverside, and San Bernardino). Permanent 1 percent (combination of two ½ cent sales taxes) plus Measure R through 2039 in Los Angeles County. **Assumptions:** Sales taxes grow consistent with county transportation commission forecasts and historical trends.	$119.4
Transportation Development Act (TDA)—Local Transportation Fund	**Description:** The Local Transportation Fund (LTF) is derived from a ¼ cent sales tax on retail sales statewide. Funds are returned to the county of generation and used mostly for transit operations and transit capital expenses. **Assumptions:** Same sales tax growth rate as used for local option sales tax measures.	$28.7
Gas Excise Tax Subventions (to Cities and Counties)	**Description:** Subventions to counties and local jurisdictions in region from the California state gas tax. Revenues for the forecast are proportionate to the percentage of streets and roads that are regionally significant. **Assumptions:** Fuel consumption declines in absolute terms by 1 percent due to increasing fuel efficiency in conventional vehicles and adoption of electric and hybrid vehicles. Regionally significant streets and roads (37 to 50 percent of total roads) are classified as either arterials or collectors.	$4.6
Transit Farebox Revenue	**Description:** Transit fares collected by transit operators in the SCAG region. **Assumptions:** Farebox revenues increase consistent with historic trends, planned system expansions, and operator forecasts.	$26.7
Highway Tolls (in core revenue forecast)	**Description:** Revenues generated from toll roads operated by the Transportation Corridor Agencies (TCA) and from the SR-91 Express Lanes operated by the Orange County Transportation Authority (OCTA). **Assumptions:** Consistent with the TCA Traffic and Revenue Report, revenues grow by 1.5 percent (compared to historical growth of about 8.5 percent) in core revenue forecast scenario.	$11.2
Mitigation Fees	**Description:** Revenues generated from development impact fees. The revenue forecast includes fees from the Transportation Corridor Agency (TCA) development impact fee program, San Bernardino County's development impact fee program, and Riverside County's Transportation Uniform Mitigation Fee (TUMF) for both the Coachella Valley and Western Riverside County. **Assumptions:** The financial forecast is consistent with revenue forecasts from TCA, San Bernardino Associated Goverments (SANBAG), and Riverside County Transportation Commission (RCTC).	$9.5
Local Agency Funds	**Description:** Includes committed local revenue sources such as transit advertising and auxiliary revenues, lease revenues, and interest and investment earnings from reserve funds. **Assumptions:** Revenues are based on financial data from transit operators and local county transportation commissions.	$25.5
LOCAL SUBTOTAL		**$225.5**

Note: Numbers may not sum to total due to rounding

TABLE 3.2 Core and Reasonably Available Revenue Projections—State Revenue Sources (in Nominal Dollars, Billions)

Revenue Source	Revenue Projection Assumptions	Revenue Estimate
STATE REVENUE SOURCES		
State Transportation Improvement Program (STIP)	**Description:** The STIP is a five-year capital improvement program that provides funding from the State Highway Account (SHA) for projects that increase the capacity of the transportation system. The SHA is funded through a combination of state gas excise tax, the Federal Highway Trust Fund, and truck weight fees. The STIP may include projects on state highways, local roads, intercity rail, or public transit systems. The Regional Transportation Planning Agencies (RTPAs) propose 75 percent of STIP funding for regional transportation projects in Regional Transportation Improvement Programs (RTIPs). Caltrans proposes 25 percent of STIP funding for interregional transportation projects in the Interregional Transportation Improvement Program (ITIP). **Assumptions:** Funds are based upon the 2011 Report of STIP Balances County and Interregional Shares, August 4, 2011 and 2012 STIP Fund Estimate. Long-term forecasts assume no growth in fuel consumption, except in Los Angeles and Orange Counties, where the growth is less than historical trends and consistent with forecasts by the local transportation commissions.	$9.4
State Highway Operation and Protection Plan (SHOPP)	**Description:** Funds state highway maintenance and operations projects. **Assumptions:** Short-term revenues are based on overlapping 2008 and 2010 SHOPP programs. Long-term forecasts are consistent with STIP forecasts and assume no growth in fuel consumption, except in Los Angeles and Orange Counties.	$19.5
State Gasoline Sales Tax Swap	**Description:** Prior to 2010, state sales tax on gasoline funded discretionary projects through the Transportation Investment Fund, which distributed revenues to the STIP, local streets and roads, and transit. In 2010, the sales tax revenues were "swapped" for an increased excise tax (initially 17.3 cents) recalculated each year to ensure revenue neutrality. **Assumptions:** The financial forecast assumes that each county receives its fair share of state gasoline sales tax swap based upon county population. Future revenues grow by 1.5 percent to be revenue neutral consistent with the gasoline sales tax swap.	$11.0
State Transit Assistance Fund (STA)	**Description:** STA is funded with 50 percent of state Public Transit Account (PTA) revenues, which come from the diesel sales tax and "spillover" in the gasoline sales tax swap. Funding is distributed by population share and revenue share of the transit operators. **Assumptions:** The forecast is based on current funding levels reported by the State Controller. Future funding declines with fuel consumption using assumptions consistent with other sources.	$2.8
Highway Safety, Traffic, Air Quality, and Port Security Bond Act of 2006 (Proposition 1B)	**Description:** Proposition 1B authorized $19.9 billion to be spent statewide on existing and new statewide transportation-related infrastructure programs and projects through FY2014. Several programs were included under Proposition 1B. **Assumptions:** The forecast is consistent with Proposition 1B apportionments for the SCAG region in the Federal Transportation Improvement Program (FTIP) through FY2014.	$3.4
Other State Sources	**Description:** Other state sources include Service Authority for Freeways and Expressways (SAFE), Freeway Service Patrol, Air Quality Vehicle Registration Fee (AB 2766), Environmental Enhancement and Mitigation, and other miscellaneous state grants. The Clean Air and Transportation Improvement Act added Proposition 116 to use state general obligation bonds to finance rail infrastructure. **Assumptions:** The RTP uses forecasts provided by LACMTA for Los Angeles County for consistency with the LACMTA long-range transportation plan. These state revenues are not estimated for other counties.	$0.8
STATE SUBTOTAL (State STIP funds include FHWA IM and NHS funding categories)		**$46.8**

Note: Numbers may not sum to total due due to rounding

TABLE 3.3 Core and Reasonably Available Revenue Projections—Federal Revenue Sources (in Nominal Dollars, Billions)

Revenue Source	Revenue Projection Assumptions	Revenue Estimate
FEDERAL REVENUE SOURCES		
FHWA Non-Discretionary Congestion Mitigation and Air Quality (CMAQ) Program	**Description:** Program to reduce traffic congestion and improve air quality in non-attainment areas. **Assumptions:** Short-term revenues are based upon the Caltrans apportionment estimates. Long-term revenues assume that the Federal Highway Trust Fund stays solvent, but fuel consumption declines by 1 percent annually. CMAQ funding is assumed to be reduced by 25 percent in 2020 and an additional 25 percent in 2025 due to improved air quality.	$5.0
FHWA Non-Discretionary Regional Surface Transportation Program (RSTP)	**Description:** Projects eligible for RSTP funds include rehabilitation and new construction on any highways included in the National Highway System (NHS) and Interstate Highways (including bridges). Also, transit capital projects, as well as intracity and intercity bus terminals and facilities, are eligible. **Assumptions:** Short-term revenues are based upon the Caltrans apportionment estimates. Long-term revenues assume that the Federal Highway Trust Fund stays solvent, but fuel consumption declines by 1 percent annually.	$6.7
FTA Formula Programs 5307 Urbanized Area Formula (Capital), 5310 Elderly and Persons with Disabilities Formula, 5311 Non-Urbanized Area Formula, 5309 Fixed Guideway Program	**Description:** This includes a number of FTA programs distributed by formula. 5307 is distributed annually to state urbanized areas with a formula based upon population, population density, and transit revenue miles of service. Program funds capital projects (and operations expenses in areas under 200,000 in population), preventive maintenance, and planning activities. 5310 funds are allocated by formula to states for capital costs of providing services to the elderly and disabled. The 5311 program provides capital and operating expenses for rural and small urban public transportation systems. Section 5309 Fixed Guideway (FG) funds are also distributed to regions on an urbanized-area formula. **Assumptions:** Formula funds are assumed to decline in proportion with the Federal Highway Trust Fund. As with the FHWA sources, the Trust Fund is expected to stay solvent, but fuel consumption declines by 1 percent annually.	$14.2
FTA Non-Formula Program 5309 New and Small Starts, 5309 Bus & Bus-Related Grants	**Description:** Capital projects include preliminary engineering, acquisition of real property, final design and construction, and initial acquisition of rolling stock for new fixed guideway systems or extensions, including bus rapid transit, light rail, heavy rail, and commuter rail systems. Capital investment grants of less than $75 million are considered "small starts." "Small starts" have a separate funding category. Program funds bus acquisition and other rolling stock, ancillary equipment, and the construction of bus facilities. Also includes bus rehabilitation and leasing, park-and-ride facilities, parking lots associated with transit facilities, and bus passenger shelters. **Assumptions:** Operators are assumed to receive FTA discretionary funds in rough proportion to what they have received historically. The Federal Highway Trust Fund is expected to stay solvent, but fuel consumption declines by 1 percent annually.	$5.3
Other Federal Funds	**Description:** Includes other federal programs, such as Regional Transportation Enhancements, Highway Bridge Replacement and Rehabilitation, Homeland Security Grants, Bus Preferential Signal Systems, Highway Earmarks, Hazard Elimination Safety, and Railroad/Highway Grade Crossing Protection (Section 130). Also includes a marginal amount from the American Recovery and Reinvestment Act (ARRA) for the first year of the forecast. **Assumptions:** LACMTA and OCTA provided forecasted revenues for these programs, which have been adopted in the LRTPs for Los Angeles and Orange Counties. For other counties, Highway Bridge Program revenues are estimated in the short term using program allocations provided by Caltrans through FY2014. ARRA amounts also come from programmed funding. Longer-term estimates are based upon the assumption of a 1 percent annual decline in fuel consumption as used for other federal funding sources referenced above.	$1.8
FEDERAL SUBTOTAL		**$33.0**

Note: Numbers may not sum to total due to rounding

TABLE 3.4 Core and Reasonably Available Revenue Projections—Innovative Financing & New Revenue Sources (in Nominal Dollars, Billions)

Revenue Source	Revenue Projection Assumptions	Revenue Estimate
INNOVATIVE FINANCING & NEW REVENUE SOURCES		
Bond Proceeds from Local Sales Tax Measures	**Description:** Long-term debt financing secured by locally imposed ½ percent sales tax measures for Los Angeles, Orange, Riverside, and San Bernardino Counties. **Assumptions:** Sales tax grows consistent with county historical trends. Assumes minimum debt service coverage of pledged revenue (net of any local return portion) in any year of 2.5x for Los Angeles County, 1.3x for Orange County, 1.5x for Riverside County (further restricted to a maximum of $975M outstanding), and 1.3x for San Bernardino County—includes currently outstanding and new debt. No debt is assumed to be issued for Imperial County.	$25.6
State and Federal Gas Excise Tax Adjustment to Maintain Historical Purchasing Power	**Description:** Additional 15 cents-per-gallon gasoline tax imposed by the state and federal government starting in 2017 through 2024. **Assumptions:** Forecast consistent with historical tax rate adjustments for both state and federal gas taxes.	$16.9
Mileage-Based User Fee (or equivalent fuel tax adjustment)	**Description:** Mileage-based user fees would be implemented to replace existing gas taxes (state and federal) by 2025. **Assumptions:** Consistent with recommendations from two national commissions established under SAFETEA-LU, it is assumed that a national mileage-based user fee system would be established during the latter years of the RTP. An estimated $0.05 per mile (in 2011 dollars) is assumed starting in 2025 to replace existing gas tax revenues.	$110.3 (est. increment only)
Highway Tolls (includes toll revenue bond proceeds)	**Description:** Toll revenues generated from regional toll facilities including SR-710 Transportation Improvement Options, I-710 South Freight Corridor, East-West Freight Corridor, segment of the High Desert Corridor, and Regional Express/HOT Lane Network. **Assumptions:** Toll revenues based on recent feasibility studies for applicable corridors. Also includes toll revenue bond proceeds.	$22.3
Private Equity Participation	**Description:** Private equity share as may be applicable for key initiatives. **Assumptions:** Private capital is assumed for a number of projects including toll facilities; also, freight rail package assumes railroads' share of costs for main line capacity and intermodal facilities such as SCIG and ICTF.	$2.7
Freight Fees/National Freight Program	**Description:** Establishment of a national freight program consistent with proposal under MAP-21 and/or establishment of a charge imposed nationally on cargo. **Assumptions:** Early estimates indicate roughly $2 billion per year nationally for the National Freight Program under MAP-21. Regional estimate assumes a conservative percentage of proposed national program. Other mechanisms may include establishment of freight fees nationally, whereby rates may be subject to timing and cash flows for qualified projects. Freight fee would be assessed in proportion to relative impacts on the transportation system and would sunset with the completion of qualified projects. Assumes establishment of a national program in scope starting in 2015.	$4.2
E-Commerce Tax	**Description:** E-commerce sales tax on goods and services negotiated over the Internet or other online system. **Assumptions:** Notwithstanding the uncertainty in the amount of revenue that is available from AB 155, the revenue could be used for transportation purposes, given the relationship between e-commerce and the delivery of goods to California purchasers. In the event the revenue is used solely for transportation, the revenue would need to be allocated to specific uses or areas within the State. One possible method would allocate the funds in proportion to population. Under this method, the SCAG region would receive an estimated $3.1 billion through 2035, assuming AB 155 statewide revenue grows at 3 percent per year.	$3.1

Revenue Source	Revenue Projection Assumptions	Revenue Estimate
Interest Earnings	**Description:** Interest earnings from toll bond proceeds. **Assumptions:** Interest earnings are assumed from toll bond proceeds, e.g., East-West Freight Corridor.	$0.2
State Bond Proceeds, Federal Grants & Other for California High-Speed Rail Program	**Description:** Estimated total per November 1, 2011, Draft California High-Speed Rail Business Plan. **Assumptions:** State general obligation bonds authorized under the Bond Act approved by California voters as Proposition 1A in 2008; federal grants authorized under ARRA and HSIPR; potential use of qualified tax credit bonds; and private sources.	$33.0
Value Capture Strategies	**Description:** Formation of special districts—infrastructure financing districts and use of tax increment financing. **Assumptions:** This strategy refers to capturing the incremental value generated by transportation investments. Specifically, SCAG assumes the formation of special districts, including infrastructure financing districts (IFDs); also assumes the use of tax increment financing for specific projects (e.g., East-West Freight Corridor).	$1.2
NEW REVENUE SOURCE SUBTOTAL		**$219.5**
GRAND TOTAL		**$524.7**

Note: Numbers may not sum to total due to rounding

Revenue Source Availability and Risk Assessment

TABLE 4 Availability Assumptions and Risk Assessment

Revenue Source	New or Existing	Availability Assumption	Potential Risk	Risk Mitigation
Federal Non-Discretionary Funds (apportioned) (FTA/FHWA)	Existing	Continued federal funding at current apportionment levels but declines with increasing fuel efficiency.	Lack of federal authorization bill upon immediate expiration of current legislation.	Funds continue on incremental basis, at historic levels (continuing resolution).
Federal Funds Discretionary (FTA/FHWA)	Existing	Reasonably available based on historical allocations to the region or State.	Lack of authorization or award.	Alternative funding sources substituted; RTP amended if needed.
Local Option Sales Taxes	Existing	All local sales tax measures will continue throughout the life of the RTP. Los Angeles County levies a permanent 1 percent tax (a combination of two half-cent sales taxes) and a third measure was recently passed (Measure R), which imposes an additional 0.5 percent sales tax to fund transportation. Measure R expires in 2039. Additionally, several local sales taxes have been renewed (Riverside, San Bernardino, Orange, and Imperial Counties).	Sales tax generation substantially less than anticipated.	Alternative funding sources substituted; RTP amended if needed.
State Funds (STIP; SHOPP; STA; Gas Tax Swap; Prop 1B)	Existing	Continued state funding at current apportionment levels but declines with increasing fuel efficiency for applicable source categories.	Transfer of state transportation funds to General Fund for non-transportation purposes and/or potential changes to Gas Tax Swap impacting transportation sources; further delay and/or curtailment of state bond sales.	Alternative funding sources substituted; RTP amended if needed.
Value Capture Strategies	New	Reasonably available based on past history of local jurisdiction financing/match for project development; economic development potential analyzed for specific initiatives (e.g., East-West Freight Corridor).	Property owner approval fails; joint development effort generates less than expected resources.	Alternative funding sources substituted; RTP amended if needed.
Highway Tolls	New	Reasonably available based on the region's project finance experience with toll corridors, namely the SR-91 and the TCA corridors.	Toll revenue generation is inadequate; necessary toll authorization for specific facilities fails to pass.	Alternative funding sources substituted; RTP amended if needed.
State and Federal Gas Excise Tax Adjustment	New	Reasonably available based on historical precedence—estimate in line with historical revenues.	Fails to garner Congressional and State Legislative actions.	Alternative funding sources substituted; RTP amended if needed.

Revenue Source	New or Existing	Availability Assumption	Potential Risk	Risk Mitigation
Freight Fees/National Freight Program	New	Reasonably available based on historical precedence (e.g., Alameda Corridor experience) and recent U.S. Senate reauthorization proposal—MAP-21.	Fails to garner Congressional action.	Alternative funding sources substituted; RTP amended if needed.
E-Commerce Tax	New	Reasonably available based on current initiatives at State level	Uncertainty in amount of revenue that is available from AB 155; not allocated for transportation.	Alternative funding sources substituted; RTP amended if needed.
Private Equity Participation	New	Reasonably available based on current discussions with private entities and experience in other parts of the nation with PPP initiatives.	Fails to meet appropriate legislative provisions currently authorized as may be necessary for specific projects; fails to adequately negotiate with private entities/consortium.	Alternative funding sources/financing substituted; RTP amended if needed.
Interest Earnings	New	Reasonably available based on general practice with bond proceeds.	Interest rate risk and liquidity considerations.	Alternative funding sources/financing substituted; RTP amended if needed.
Bond Proceeds from Local Sales Tax Measures	New	Reasonably available based on past debt financing strategies.	Subject to the sale of bonds.	Alternative funding sources/financing substituted; RTP amended if needed.
State Bond Proceeds, Federal Grants & Other for California High-Speed Rail Program	New	Reasonably available based on state general obligation bonds authorized under the Bond Act approved by California voters in 2008; federal grants authorized under ARRA and HSIPR, etc.	Fail to garner private-sector commitment; fail to adequately generate system user-fee revenues to pay debt obligations.	Alternative funding sources/financing substituted; RTP amended if needed.
Mileage-Based User Fee (or equivalent fuel tax adjustment)	New	Reasonably available based upon recommendations from two national commissions (National Surface Transportation Policy and Revenue Study Commission and National Surface Transportation Infrastructure Financing Commission) created by Congress. The incremental amount assumed is equivalent to the historical 5 percent long-term growth in the Highway Trust Fund (due to periodic adjustments in the gas tax and growth in fuel consumption).	Fails to garner Congressional and State Legislative actions.	Alternative funding sources substituted; RTP amendment if needed.

Historical Trends

Despite declines in recent years, the Highway Trust Fund has historically grown by approximately 5 percent annually (in nominal dollars). The historic growth is due to periodic adjustments in the gas tax and growth in VMT. The historic growth of the Trust Fund from gas tax revenues is shown in **FIGURE 9**. Future VMT is projected to grow at a slower rate than the historical average.

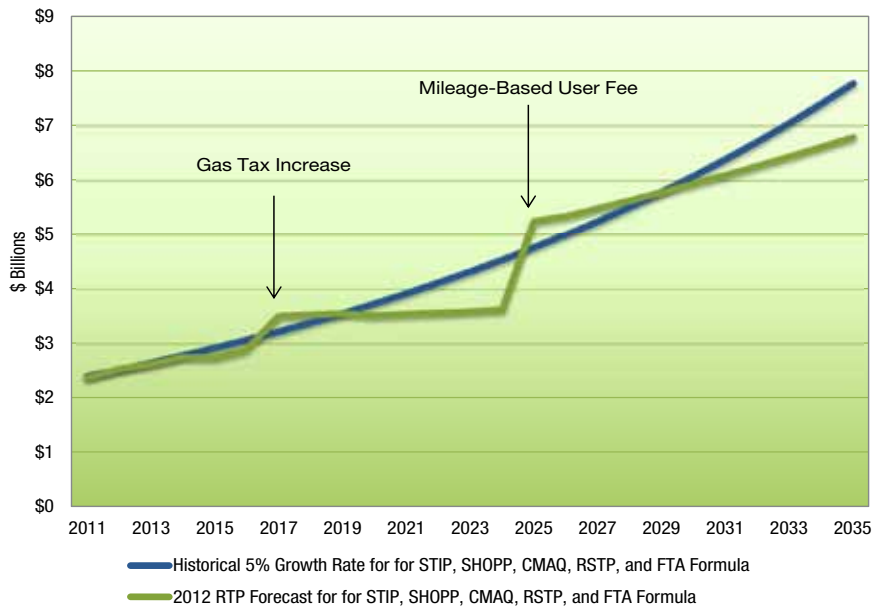
FIGURE 9 Historical Highway Trust Fund Revenue from Gasoline Excise Tax

Source: Federal Highway Administration

Comparison to Historical Trends

The projected revenue from the mileage-based user fee and adjustments to state and federal gas excises taxes, when combined with the core revenue forecast for state and federal sources, generate less revenue than the historic average increase in state and federal transportation revenues sources of 5 percent annually. **FIGURE 10** shows a comparison of the revenues projected for select gas tax-funded sources under the historic growth rate of 5 percent annually (in nominal dollars) and under the mileage-based user fee and adjustments to state and federal gas excises taxes.

FIGURE 10 Growth of Fuel Tax Generated Sources



Note: Green line assumes gas tax adjustment and eventual repacement with mileage-based user fee

Expenditure Categories and Methodology

Transportation expenditures in the SCAG region can be summarized into main categories:

- Capital costs for state highways, regionally significant arterials, local streets and roads, as well as transit
- Operating and maintenance costs for state highways, regionally significant arterials, local streets and roads, as well as transit
- Debt service payments for current and anticipated bond issuances

In preparing the 2012–2035 RTP/SCS, SCAG asked each of the county transportation commissions to submit detailed capital costs for every highway and transit project proposed for the region. The RTP/SCS expenditure estimates also include capital costs for regionally significant arterials, active transportation, goods movement, intelligent transportation systems, and transportation demand management investments. The county transportation commissions submitted their detailed capital costs via an Internet-based database application developed and hosted by SCAG. **FIGURE 11** shows an example of the standardized template that the county transportation commissioned used to submit cost information for capital projects.

FIGURE 11 Example Project Costs by Category

Engineering ($1,000's)	Right-of-Way ($1,000's)	Construction ($1,000's)	Total Costs ($1,000's)
$2,000	$4,000	$49,000	$55,000

Example Project Expenditures by Funding Source

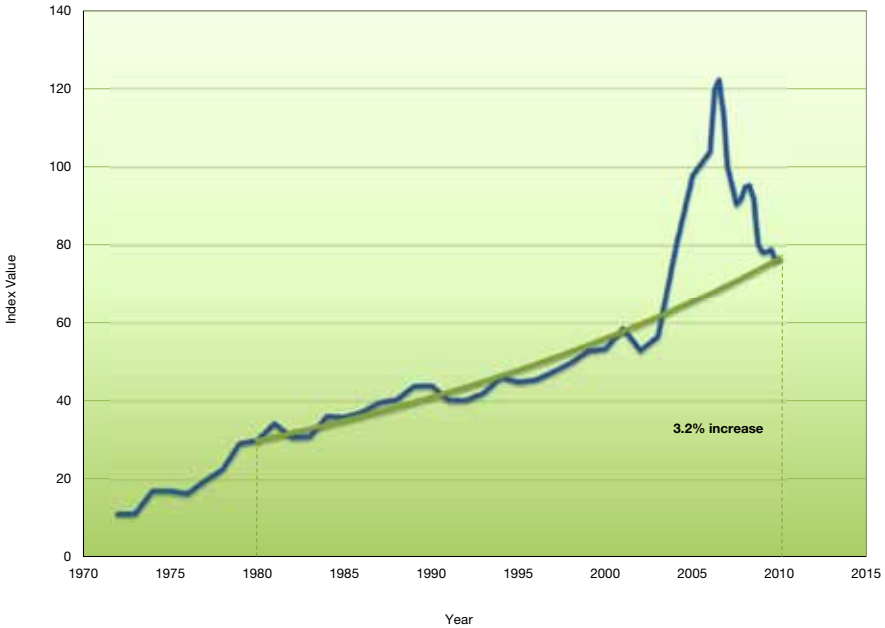
Fderal Funding ($1,000's)	Federal Funding Soure	State Funding ($1,000's)	State Funding Source	Local Funding ($1,000's)	Local Funding Source	Private Funding ($1,000's)	Total Funding ($1,000's)
$45,000	CMAQ	$7,000	STIP	$3,000	Agency	$0	$55,000

The next few sections describe specific economic assumptions and challenges in developing expenditure forecasts.

Capital Project Cost Escalation

While inflation clearly affects the nominal dollars reported for future revenues, the rise in construction costs can further erode the purchasing power of transportation revenues. After spiking dramatically in 2007, construction costs have corrected in recent years. **FIGURE 12** shows the increase and decline in California highway construction costs since the early 1970s. The United States Army Corps of Engineers Index for Roads, Railroads, and Bridges shows similar trends. While the recent correction in construction costs has slowed the longer-term increase in costs, the growth still remains above general inflation. The financial plan uses a 3.2 percent annual inflation factor to estimate future, nominal costs. The faster increase in construction costs than in revenues contributes to a decline in purchasing power for transportation funding over the planning period.

FIGURE 12 Highway Project Costs



Source: California Department of Transportation

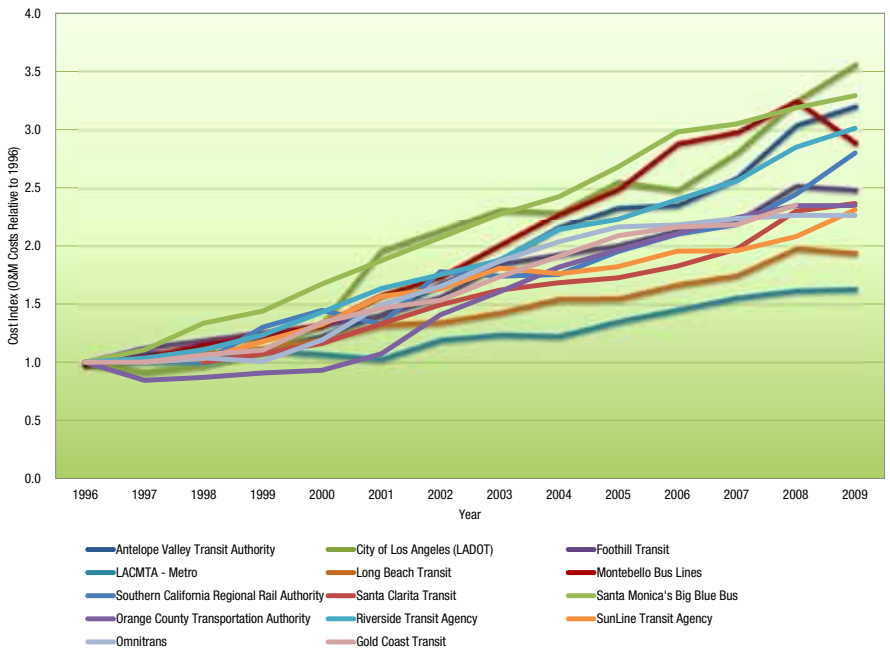
Transit Operating and Maintenance (O&M) Costs

Future transit O&M costs are difficult to predict because they depend on a variety of factors, such as future revenue-miles of service, labor contracts, and the age of rolling stock. The addition of new transit service and capital projects, such as the Exposition Transit Corridor, can add to ongoing O&M costs. Over the last decade, these O&M costs grew 1 to 10 percent annually, depending on the transit operator (see **FIGURE 13**). Some of the differences in O&M growth are due to rapid expansion among the newer operators and outsourcing among the older operators.

For the RTP/SCS, transit O&M costs are estimated based upon historical increases:

- The regional average increase (3.6 percent) is used for most operators. This assumes that some of the extraordinary increases for individual operators due to rapid expansion will not continue into the future.
- For Los Angeles County, the financial plan relies on detailed forecasts from the county transportation commission. These forecasts are consistent with historical data and take into account large shifts in O&M costs due to major capital projects.

FIGURE 13 Growth in Transit Operating and Maintenance Costs



Source: SCAG Analysis of National Transit Database Statistics

Multimodal System Preservation and Maintenance

Along with deferred maintenance on the State Highway System, the SCAG region faces the need to improve the state of good repair on local streets and roads and in the transit system. In an effort to quantify the extent of transit needs, the California Transit Association in conjunction with Caltrans and the Federal Transit Administration conducted a study of California's unmet transit funding needs. In a similar vein, the League of California Cities and the California State Association of Counties estimated future system preservation and maintenance needs to bring the local streets and roads to a state of good repair. **TABLE 5** summarizes the total system preservation and maintenance needs assumed in the RTP/SCS to bring transit, local streets and roads, and the State Highway System to a state of good repair. These estimates include the baseline SHOPP investments and transit O&M costs previously described.

TABLE 5 Multimodal System Preservation and Maintenance Needs (in Nominal Dollars, Billions)

System	State of Good Repair Needs Included in Estimate	Estimated State of Good Repair Cost
Transit	O&M Existing Service; O&M Service Expansion; O&M Major New Service; Preservation	$139.3
Local Streets and Roads	Pavement; Essential Components; Bridges	$20.9
State Highway	Bridges, Pavement, Roadside; Mobility, Collision Reduction; Mandates, Facilities; Emergency Response	$56.7
Total		**$216.9**

Source: SCAG Cost Model 2011

Debt Service

Local agencies in the SCAG region have historically relied on debt financing to ensure that revenues are available to meet the cashflow requirements of future expenditures. The Los Angeles County Metropolitan Transportation Authority has a detailed county financial model that estimates debt service on a project basis. Other county transportation commissions prepare debt service forecasts for rating agencies and report current debt service in their comprehensive annual financial reports (CAFRs). The 2012–2035 RTP/SCS includes all outstanding commitments and interest payments on future bonds and commercial paper. Issued debt is expected to remain under debt ceilings.

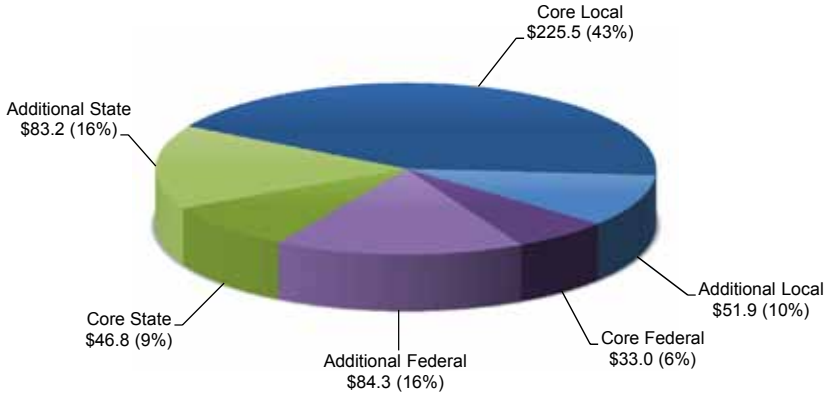
Summary of Revenue Sources and Expenditures

As shown in **FIGURE 14**, capital projects total $262.8 billion in nominal dollars. O&M costs total $216.9 billion, while debt service obligations total $45.1 billion. Transit-related costs compose the largest share of O&M costs for the region, totaling $139.3 billion. This expenditure summary meets a total regional budget of $524.7 billion over the 2012–2035 RTP/SCS time horizon, as shown in **FIGURE 15**.

FIGURE 14 Expenditure Summary $524.7 Billion (in Nominal Dollars) FY2011–FY2035

Source: SCAG Revenue Model 2011
Note: Numbers may not sum to total due to rounding

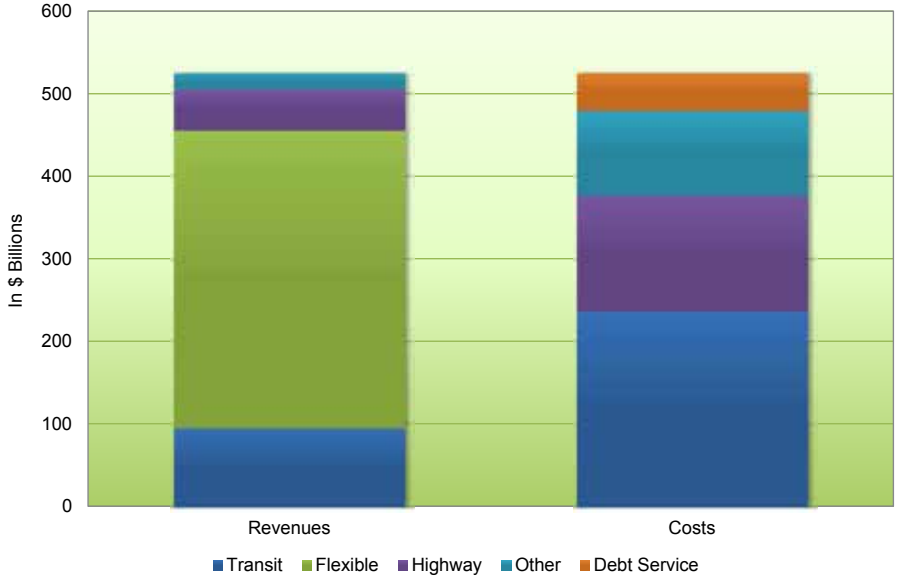
FIGURE 15 Revenue Summary $524.7 Billion (in Nominal Dollars) FY2011–FY2035



Source: SCAG Revenue Model 2011
Note: Numbers may not sum to total due to rounding

As shown in **FIGURE 16**, transit expenditures account for almost half of the RTP/SCS costs at 47 percent. Highway expenditures account for 26 percent of the RTP/SCS costs. About 18 percent of costs are attributable to an "other" category, reflecting proposed investments in goods movement, grade separations, active transportation, transportation demand management, and transportation system management 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 has been included as part of the RTP/SCS. Anticipated debt service payments make up 9 percent of total costs.

FIGURE 16 Revenues Compared to Costs by Mode



Note: Numbers may not sum to total due to rounding

The following **TABLE 6** provides details of the SCAG region's 2012–2035 RTP/SCS revenue forecast by source in five-year increments. This is followed by **TABLE 7**, which provides details of the region's expenditures by category in five-year increments.

TABLE 6 2012–2035 RTP/SCS Revenues (in Nominal Dollars, Billions)

	REVENUE SOURCES	FY2011–FY2015	FY2016–FY2020	FY2021–FY2025	FY2025–FY2030	FY2031–FY2035	TOTAL
LOCAL	Sales Tax	$16.3	$22.1	$28.7	$36.2	$44.7	$148.0
	– County	$13.1	$17.8	$23.1	$29.2	$36.1	$119.4
	– Transportation Development Act (TDA)	$3.3	$4.3	$5.5	$6.9	$8.6	$28.7
	Gas Tax (Subvention to Cities & Counties)	$1.0	$1.0	$0.9	$0.9	$0.8	$4.6
	Other Local Funds	$5.3	$4.6	$4.7	$5.6	$5.2	$25.5
	Transit Fares	$3.2	$4.3	$5.3	$6.4	$7.5	$26.7
	Tolls	$1.4	$1.7	$2.1	$2.6	$3.3	$11.2
	Mitigation Fees	$1.4	$1.8	$1.9	$2.1	$2.3	$9.5
	LOCAL TOTAL	**$28.7**	**$35.4**	**$43.5**	**$53.9**	**$64.0**	**$225.5**
STATE	State Highway Operations and Protection Program (SHOPP)	$3.7	$4.2	$4.0	$3.8	$3.6	$19.5
	State Transportation Improvement Program (STIP)	$1.9	$2.0	$1.9	$1.8	$1.7	$9.4
	– Regional (RTIP)	$1.3	$1.4	$1.3	$1.2	$1.2	$6.4
	– Interregional (ITIP)	$0.6	$0.6	$0.6	$0.6	$0.5	$3.0
	State Gasoline Sales Tax Swap	$1.4	$1.7	$2.1	$2.6	$3.3	$11.0
	State Transit Assistance (STA)	$0.5	$0.5	$0.6	$0.6	$0.7	$2.8
	Proposition 1B (Infrastructure Bonds)	$3.0	$0.4	$0.0	$0.0	$0.0	$3.4
	Other State Funds (1)	$0.3	$0.1	$0.1	$0.1	$0.1	$0.8
	STATE TOTAL	**$10.8**	**$9.0**	**$8.7**	**$9.0**	**$9.4**	**$46.8**
FEDERAL	Federal Transit	$3.0	$3.6	$3.9	$4.3	$4.7	$19.5
	– Federal Transit Formula	$2.3	$2.6	$2.8	$3.1	$3.4	$14.2
	– Federal Transit Non-Formula	$0.7	$1.0	$1.1	$1.2	$1.3	$5.3
	Federal Highway & Other	$2.9	$2.6	$2.6	$2.6	$2.8	$13.5
	– Congestion Mitigation and Air Quality (CMAQ)	$1.3	$1.1	$0.9	$0.8	$0.9	$5.0
	– Surface Transportation Program (Regional)	$1.1	$1.2	$1.3	$1.5	$1.6	$6.7
	– Other Federal Funds (2)	$0.5	$0.3	$0.3	$0.3	$0.4	$1.8
	FEDERAL TOTAL	**$5.9**	**$6.1**	**$6.5**	**$6.9**	**$7.5**	**$33.0**
INNOVATIVE FINANCING & NEW REVENUE SOURCES	Bond Proceeds from Local Sales Tax Measures	$9.4	$10.4	$5.9	$0.0	$0.0	$25.6
	State and Federal Gas Excise Tax Adjustment	$0.0	$8.6	$8.3	$0.0	$0.0	$16.9
	Mileage-Based User Fee	$0.0	$0.0	$8.9	$48.5	$52.9	$110.3
	Highway Tolls (including bond proceeds)	$3.0	$0.0	$9.8	$3.8	$5.7	$22.3
	Private Equity Participation	$1.3	$0.1	$0.1	$1.2	$0.0	$2.7
	Freight Fees/National Freight Program	$0.1	$0.9	$1.0	$1.0	$1.2	$4.2
	E-Commerce Tax	$0.3	$0.6	$0.6	$0.7	$0.9	$3.1
	Interest Earnings	$0.0	$0.0	$0.1	$0.1	$0.1	$0.2
	California High-Speed Rail Program Funding	$0.0	$3.9	$10.2	$14.3	$4.5	$33.0
	Value Capture Strategies	$0.0	$0.0	$1.2	$0.0	$0.0	$1.2
	INNOVATIVE FINANCING & NEW REVENUE SOURCES TOTAL	**$14.1**	**$24.5**	**$46.1**	**$69.6**	**$65.2**	**$219.5**
REVENUE TOTAL		**$59.5**	**$75.0**	**$104.8**	**$139.3**	**$146.1**	**$524.7**

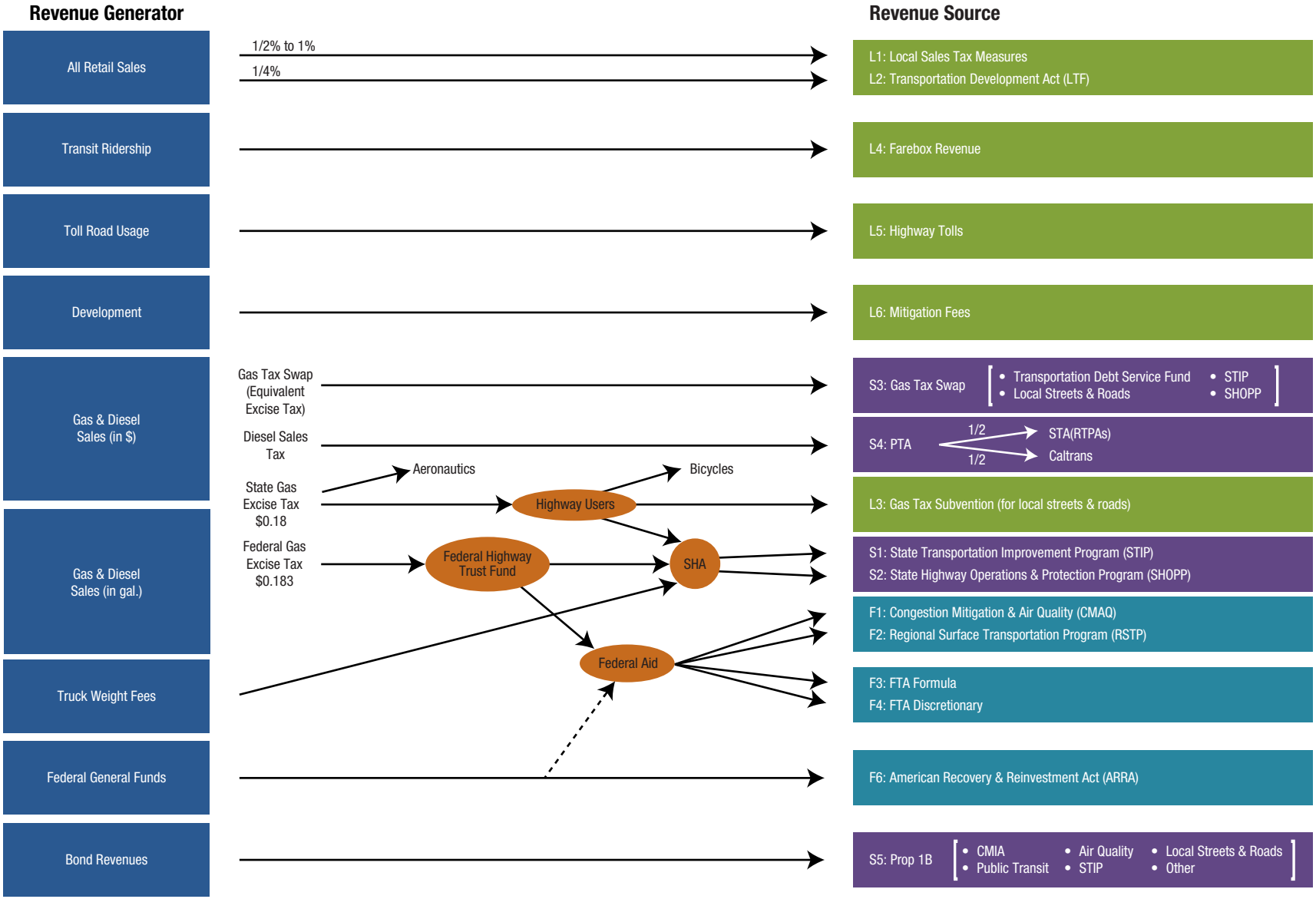
Notes:
(1) Service Authority for Freeways and Expressways (SAFE), Freeway Service Patrol, Air Quality Vehicle Registration Fee (AB 2766), Environmental Enhancement and Mitigation.
(2) Includes other federal programs, e.g., Regional Transportation Enhancements, Highway Bridge Replacement and Rehabilitation, Homeland Security Grants, Bus Preferential Signal Systems, Highway Earmarks, local assistance, Hazard Elimination Safety, and Railroad/Highway Grade Crossing Protection (Section 130).
Numbers may not sum to total due to rounding

TABLE 7 2012–2035 RTP/SCS Expenditures (in Nominal Dollars, Billions)

RTP COSTS	FY2011–FY2015	FY2016–FY2020	FY2021–FY2025	FY2026–FY2030	FY2031–FY2035	TOTAL
Capital Projects:	**$37.3**	**$44.8**	**$57.1**	**$63.4**	**$60.2**	**$262.8**
Arterials	$4.4	$3.8	$3.8	$4.7	$5.4	$22.1
Grade Separations & Goods Movement	$8.1	$7.9	$12.9	$14.6	$5.0	$48.4
High-Occupancy Vehicle/High-Occupancy Toll Lanes	$5.2	$2.5	$0.6	$4.2	$8.4	$20.9
Mixed-Flow and Interchange Improvements	$3.4	$4.5	$5.0	$2.7	$0.5	$16.0
Toll Facilities	$1.5	$10.9	$5.8	$3.3	$5.8	$27.3
Transportation System Management (including ITS)	$1.3	$1.2	$0.8	$1.9	$2.4	$7.6
Transit	$11.6	$13.1	$27.3	$28.5	$26.4	$106.9
Active Transportation	$0.7	$0.4	$0.3	$1.9	$3.4	$6.7
Transportation Demand Management	$0.2	$0.2	$0.2	$1.3	$2.5	$4.5
Other (1)	$0.7	$0.4	$0.6	$0.4	$0.4	$2.5
Operations and Maintenance:	**$19.4**	**$22.9**	**$37.4**	**$63.7**	**$73.5**	**$216.9**
Highway	$3.4	$3.0	$12.5	$18.8	$19.1	$56.7
Transit	$14.9	$18.8	$23.8	$37.0	$44.8	$139.3
Local Streets and Roads	$1.1	$1.1	$1.2	$7.9	$9.6	$20.9
Debt Service	**$2.8**	**$7.3**	**$10.3**	**$12.2**	**$12.5**	**$45.1**
COST TOTAL	**$59.5**	**$75.0**	**$104.8**	**$139.3**	**$146.1**	**$524.7**

Note: (1) Includes: environmental mitigation, landscaping, and project development costs.
Numbers may not sum to total due to rounding

APPENDIX A: Transportation Funding in the SCAG Region



APPENDIX B: Details about Revenue Sources

Local Revenue Sources

LOCAL OPTION SALES TAX MEASURES

Description: Revenues are derived from locally imposed ½ percent sales taxes for select counties. Imperial, Los Angeles, Orange, Riverside, and San Bernardino Counties currently have sales tax measures dedicated to transportation expenditures.

Most local sales tax measures are for a limited term, but all continue through the RTP/SCS planning period. Imperial County Measure D continues through 2050, Orange County Measure M continues through 2041, Riverside County Measure A continues through 2039, and San Bernardino County Measure I continues through 2040. Los Angeles County levies a permanent 1 percent tax (a combination of two ½ percent sales taxes—Proposition A and Proposition C). In addition, Los Angeles County Measure R provides a temporary, additional ½ percent sales tax (on top of the existing, permanent 1 percent sales tax) and continues through 2039. Ventura County is the only county in the SCAG region without a local sales tax measure.

Base Year: FY2011.

Data Sources: Sales tax forecast data provided by the local transportation commissions; UCLA Anderson Forecast; historical data on revenues reported by the State Board of Equalization (SBOE) in 1985–86 through 2008–09 Annual Reports, Table 21C. Actual local tax allocations for 2009–10 and 2010–11 provided by SBOE.

Real Growth Rate: Los Angeles County projects an initially higher growth rate as sales taxes recover from the Great Recession. The growth rates are consistent with those for the Transportation Development Act since both sources are tied to sales tax revenue generation: Imperial County—1.9 percent; Los Angeles County—3.9 percent to FY2020, 1.7 percent to FY2030, 1.2 percent to FY2035; Orange County—1.7 percent; Riverside County—2.3 percent; San Bernardino County—2.3 percent; Ventura County—2.3 percent.

Revenue Total: $119.4 billion (nominal dollars).

TRANSPORTATION DEVELOPMENT ACT (LOCAL TRANSPORTATION FUND)

Description: The Transportation Development Act (TDA) provides two major sources of funding for public transportation—the Local Transportation Fund (LTF) and the State Transit Assistance (STA) fund. LTF funds are derived from a quarter-cent sales tax on retail sales statewide. Funds are returned to the county of tax generation. This category includes Article 3, 4, 4.5, and 8 of the Government Code. In the SCAG region, TDA funds are used mostly for transit operations and transit capital expenses. Article 3 funds support bicycle and pedestrian facilities.

Base Year: FY2011.

Data Sources: Sales tax forecast data provided by the local transportation commissions; UCLA Anderson Forecast; historical data on revenues reported by the SBOE in 1985–86 through 2008–09 Annual Reports, Table 21B. Actual local tax allocations for 2009–10 and 2010–11 provided by SBOE.

Real Growth Rate: Imperial County—1.9 percent; Los Angeles County—3.9 percent to FY2020, 1.7 percent to FY2030, 1.2 percent to FY2035; Orange County—1.7 percent; Riverside County—2.3 percent; San Bernardino County—2.3 percent; Ventura County—2.3 percent.

Revenue Total: $28.7 billion (nominal dollars).

GAS EXCISE TAX SUBVENTIONS

Description: Gas tax subventions to counties and cities in the region.

Base Year: FY2011.

Data Sources: Gas tax subvention revenue data was collected for each city and county in the SCAG region from the California State Controller (Controller), Street and Roads Annual Reports (Tables 3 and 9). Growth in subvention revenues is based on expected changes in vehicle fuel consumption forecasted by SCAG. Increasing fuel efficiency in conventional vehicles due to newly adopted CAFE standards as well as greater use of hybrid and electric vehicles are expected to reduce fuel consumption in California and the SCAG region.

SCAG uses a 1 percent annual decline in fuel consumption to produce a conservative estimate of changes in revenues associated with fuel taxes.

Revenues for the forecast are shown in proportion to the percentage of streets and roads that are regionally significant in each county. Regionally significant streets and roads are generally classified as either arterials or collectors.

The proportion of regionally significant roads is consistent with the 2004 and 2008 RTPs and is based upon road classification and lane-mile data collected from the California Department of Transportation (Caltrans) and local county transportation commissions. The proportion of arterials and collectors in each county was calculated relative to the total lane-miles for that county and applied to the total subvention revenues for the county. The percentages are: Imperial County—39 percent; Los Angeles County—46 percent; Orange County—50 percent; Riverside County—37 percent; San Bernardino County—45 percent; Ventura County—41 percent.

Real Growth Rate: Negative 3.3 percent annually (nominal growth rate is -0.5 percent).

Revenue Total: $4.6 billion (nominal dollars).

TRANSIT FAREBOX REVENUE

Description: Transit fares collected by transit operators in the SCAG region.

Base Year: FY2009.

Data Sources: Historical fare revenue data were collected from the Controller, Transit Operators and Non-Transit Claimants Annual Report, Fiscal Years 1978–79 through 2007–08, Table 1—Statement of Revenues and Expenses. Additional fare revenue projections were derived from financial sections of long-range transportation plans from the Los Angeles County Metropolitan Transportation Authority (LACMTA) and the Orange County Transportation Authority (OCTA). Revenues in the forecast account for fixed route services (e.g., bus, urban rail, and light rail), smart shuttles, paratransit and dial-a-ride services. Revenues were forecasted separately for 14 major regional operators in addition to other operators in the region.

Fare revenue forecasts were also collected from the Southern California Regional Rail Authority (SCRRA) for the Metrolink commuter rail system. The commuter rail revenues are distributed among the counties that support the rail service, based on data provided in the SCRRA Strategic Assessment.

Real Growth Rate: Historically, the region has experienced a real growth rate in fare revenues of about 2.7 percent. The following rates were used in the forecast:

- Los Angeles County—3.7 percent to FY2020 and 0.2 percent to FY2035 (consistent with the LACMTA long-range plan and slightly less than historical growth)
- Orange County—2.7 percent (consistent with the OCTA long-range plan and considerably less than historical growth)
- Metrolink Regional System—3.5 percent (consistent with the SCRRA Strategic Assessment)
- Other Transit Operators in the region—2.7 percent (historical regional average)

These rates result in fare revenue growth well below historical averages.

Revenue Total: $26.7 billion (nominal dollars).

HIGHWAY TOLLS

Description: This category includes revenues generated from toll roads operated by the Transportation Corridor Agencies (TCA) and OCTA. TCA consists of two separate government entities—the San Joaquin Hills Transportation Corridor Agencies (SJHTCA), which oversees the San Joaquin Hills (SR-71) toll road, and the Foothill/Eastern Transportation Corridor Agencies (FETCA), which oversees the Foothill (SR-241) and Eastern (SR-241, SR-261, and SR-133) toll roads. OCTA operates the 91 Express Lanes. Revenues are used for that facility exclusively.

Forecasting future toll revenues requires estimates of the number of vehicles using the facilities and the tolls being charged. The RTP/SCS forecasts toll revenues consistent with the 2008 TCA Traffic and Revenue Report, which forecasts 1.5 percent growth in revenues. This is a conservative assumption compared to historical growth of about 8.5 percent.

Base Year: FY2010.

Data Sources: Transportation Corridor System, Final Traffic and Revenue Report, April 10, 2008; FETCA, Financial Statements, June 30, 2006 to 2010; SJHTCA, Financial

Statements, June 30, 2006 to 2010; 91 Express Lanes Fund, Financial Statements, June 30, 2006 to 2009.

Real Growth Rate: 1.5 percent annually.

Revenue Total: $11.2 billion (nominal dollars).

MITIGATION FEES

Description: This category includes revenues generated from development impact fees. These fees are based on the general principle that future development within a specified area/jurisdiction will benefit from the construction of transportation improvements. Fees are assessed on new residential and non-residential (e.g., commercial and industrial) development. Within the region, a number of programs fund regionally significant transportation investments—TCA development impact fee program; Riverside County's Transportation Uniform Mitigation Fee (TUMF for both the Coachella Valley and Western Riverside County); and San Bernardino County's Development Impact Fee (DIF) program.

The RTP/SCS financial forecast is consistent with revenue forecasts from the Riverside County Transportation Commission (RCTC) and San Bernardino Associated Governments (SANBAG). The growth in mitigation fees is consistent with projected growth in retail sales.

Base Year: Various.

Data Sources: Revenue forecast collected from Coachella Valley Association of Governments (CVAG); Western Riverside Council of Governments (WRCOG); RCTC; and SANBAG. Additional sources—Transportation Corridor System, Final Traffic and Revenue Report, April 10, 2008; FETCA, Financial Statements, June 30, 2006 to 2010; SJHTCA, Financial Statements, June 30, 2006 to 2010; 91 Express Lanes Fund, Financial Statements, June 30, 2006 to 2009; and Controller, Transportation Planning Agencies Annual Report, Fiscal Years 1987–88 through 2007–08, Table 1—Statement of Revenues for All Fund Types.

Real Growth Rate: CVAG TUMF—1.6 percent; WRCOG TUMF—1.6 percent; SANBAG DIF—not applicable; TCA Development Impact Fee—not applicable.

Revenue Total: $9.5 billion (nominal dollars).

LOCAL AGENCY FUNDS

Description: Includes local revenue sources such as transit advertising and auxiliary revenues, lease revenues, and interest and investment earnings from reserve funds. For Los Angeles County, interest income from Propositions A and C, LTF, and STA are included under this source. Income from financing is also included, while principal and interest payments are included as part of debt service. For Orange County, interest income from Measure M and LTF as well as general funds and several transit-related programs are included.

Base Year: FY2005 to FY2006.

Data Source: Revenues are based on financial data from transit operators and local county transportation commissions.

Real Growth Rate: Not applicable.

Revenue Total: $25.5 billion (nominal dollars).

State Revenue Sources

STATE TRANSPORTATION IMPROVEMENT PROGRAM (STIP)

Description: The State Highway Account (SHA) is funded through a combination of state gas excise tax, the Federal Highway Trust Fund, and other miscellaneous revenues (e.g., interest and sale of property). In addition, the SHA received money as a result of the "Gas Tax Swap." The Gas Tax Swap revenues are estimated separately in the SCAG revenue forecast as explained further below.

The STIP is a five-year capital improvement program that provides funding from the SHA for capital projects that increase the capacity of the transportation system. The STIP may include projects on state highways, local roads, intercity rail, or public transit systems. The STIP is renewed every two years and consists of separate projects. The Regional Transportation Planning Agencies propose 75 percent of STIP funding for regional transportation projects in Regional Transportation Improvement Programs (RTIPs). Caltrans proposes 25 percent of STIP funding for interregional transportation projects in the Interregional Transportation Improvement Program (ITIP).

Funds are based on 2010 STIP programs of projects for the five years covering FY2011 through 2015. Starting in FY2011, the average allocation from the 2010 STIP program is included and grown by forecasted changes in fuel consumption. As with other revenue sources, the RTP/SCS adopts a conservative assumption that fuel consumption declines by 1 percent annually due to changes in CAFE standards and the adoption of hybrid and electric vehicles.

Base Year: FY2011 to FY2015.

Data Sources: California Transportation Commission, 2011 Report of STIP Balances County and Interregional Shares, August 4, 2011; SCAG estimates of the effects of new CAFE standards on fuel consumption.

Real Growth Rate: Negative 3.3 percent annually (nominal growth rate is -0.5 percent).

Revenue Total: $9.4 billion (nominal dollars).

STATE HIGHWAYS OPERATION AND PROTECTION PLAN (SHOPP)

Description: The SHOPP is a four-year program that provides funding from the SHA to be used for projects that reduce collisions and hazards to motorists, preserve and rehabilitate bridges and roadways, enhance and protect roadsides, and improve the operation of the State Highway System. It does not include projects that increase the capacity of the transportation system. SHOPP revenues are taken "off the top" before allocations are made for the STIP. As with the STIP, the SHOPP receives additional money from the Gas Tax Swap. These additional revenues are explained further below.

Short-term SHOPP revenues are based on the 2008 and 2010 SHOPP programs provided by Caltrans. These overlapping programs provide funds that cover FY2009 to FY2012 and FY2011 to FY2014. To estimate the SHOPP allocations for FY2013 and FY2014, the revenues in the 2010 SHOPP program are doubled, since the allocations for the 2012 SHOPP were not available in time for the financial forecasts.

Starting in FY2015, long-term SHOPP revenues are estimated by the average of annual revenues grown by forecasted changes in fuel consumption. Since SHOPP revenues have been variable, the annual average is based on the SHOPP allocations for the last ten years. Consistent with other revenue sources, the RTP/SCS adopts a conservative assumption that fuel consumption declines by 1 percent annually due to changes in CAFE standards and the adoption of hybrid and electric vehicles.

The 2011 Ten-Year SHOPP identifies $7.4 billion in statewide annual needs, while expenditures programmed for the next four years are only $1.8 billion annually. The financial plan assumes that the state gas excise tax remains unchanged with the same percentage split of funding available for capital projects. However, the increase in fuel efficiency will erode the funding available over the RTP/SCS planning period.

Base Year: FY2005 to FY2014.

Data Sources: Caltrans, 2004 SHOPP, Approved April 8, 2004; Caltrans, 2006 SHOPP, Approved March 16, 2006; Caltrans, 2008 SHOPP, Approved March 13, 2008; Caltrans, 2010 SHOPP, Approved February 24, 2010; SCAG estimates of the effects of new CAFE standards on fuel consumption.

Real Growth Rate: Negative 3.3 percent annually (nominal growth rate is -0.5 percent).

Revenue Total: $19.5 billion (nominal dollars).

STATE GASOLINE SALES TAX SWAP

Prior to 2010, the state of California charged sales tax on gasoline purchases. Passed by the general electorate in March 2002, Proposition 42 amended the State Constitution to transfer state sales taxes on gasoline, other than revenues calculated under the spillover formula, from the General Fund to a Transportation Investment Fund (TIF) for transportation purposes. Through a series of provisions enacted by Assembly Bill x8-6 (Chapter 11, Statutes of 2010), Senate Bill 70 (Chapter 9, Statutes of 2010), and Assembly Bill 105 (Chapter 6, Statutes of 2011), the California Legislature eliminated the sales tax on gasoline and replaced the tax with an additional excise tax on gasoline. In essence, the state gasoline sales tax revenues were "swapped" for an increased state excise tax.

Effective July 1, 2010, the gasoline excise tax increased by 17.3 cents. On July 1, 2011, sales taxes on diesel fuel increased by 1.75 percent and the excise tax decreased—to ensure local transit operators received STA funding (share also increased from two-thirds to 75 percent). Each year, the SBOE is required to adjust the excise tax, so the Gas Tax Swap remains revenue neutral. As a result, the financial plan assumes that the

Gas Tax Swap generates the same revenues as generated under the prior state sales tax on gasoline.

Although the revenues derived from the new excise tax cannot be used to pay bond debt service or loans to the State General Fund, AB 105 requires the Controller to transfer an amount equal to the amount of the monthly debt service paid by the General Fund on transportation bonds into the SHA. Such revenues are to be held in the account for future appropriation by the Legislature.

The remaining net revenues derived from the new excise tax are allocated 44 percent to local streets and roads, 44 percent to the STIP, and 12 percent to the SHOPP. For the purposes of the financial plan, all of these revenues have been forecasted as a single revenue source.

The financial forecast assumes each county receives its fair share of the gasoline tax swap revenues based upon county population. Future revenues are expected to grow by the increase in retail sales. The financial plan assumes that future growth in retail sales will be consistent with the 1.5 percent annual growth statewide between FY1979 and FY2009. This 30-year time period includes the recent decline in retail sales due to the recession. As a result, SCAG expects this to be a conservative estimate of future growth in retail sales.

Base Year: FY2009.

Data Sources: SBOE, 1979 through 2009 Annual Reports, Tables 18 and 20; California Department of Finance, E-2. California County Population Estimates and Components of Change by Year—July 1, 2000–2009, December 2009.

Real Growth Rate: 1.5 percent annually.

Revenue Total: $11.0 billion (nominal dollars).

STATE TRANSIT ASSISTANCE FUND (STA) FROM THE PUBLIC TRANSPORTATION ACCOUNT (PTA)

Description: The Public Transportation Account (PTA) is a trust fund that derives its revenues from a 4.75 percent sales tax on diesel fuel. One-half of the PTA trust fund is directed toward the STA for local transit.

Prior to the Gas Tax Swap, the PTA also received funding from a 4.75 percent sales tax on the 9-cent state excise tax on gasoline and “spillover” funds (4.75 percent tax on all taxable sales minus 5 percent tax on all taxable sales minus gasoline). The legislation enacted in 2011 (Assembly Bill 105), reenacted the provisions of the Gas Tax Swap and addressed issues previously raised by the passage of Propositions 22 and 26. The legislation also increased the state sales tax on diesel fuel by 1.75 percent in FY2015 and reduced the state excise tax on diesel fuel to 13 cents. The revenue from the increased portion of the state sales tax is allocated to the STA to maintain funding to local transit.

As with the Gas Tax Swap, the changes in the diesel excise tax are intended to be revenue neutral. The SBOE adjusts the diesel excise tax annually to be consistent with the revenue loss from the sales tax changes on diesel.

Actual historical funding figures are reported by the Controller through FY2011. Future funding is estimated for the financial plan using the growth in fuel consumption. Consistent with other funding sources, the financial plan assumes that fuel consumption will decline by 1 percent annually.

Base Year: FY2011.

Data Sources: Controller, Transportation Planning Agencies Annual Report, Fiscal Years 1987–88 through 2007–08, Table 1—Statement of Revenues for All Fund Types; Data for FY2009 through FY2011 comes from Quarterly State Transit Assistance reports from the Controller; SCAG estimates of the effects of new CAFE standards on fuel consumption.

Real Growth Rate: Negative 3.3 percent annually (nominal growth rate is -0.5 percent).

Revenue Total: $2.8 billion (nominal dollars).

HIGHWAY SAFETY, TRAFFIC, AIR QUALITY, AND PORT FUND (PROPOSITION 1B)

Description: The Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, approved by the voters as Proposition 1B on November 7, 2006, authorized $19.9 billion over several years to fund existing and new statewide transportation-related infrastructure programs and projects, such as the Corridor Mobility Improvement Account, the Trade Corridor Improvement Fund, the State-Local Partnership Program Account,

as well as STIP and SHOPP augmentation. Legislation enacted together with the budget further defines how several of these programs work.

The financial plan includes all Proposition 1B allocations included in the 2011 Federal Transportation Improvement Program (2011 FTIP). This includes allocations through FY2014. In addition, LACMTA and OCTA have estimated other allocations through FY2018.

Base Year: FY2011.

Data Sources: SCAG, 2011 FTIP; LACMTA, 2009 Long-Range Transportation Plan, April 29, 2010; OCTA, 2010 LRTP Forecast, August 25, 2010.

Real Growth Rate: Not applicable.

Revenue Total: $3.4 billion (nominal dollars).

OTHER STATE SOURCES

Description: Other state sources include Service Authority for Freeways and Expressways, Vehicle Registration Fee, Freeway Service Patrol, Air Quality Vehicle Registration Fee (AB 2766), Environmental Enhancement and Mitigation, and other miscellaneous state grants. The Clean Air and Transportation Improvement Act added Proposition 116 to use state general obligation bonds to finance rail infrastructure. The RTP uses forecasts provided by LACMTA for Los Angeles County for consistency with the LACMTA long-range transportation plan. These state revenues are not estimated for other counties.

Base Year: FY2006.

Data Source: LACMTA, 2009 Long-Range Transportation Plan, April 29, 2010.

Real Growth Rate: Not applicable.

Revenue Total: $0.8 billion (nominal dollars).

Federal Revenue Sources

CONGESTION MITIGATION AND AIR QUALITY (CMAQ)

Description: The CMAQ program is a federal funding program to reduce traffic congestion and improve air quality in federally designated air quality non-attainment areas. With CMAQ formula changes under SAFETEA-LU, Imperial County is a recipient of CMAQ funding along with the other five counties in the SCAG region.

Short-term revenues through FY2014 are based upon apportionment estimates provided by Caltrans for each county. Starting in FY2015, revenues are expected to decline along with the Federal Highway Trust Fund (HTF). The HTF grew by 1.8 percent (1.7 percent in the Highway Account) over the 25-year period from 1984 to 2009. However, recent appropriations have exceeded money available in the fund. Since 2008, the HTF has failed to meet its obligations and has required Congress to authorize $34.5 billion in transfers from the General Fund to keep it solvent.

The financial plan assumes that Congress will reach agreement on maintaining solvency of the HTF over the RTP/SCS planning period. However, the core revenues available from the HTF are expected to decline due to increasing fuel efficiency. Consistent with other revenue sources, the financial plan uses a conservative assumption that fuel consumption declines by 1 percent annually due to changes in CAFE standards and the adoption of hybrid and electric vehicles.

Reflecting improvements in air quality, the RTP/SCS assumes that the SCAG region will reach attainment in stages for a number of pollutants and that the severity level for other pollutants will lessen over the planning period. To reflect these conditions, CMAQ funding is expected to decline by 25 percent in 2020 and another 25 percent in 2025.

Base Year: FY2014.

Data Sources: Caltrans, CMAQ Apportionments for 1997–98 through 2009–10, various years; Caltrans, CMAQ 2011 FSTIP Estimates, October 15, 2009; FHWA, Federal Highway Statistics 2008, Table FE-210: Status of the Federal Highway Trust Fund 1957–2008.

Real Growth Rate: Negative 3.3 percent annually (nominal growth rate is -0.5 percent).

Revenue Total: $5.0 billion (nominal dollars).

REGIONAL SURFACE TRANSPORTATION PROGRAM (RSTP)

Description: The Regional Surface Transportation Program (RSTP) was established by California state statute to utilize Surface Transportation Program funds, which are a federal source reauthorized under SAFETEA-LU. Projects eligible for RSTP funds include rehabilitation and new construction on any highways included in the National Highway System and Interstate Highways that are not classified as local or rural minor collectors.

Short-term revenues through FY2014 are based upon apportionment estimates provided for each county by Caltrans. Starting in FY2015, revenues are estimated to decline with the HTF. As with CMAQ funding, the financial plan uses the assumption that the core revenues available from the HTF will decline due to increasing fuel efficiency. Consistent with other revenue sources, fuel consumption is expected to decline by 1 percent annually due to changes in CAFE standards and the adoption of hybrid and electric vehicles.

Base Year: FY2014.

Data Sources: Caltrans, RSTP Apportionments for 1997–98 through 2009–10, various years; Caltrans, RSTP 2011 FSTIP Estimates, October 15, 2009; FHWA, Federal Highway Statistics 2008, Table FE-210: Status of the Federal Highway Trust Fund 1957–2008.

Real Growth Rate: Negative 3.3 percent annually (nominal growth rate is -0.5 percent).

Revenue Total: $6.7 billion (nominal dollars).

FTA FORMULA—SECTIONS 5307, 5310, 5311, AND 5309 FIXED GUIDEWAY

Description: FTA Section 5307 provides revenues for transit projects in urbanized areas, including capital purchases or preventive maintenance of the transit fleet. Revenues are distributed to state urbanized areas by a formula based upon population, population density, and transit revenue miles of service.

FTA Section 5311 provides revenues for capital and operating expenses incurred by rural and small urban transit programs (areas with population under 50,000 as designated by the Bureau of the Census). FTA Section 5310 revenues are for specialized transit programs including programs for seniors and persons with disabilities. A portion of Section 5309 is provided for fixed-guideway rail improvements and is allocated by formula.

The Controller reports revenues received by SCAG region transit operators. Starting in FY2015, the financial plan uses the assumption that FTA formula revenues will decline in proportion with the HTF. The fund grew by 1.8 percent (2.9 percent in the mass transit account) over the 25-year period from 1984 to 2009. As with CMAQ and RSTP funding, the financial plan uses the assumption that the core revenues available from the HTF will decline due to increasing fuel efficiency. Consistent with other revenue sources, fuel consumption is expected to decline by 1 percent annually due to changes in CAFE standards and the adoption of hybrid and electric vehicles.

Base Year: FY2010.

Data Sources: FTA, FTA Fiscal Years 2006 to 2010 Apportionments, Allocations, and Corrections, various years; Controller, Transit Operators and Non-Transit Claimants Annual Report, Fiscal Years 1999–00 through 2007–08, Table 1—Statement of Revenues and Expenses; FHWA, Federal Highway Statistics 2008, Table FE-210: Status of the Federal Highway Trust Fund 1957–2008.

Real Growth Rate: Negative 3.3 percent annually (nominal growth rate is -0.5 percent).

Revenue Total: $14.2 billion (nominal dollars).

FTA DISCRETIONARY—SECTION 5309 NEW STARTS AND BUS

Description: Section 5309 provides funding for major new start transit projects and bus purchases. For these purposes, funding is allocated on a discretionary basis. Section 5309 also provided funding for fixed guideway that is allocated by formula and included in the previous funding sources for the RTP/SCS.

The Controller reports the revenues received by SCAG region transit operators. The RTP/SCS uses the assumption that, on average, operators will continue to receive discretionary funding in rough proportion to what they have received historically. Consistent with other federal sources from the HTF, it is assumed that revenues will decline with fuel consumption by 1 percent per year.

Actual apportionments are used through FY2012. Starting in FY2013, future allocations are estimated by the average apportionment from FY2005 to FY2012 and a 1 percent decline in fuel consumption.

Base Year: FY2012.

Data Source: FTA, FTA Fiscal Years 2006 to 2010 Apportionments, Allocations, and Corrections, various years; Controller, Transit Operators and Non-Transit Claimants Annual Report, Fiscal Years 1999–00 through 2007–08, Table 1—Statement of Revenues and Expenses; 2011 FTIP Programmed Amounts, County Approved Fund Summary, March 17, 2008; FHWA, Federal Highway Statistics 2008, Table FE-210: Status of the Federal Highway Trust Fund 1957–2008.

Real Growth Rate: Negative 3.3 percent annually (nominal growth rate is -0.5 percent).

Revenue Total: $5.3 billion (nominal dollars).

AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA)

Description: Congress passed the American Recovery and Reinvestment Act (ARRA) of 2009 on February 13, 2009, as a direct response to the economic crisis caused by the recession. The Recovery Act was a short-term stimulus intended to spur economic activity, save existing jobs, create new jobs, and invest in long-term growth. ARRA provided transportation funding through several different programs: FHWA Highway Infrastructure Investment, FTA Transit Capital Assistance, Federal Railroad Administration (FRA) Capital Grants to the National Railroad Passenger Corporation, Federal Aviation Administration Grants-in-Aid for Airports, FTA Guideway Infrastructure Investment, FRA Capital Assistance for High-Speed Rail Corridors, and Office of the Secretary of Transportation Supplemental Discretionary Grants.

The financial plan uses actual programmed amounts from the 2011 FTIP. These amounts continue only through FY2011, the first year of the RTP planning period. As a result, ARRA is a minor funding source for the 2012 RTP.

Base Year: Not Applicable.

Data Sources: 2011 FTIP.

Real Growth Rate: Not applicable.

Revenue Total: Less than $0.1 billion (nominal dollars).

OTHER FEDERAL FUNDS

Description: Includes other federal programs, such as Regional Transportation Enhancements, Highway Bridge Replacement and Rehabilitation, Homeland Security Grants, Bus Preferential Signal Systems, Highway Earmarks, local assistance, Hazard Elimination Safety, and Railroad/Highway Grade Crossing Protection (Section 130).

LACMTA provided forecasted revenues for Los Angeles County. For other counties, Highway Bridge Program revenues are estimated in the short term using program allocations provided by Caltrans through FY2014. Longer-term estimates are based upon the average of Highway Bridge Program allocations from FY2007 to FY2014 and the 1 percent decline in fuel consumption assumption used for other federal funding sources.

Base Year: FY2007 to FY2014.

Data Sources: Caltrans, Division of Local Assistance, 2006/7–2011/12 Highway Bridge Program, December 27, 2007; Caltrans, Division of Local Assistance, 2008/9–2013/14 Highway Bridge Program, November 10, 2010; revenues are also based on financial data from transit operators and local county transportation commissions.

Real Growth Rate: Negative 3.3 percent annually (nominal growth rate is -0.5 percent).

Revenue Total: $1.8 billion (nominal dollars).

New Revenue Sources/Innovative Financing

VALUE CAPTURE STRATEGIES

Description: Refers to capturing the incremental value generated by transportation investments. A number of techniques are assumed. Assessment districts and community facilities districts (CFDs) are longstanding and widely used mechanisms in California to fund public infrastructure, including transit and transportation investments. Each has unique benefits, voter threshold, and procedural requirements, but both place the funding burden on those that benefit. Assessments districts and CFDs can be used for local projects, such as a road improvement, or to fund regional transportation projects, such as rail or highway extensions, with the coordination of local agencies and their activities. The districts are an area created by the property owners (or, in some instances, registered voters for a CFD) within its boundaries for the purposes of funding public improvements.

The property owners agree to impose assessments on each parcel that are proportional to the benefit created by the public improvements. There are many assessment districts currently in existence in the SCAG region—most of which are relatively small and were created to fund local streets, water and sewer laterals, and street lighting. There are also much larger assessment districts, such as the Los Angeles County Park and Open Space District, that impose a countywide assessment. An assessment district or CFD can be formed to fund a portion of major highway projects as well. Highway projects produce a benefit for residents and businesses along corridors with the reduction of congestion on local streets and access improvements to businesses.

The formation of an assessment district requires approval from a majority of the assessments, as opposed to the two-thirds requirement for CFDs. CFDs result in the creation of a special tax that can be used to secure bonds or pay for approved capital and operating costs. The tax may increase over time and have a term that is longer than the bonds. CFDs can be structured to address the characteristics (e.g., number and type of parcels) of the district.

Revenue estimates also reflect other opportunities for value capture financing including tax increment financing. Cities and counties have had the authority since 1990 to create infrastructure financing districts (IFDs) to fund local infrastructure. IFDs divert incremental property tax revenues for 30 years to fund, among other things, highways and transit projects. Revenue estimates were based on case study evaluations of past practices and current trends. Revenue generation can vary significantly by area due to associated economic development potential. Specific capital improvements reviewed include the East-West Freight Corridor.

Base Year: Various.

Data Source: LACMTA Benefit Assessment District Program, Los Angeles County Assessor's Office County Parcel Data; SCAG Comprehensive Regional Goods Movement Plan and Implementation Strategy, Warehouse and Distribution Study Task 5.

Real Growth Rate: Not Applicable.

Revenue Total: $1.2 billion (nominal dollars).

BOND PROCEEDS FROM LOCAL SALES TAX MEASURES

Description: Issuance of debt against existing locally imposed ½ percent sales tax revenues for Los Angeles, Orange, Riverside, and San Bernardino Counties. No debt is assumed to be issued for Imperial County.

A 30-year term is assumed so long as the final maturity is not later than the expiration date of the tax. Interest rates assumed are as follows: Municipal Market Data AAA scale plus 0.30 percent (2012 = 0.55 percent, 2041 = 4.01 percent). Costs of issuance are estimated at 0.50 percent of par amount plus $250,000, funded from proceeds of the bonds. Additionally, bond proceeds cover debt service reserve funds. For annual debt service, analysis assumed level aggregate for county; individual bond issues may have deferred principal to approximate aggregate level debt service for all debt outstanding.

The forecast also assumes minimum debt service coverage of pledged revenue (net of any local return portion) in any year of 2.5x for Los Angeles, 1.3x for Orange, 1.5x for Riverside (further restricted to a maximum of $975 million outstanding), and 1.3x for San Bernardino, including currently outstanding and new debt.

Base Year: Various.

Data Source: UCLA Anderson Forecast; historical data on revenues reported by the SBOE in 1979 through 2010 Annual Reports, Table 21B.

Real Growth Rate: Various.

Revenue Total: $25.6 billion (nominal dollars).

HIGHWAY TOLLS

Description: Toll revenues generated from the SR-710 Transportation Improvement Options, the I-710 South Freight Corridor, East-West Freight Corridor, a segment of the High Desert Corridor, and Regional Express Lane Network. This revenue category also includes toll revenue bond proceeds. A more detailed discussion of toll assumptions for some projects is provided below:

- **SR-710 Transportation Improvement Options Bond Proceeds.** The financing plan assumes that $2.6 billion of toll revenue bonds are issued for the project, with $2.3 billion in proceeds available for construction costs. The financing plan assumes the bonds have an average interest rate of 6 percent over 30 years. The annual debt

service amounts are essentially level for the first 9 years and then increase in order to provide for 1.3x debt service thereafter. Interest on the bonds is capitalized from FY2021 through FY2025.

- **SR-710 Transportation Improvement Options Toll Revenue.** The financing plan assumes that the project will be tolled and that toll revenues will support debt service and operating costs for the life of the project. The plan includes a traffic and revenue forecast with annual revenue growth of approximately 3.8 percent between FY2021 and FY2030, 2.0 percent between FY2031 and FY2040, and 1 percent thereafter.
- **I-710 South Freight Corridor Toll Revenue/Bond Proceeds.** The financing plan for the I-710 Truck Lanes includes a bond issued in FY2021, totaling $3.2 billion in par value and provides $2.9 billion in proceeds. The bonds are sized with a 1.3x debt service coverage ratio.
- **East-West Freight Corridor Toll Revenues/Bond Proceeds.** The financing plan for the East-West Freight Corridor includes toll revenue bonds. Toll revenue bonds are issued in FY2022, FY2025, and FY2030, totaling $5.5 billion in par amount that provides $4.9 billion in proceeds. The bonds are sized with a 1.3x debt service coverage ratio.
- **High Desert Corridor Toll Revenues/Bond Proceeds.** The amount of toll revenue and toll revenue bonds available for the improvements is based upon traffic projections from LACMTA. Traffic is assumed to grow at 4 percent per year. The tolled roads are projected to generate a total of $112.2 million in toll revenue in FY2021. The toll revenue bonds are secured by the net toll revenues, after payment of operating expenses, and local sales tax. The par amount issued is limited by the projected net toll revenue and assumed debt service coverage of 130 percent. The toll revenue supports the issuance of bonds in FY2015 with a $1.2 billion par value that provides $1.0 billion in proceeds.

Base Year: Various—subject to capital project completion.

Data Sources: Reviewed other toll facility data sources including FETCA, Financial Statements; SJHTCA, Financial Statements; additional sources include Riverside County-Orange County Major Investment Study Final Project Report, SR-91 Implementation Plan, 2011, and LACMTA 2009 Long-Range Transportation Plan.

Real Growth Rate: 0.0 percent to 4.0 percent annually.

Revenue Total: $22.3 billion (nominal dollars); estimate includes anticipated bond proceeds.

STATE AND FEDERAL GAS EXCISE TAX ADJUSTMENT TO MAINTAIN HISTORICAL PURCHASING POWER

Description: Historical extrapolation of gas tax revenues equivalent to additional 15 cents-per-gallon gasoline tax imposed by the state and federal governments starting in 2017. Forecast based on historical trends in adjustments to both state and federal gas excise taxes.

Base Year: FY2017.

Data Source: Not applicable.

Real Growth Rate: 0.0 percent annually.

Revenue Total: $16.9 billion (nominal dollars).

FREIGHT FEE/NATIONAL FREIGHT PROGRAM

Description: The National Freight Program as described under the U.S. Senate-proposed *Moving Ahead for Progress in the 21st Century* (MAP-21) would establish a federal formula funding program for infrastructure improvements that strengthen the nation's freight network. It also aims to reduce environmental impacts, improve safety, incorporate technology where applicable, and incorporate federal- and state-level quantifiable performance measures.

The program is allocated 5.7 percent of the amount remaining for the various Highway Trust Fund formulas, less amounts for congestion mitigation and metropolitan planning. Early estimates indicate approximately $2 billion per year, nationally. The regional estimate assumes only a small share of the national program to be conservative.

Other potential mechanisms to fund freight initiatives may include establishment of freight fees nationally, whereby rates may be subject to timing of qualified projects such that any freight fees would be assessed in proportion to relative impacts on the transportation system and would sunset with the completion of projects.

Base Year: Although MAP-21 identifies a National Freight Program starting in FY2012, analysis conservatively estimates resources available starting FY2015.

Data Source: U.S. Senate-proposed transportation reauthorization bill, MAP-21.

Real Growth Rate: Not applicable.

Revenue Total: $4.2 billion (nominal dollars).

PRIVATE EQUITY PARTICIPATION

Description: Local transportation agencies within the SCAG region, including LACMTA, RCTC, OCTA, and SANBAG, have been or are currently analyzing alternative project delivery options for funding and delivery of their projects, from a public-private partnership (P3) financing using a concession to P3 delivery using availability payments. The P3s have the potential to reduce costs or involve private funding, which would reduce the need for local funding.

Under a concession delivery model, a transportation agency would award a long-term contract to a private firm or consortium of firms to design, build, finance, operate and maintain a revenue-generating project (e.g., a tolled road) for a specific term. The benefits of the concession model include life-cycle costing, which transfers operations and maintenance cost risks to the private sector and creates incentives for the private sector to make tradeoffs between higher upfront capital costs and lower long-term O&M costs. Adding the financing element to this model means that in the best case, the transportation agency would not be financially liable for the project and that it would be up to the private sector to raise the necessary funds, manage the construction, and assume the traffic and revenue risk on the project. The concession may reduce the local agency's local funding requirement because of the private investment.

Private concession models are assumed for the analysis of a number of projects including the SR-710 Transportation Improvement Options and the freight corridor system. Development of the high-speed rail system is also anticipated to involve significant private-sector engagement; this is discussed under the HSR program funding section.

Under an "availability payment" P3 project structure, the transportation agency would contract with a private-sector partner to design, construct, operate, and/or maintain a highway for a contracted period of time. Availability payments are often used for highway projects not expected to generate adequate revenues to pay for their own construction and operation, either because the highway is un-tolled or the tolls are not forecast to generate sufficient income. This requires that the project sponsor have sufficient and credible non-toll sources of funding to make all required availability payments. Under availability payment structures, the project sponsor generally retains the revenue risk rather than the private partner if it were for a tolled highway.

The potential benefit of an availability payment structure is that the payments made by the project sponsor could be less than they would be under a traditional project delivery approach. If the payments are less, the transportation agency would achieve savings and be able to apply the freed-up revenues for other projects. LACMTA is currently evaluating the use of an availability payment project delivery for transit projects.

Financial analysis for the 2012 RTP also assumes that the two Class I freight railroads—Burlington Northern Santa Fe (BNSF) Railway and the Union Pacific Railroad (UP)—will fund their respective capacity and operational initiatives. It is assumed, for example, that the UP will invest an estimated $500 million in a modernization project that will increase container throughput at the Intermodal Container Transfer Facility (ICTF). Additionally, it is assumed that the BNSF will invest approximately $500 million to construct the Southern California International Gateway (SCIG), a new near-dock facility adjacent to the San Pedro Bay Ports with direct access to the Alameda Corridor.

Analysis also includes a freight rail investment package including main line rail improvements (rail-to-rail grade separations, double or triple tracking, new signal systems, universal crossovers, new sidings, etc.). The railroads are assumed to fund their respective shares of capital improvement costs.

Base Year: Not applicable.

Data Source: Draft business plans as available.

Real Growth Rate: Not applicable.

Revenue Total: $2.7 billion (nominal dollars).

E-COMMERCE TAX

Description: E-commerce sales generally refers to the sale of goods and services where an order is placed or where price and terms of the sale are negotiated over an Internet,

electronic mail, or other online system. E-commerce sales may also include orders placed by phone or mail. Upon making an e-commerce purchase, California law requires that residents pay a use tax on the purchase amount, which is equal to the sales tax rate. The state estimates that most residents do not report use tax and this resulted in $1.1 billion in forgone use tax revenue during 2010. The state cannot compel out-of-state retailers to pay a sales or use tax, as federal law requires that retailers have a physical presence in the state. Many out-of-state retailers have a common corporate presence in the state (i.e., work with an entity that is part of a combined corporate reporting group that performs services in the state in connection with the retailer) or work with California residents that provide referrals (i.e., affiliates) to out-of-state retailers for compensation. In its FY2012 budget, the state attempted to compel out-of-state retailers that are part of a commonly controlled group or that work with affiliates to pay a use tax (through ABX1 28). In September 2011, the state repealed ABX1 28 and enacted AB 155, which includes many of the same provisions of ABX1 28, but delays implementation until September 2012.

The Governor's office estimated that ABX1 28 would have generated $200 million during FY2012. Given that AB 155 would implement many of the same provisions as ABX1 28, it could generate a pro rata amount of the estimated $200 million in FY2013 and the full amount in each year thereafter. However, there are several events that may affect the amount the state collects. The provisions of AB 155 may not take effect if federal legislation passes that allows states to impose the collection of use taxes on out-of-state retailers. Also, in reaction to the tax, one of the most well-known out-of-state retailers, Amazon (Amazon.com), stopped working with affiliates and began collecting petitions to repeal ABX1 28. After passage of AB 155, Amazon reported that it has stopped collecting petitions and will support AB 155, but Amazon is not required to do so.

Notwithstanding the uncertainty in the amount of revenue that is available from AB 155, the revenue could be used for transportation purposes, given the relationship between e-commerce and the resultant delivery of goods to California purchasers. In the event the revenue is used solely for transportation, the revenue would need to be allocated to specific uses or areas within the state. One method would allocate the funds in proportion to population. Under this method, the SCAG region would receive an estimated $3.1 billion through 2035, assuming 3 percent nominal growth rate.

Base Year: FY2013.

Data Source: California Assembly Bill 155, SBOE, Revenue Estimate: Electronic Commerce and Mail Order Sales, December 6, 2010; State of California Governor, California State Budget 2011–12, Budget Summary, p. 14.

Real Growth Rate: 0.0 percent annually.

Revenue Total: $3.1 billion (nominal dollars).

MILEAGE-BASED USER FEE (OR EQUIVALENT FUEL TAX ADJUSTMENT)

Description: Mileage-based user fees would be implemented to replace existing gas taxes. Analysis assumed $0.05 (2011$) per mile starting in 2025 and indexed at a rate of 2.5 percent.

Advancements in technologies enabling greater use of electric or alternative fuel vehicles will continue to impact gas tax revenues. The U.S. Energy Information Agency estimates that fuel efficiency for all light-duty vehicles will steadily increase, from an average weighted MPG of just over 20 in 2008 to nearly 29 in 2030. The fuel efficiency of freight trucks also is expected to improve, although at a slower rate, from an average weighted MPG of about 6 in 2008 to nearly 7 in 2030. This projection assumes there is not a major paradigm shift in vehicle fuel technology, such as affordable electric cars or hybrid heavy-duty trucks. It also assumes no shift will occur in public policy or public attitudes that encourage people to reduce their long-term travel habits or shift to more efficient vehicles more quickly. Given the growing concern about climate protection and fuel price volatility, however, such changes are likely, which would lead to a more rapid deterioration in the long-term viability of the current fuel tax.

SCAG projections indicate that the total number of vehicle miles traveled in the SCAG region will increase by about 16 percent by 2035. The National Surface Transportation Infrastructure Financing Commission also predicts an increase in VMT nationwide. The Financing Commission evaluated a combination of short- and long-term factors, identifying that short-term motor fuel price volatility combined with a weak economy could have a considerable negative impact. They indicate that despite a recent national decline in VMT, travel growth nationally will resume a trajectory of about 1.5 to 1.8 percent per year for the foreseeable future due to factors such as population growth, economic growth, and land use patterns. Accordingly, the Financing Commissions' findings and

recommendations indicate that the most viable approach to efficiently fund investments in transportation in the medium to long run will be a user charge system based more directly on miles driven (and potentially on factors such as time of day, type of road, vehicle weight, and fuel economy) rather than indirectly on fuel consumed. Additionally, the National Surface Transportation Policy and Revenue Study Commission identified consistent findings and recommendations.

Numerous studies in the United States have tested approaches to charging drivers on a use basis—including Oregon and the Puget Sound region of Washington State. A nationwide survey was conducted by the University of Iowa for the U.S. Department of Transportation that focused on equipment for monitoring travel and methods of billing. The study involved about 2,700 vehicles in 12 locations. Participants were surveyed on their reactions to receiving two types of monthly bills: one providing aggregate data only and the other showing detailed information that included routes of travel. The study included the installation of on-board systems in six regions across the country (San Diego, Baltimore, Austin, Boise, Research Triangle in North Carolina, and eastern Iowa). The aim of the study is to design a prototype road pricing system that is reliable, secure, flexible, user-friendly, and cost-effective and to assess vehicle operators' reactions to the system.

For the SCAG region, revenue from mileage-based fees total $148.2 billion from FY2025 to FY2035. This analysis assumes that mileage-based fees would replace existing state and federal gas taxes. As such, the incremental increase in revenue resulting from the transition to a more direct mileage-based charge system would generate $110.3 billion, from FY2025 to FY2035.

Base Year: FY2025.

Data Source: SCAG travel demand forecast for 2012 RTP.

Real Growth Rate: 0.5 percent annually.

Revenue Total: $110.3 billion (nominal dollars)—estimated incremental revenue only.

INTEREST EARNINGS

Description: Interest earnings are assumed from toll bond proceeds (e.g., East-West Freight Corridor). See toll bond revenue assumption for further details on bond proceeds and interest earnings.

Base Year: Not applicable.

Data Source: Not applicable.

Real Growth Rate: Not applicable.

Revenue Total: $0.2 billion (nominal dollars).

STATE BOND PROCEEDS, FEDERAL GRANTS, AND OTHER FOR CALIFORNIA HIGH-SPEED RAIL PROGRAM

Description: The 2012 RTP financial plan assumes state general obligation bonds authorized under the Bond Act approved by California voters as Proposition 1A in 2008. Proposition 1A authorized the state to issue $9.95 billion of general obligation bonds, of which $9 billion will be used to develop the high-speed rail system. As per the California High-Speed Rail Authority's recent release of its Draft 2012 Business Plan for the High Speed Rail Program, financial assumptions also include the potential use of qualified tax credit bonds and private investment.

Large-scale private-sector involvement in the development and implementation of the HSR system is contemplated. The 2012 Business Plan identifies cost containment, risk mitigation, and the potential for additional capital as rationale for private-sector participation. Various contractual project delivery options are considered, including concession models.

Base Year: FY2016.

Data Source: California High-Speed Rail Program Draft 2012 Business Plan, November 1, 2011.

Real Growth Rate: Not applicable.

Revenue Total: $33.0 billion (nominal dollars).

APPENDIX C: Financial Plan Assessment Checklist

SCAG used the following checklist to ensure that revenues and expenditures in the financial plan were reasonable.

- ✓ Do the RTP, TIP, and FSTIP contain a financial plan that summarizes current and future revenue sources?
- ✓ Is the financial plan and supporting information presented and explained in a format that can be clearly understood?
- ✓ Is the financial plan made available to the public as part of the public involvement process?
- ✓ Has the financial information in the financial plan been coordinated with all of the affected agencies (MPOs, state DOT, transit operators, local jurisdictions)?
- ✓ Are the assumptions and data sources for each revenue source (federal, state, local, other) clearly documented in the financial plan?
- ✓ Are the approaches for forecasting future revenues documented and defined?
- ✓ Are all revenue figures over consistent timeframes and fiscal years?
- ✓ Are consistent dollar values used and defined?
- ✓ Are the assumptions used for inflation of costs to future nominal dollars clearly documented and applied consistently?
- ✓ Does the RTP clearly indicate which revenue sources currently exist and which are new?
- ✓ Are the assumptions about the availability of current revenue sources clearly identified by revenue source?
- ✓ Are new revenue sources clearly identified?
- ✓ For new revenue sources, are the strategies to achieve these clearly documented? Are the responsible parties for these strategies identified?
- ✓ If new revenue sources are not implemented, are the strategies or risk mitigation approaches for how to meet funding shortfalls identified?
- ✓ If innovative financing tools and techniques are used as revenue sources, are these clearly identified and documented in the RTP?
- ✓ Are the current and future federal funds included in the financial plan based on known or reasonably expected authorization levels?
- ✓ Are anticipated discretionary funds consistent with recent levels of discretionary funds actually allocated to the pertinent agencies/jurisdictions?
- ✓ If the RTP includes “illustrative” or “vision elements,” are the revenue sources for these clearly separate from the fiscally constrained portion of the plan?

APPENDIX D: SCAG Regional Financial Model

The SCAG regional financial model consists of two Excel spreadsheets. The first spreadsheet helps SCAG estimate revenues available for transportation capital projects over the timeframe of the RTP/SCS (FY2011 to FY2035). The second spreadsheet allows SCAG to compare the revenues to expenditures proposed for the 2012 RTP.

The revenue model spreadsheet begins with a compilation of historical data from published sources. SCAG relies on published data because it can be collected and verified easily. The model focuses on using revenue data at collection and disbursement levels and includes 41 data tables from a variety of local, state, and federal sources.

The historical data in the regional financial model have been expanded considerably since the 2008 RTP. Several tables were added and historical data series were extended. For example, the state sales tax records have been tracked to 1933–34. The addition of this longer-term historical data helped to conduct Monte Carlo sensitivity testing, especially in light of the recession and other economic extremes that occurred in the 1930s and 1970s.

All tables and their sources are shown below.

Table	Source(s)
1: State Sales and Use Tax Collections and Number of Permits, 1933–34 to 2008–09	California State Board of Equalization, 1933–34 through 2008–09 Annual Reports, Table 18 (or equivalent tables in earlier reports).
2: State Sales and Use Tax Statistics by County, 1933–34 to 2008–09	California State Board of Equalization, 1933–34 through 2008–09 Annual Reports, Table 20 (or equivalent tables in earlier reports).
3: Revenues Distributed to Counties from County Transportation Tax (i.e., TDA Funding), 1972–73 to 2010–11	1) California State Board of Equalization, 1972–73 through 2008–09 Annual Reports, Table 21B. 2) California State Board of Equalization, Local Tax Allocations for 2009–10 and 2010–11.
4: Revenues Distributed to Special Districts from Transactions and Use Tax, 1981–82 to 2010–11	1) California State Board of Equalization, 1972–73 through 2008–09 Annual Reports, Table 21C. 2) California State Board of Equalization, Local Tax Allocations for 2009–10 and 2010–11.
5: Total Gas Tax Apportionments to Counties and Constituent Cities, 1999–00 to 2007–08	California State Controller, Streets and Roads Annual Report, Fiscal Years 1999–00 through 2007–08, Tables 3 and 9—Detailed Statement of Monies Made Available for Street Purposes.
6A: California Total Vehicle Fuel Forecasts, 1980 to 2030	California Department of Transportation, Division of Transportation System Information, 2008 California Motor Vehicle Stock, Travel and Fuel Forecast, June 2009.
6B: Taxable Distributions of Diesel Fuel and Gasoline, 1923–24 to 2008–09	California State Board of Equalization, 2008–09 Annual Report, Tables 24 and 25a.
7A-7B: CTC-Adopted 2006 STIP, 2006–07 to 2010–11	California Transportation Commission, 2006 STIP Staff Recommendations Update Summary, April 27, 2006.
7C-7D: Programmed 2010 STIP, 2010–11 to 2014–15	California Transportation Commission, 2011 Report of STIP Balances County and Interregional Shares, August 4, 2011.
8A-8G: 1998 to 2010 SHOPP Programs, 1998–99 to 2013–14	California Department of Transportation, Approved SHOPP, multiple dates.
9: Proposition 1B Apportionments, 2010–11 to 2013–14	Southern California Association of Governments, Regional Transportation Improvement Program #11-01.
10A: Transit Passenger Fares, 1978–79 to 2007–08	California State Controller, Transit Operators and Non-Transit Claimants Annual Report, Fiscal Years 1978–79 through 2007–08, Table 1—Statement of Revenues and Expenses.
10B: FTA Section 5307, 1987–88 to 2007–08	California State Controller, Transit Operators and Non-Transit Claimants Annual Report, Fiscal Years 1999–00 through 2007–08, Table 1—Statement of Revenues and Expenses.

Table	Source(s)
10C: Special Demonstration Project, 1987–88 to 2007–08	California State Controller, Transit Operators and Non-Transit Claimants Annual Report, Fiscal Years 1999–00 through 2007–08, Table 1—Statement of Revenues and Expenses.
10D: Other Financial Assistance, 1987–88 to 2007–08	California State Controller, Transit Operators and Non-Transit Claimants Annual Report, Fiscal Years 1999–00 through 2007–08, Table 1—Statement of Revenues and Expenses.
10E: FTA Section 5310 and 5311, 1987–88 to 2007–08	California State Controller, Transit Operators and Non-Transit Claimants Annual Report, Fiscal Years 1999–00 through 2007–08, Table 1—Statement of Revenues and Expenses.
11A-11C: FTA Section 5307, 5309a, and 5309b Allocations, 2005–06 to 2009–10	Federal Transit Administration, FTA Fiscal Year Apportionments and Allocations, multiple years.
12A-12C: 2008 RTIP 5309c, Demonstration Projects, and Other, 2008–09 to 2011–12	1) Federal Transit Administration, FTA Fiscal Year Apportionments and Allocations, multiple years. 2) 2008 RTIP Programmed Amounts, County-Approved Fund Summary, March 17, 2008.
13: Orange County Highway Toll Revenues, 1997–98 to 2009–10	1) Transportation Corridor System, Final Traffic and Revenue Report, prepared by Stantec Consulting Inc., April 10, 2008. 2) Foothill/Eastern Transportation Corridor Agency, Financial Statements, June 30, 2006 to 2010. 3) San Joaquin Hills Transportation Corridor Agency, Financial Statements, June 30, 2006 to 2010. 4) 91 Express Lanes Fund, Financial Statements, June 30, 2006 to 2009.
14A: Developer Fees, 1987–88 to 2007–08	California State Controller, Transportation Planning Agencies Annual Report, Fiscal Years 1987–88 through 2007–08, Table 1—Statement of Revenues for All Fund Types.
14B: Interest Earned by Transportation Planning Agencies, 1987–88 to 2007–08	California State Controller, Transportation Planning Agencies Annual Report, Fiscal Years 1987–88 through 2007–08, Table 1—Statement of Revenues for All Fund Types.
14C: State Transit Assistance Funds, 1987–88 to 2010–11	1) California State Controller, Transportation Planning Agencies Annual Report, Fiscal Years 1987–88 through 2007–08, Table 1—Statement of Revenues for All Fund Types. 2) California State Controller, Quarterly State Transit Assistance for 2008–09 to 2010–11.
15: Federal CMAQ Apportionments, 1997–98 to 2013–14	California Department of Transportation, CMAQ Apportionments, multiple years.
16: Federal RSTP Apportionments, 1997–98 to 2013–14	California Department of Transportation, RSTP Apportionments, multiple years.
17: Highway Bridge Program Federal Funds 2006–07 to 2013–14	1) California Department of Transportation, Division of Local Assistance, 2006/7–2011/12 Highway Bridge Program, 12/27/07. 2) California Department of Transportation, Division of Local Assistance, 2008/9–2013/14 Highway Bridge Program, 11/10/10.
18: Programmed ARRA Funding, 2008–09 to 2010–11	Final 2008 FTIP Programmed ARRA Amounts through Amendment 53.
19: Status of the Federal Highway Trust Fund, 1957 to 2009	Federal Highway Administration, Federal Highway Statistics 2008, Table FE-210: Status of the Federal Highway Trust Fund 1957-2008. Data exclude the transition quarter that covers July, August, and September 1976.
20: GDP (Chained) Price Index, 1940 to 2010	Office of Management and Budget, Budget of the United States Government, Fiscal Year 2011 Budget (FY11) Transmitted to Congress on February 1, 2010, Table 10.1—Gross Domestic Product and Deflators Used in the Historical Tables
21: California County Population Estimates, 1999 to 2009	California Department of Finance, E-2. California County Population Estimates and Components of Change by Year—July 1, 2000–2009, December 2009.

The revenue model uses these tables to estimate long-term historical trends. SCAG tries to use as much data as possible, but definitions and data availability can vary over time. **TABLE 10** shows an example of the state sales and use tax statistics used in the model. The information in this example comes from the California State Board of Equalization Annual Reports.

TABLE 10 State Sales and Use Tax Statistics by County (Taxable Sales of All Outlets in Millions of Dollars)

Fiscal Year	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	CA Total
1933–34	$9	$549	$18	$13	$25	$12	$1,325
1934–35	$16	$922	$34	$24	$38	$18	$2,422
1935–36	$18	$976	$36	$25	$40	$17	$2,435
1936–37	$20	$1,235	$43	$30	$47	$19	$2,945
1937–38	$21	$1,291	$45	$31	$49	$21	$2,889
1938–39	$21	$1,275	$43	$30	$48	$20	$2,980
1939–40	$23	$1,390	$43	$30	$48	$20	$3,266
1940–41	$26	$1,617	$50	$36	$56	$22	$3,660
1941–42	$22	$1,955	$59	$41	$63	$28	$4,378
1942–43	$23	$1,893	$62	$51	$81	$29	$4,474
1943–44	$28	$2,242	$76	$62	$92	$39	$5,195
1944–45	$31	$2,555	$91	$68	$109	$46	$6,035
1945–46	$38	$3,192	$119	$93	$143	$53	$7,469
1946–47	$53	$4,272	$155	$123	$187	$70	$9,879
1947–48	$61	$4,725	$179	$138	$206	$82	$11,054
1948–49	$60	$4,771	$180	$139	$211	$90	$11,252
1949–50	$56	$4,687	$184	$135	$208	$92	$11,043
1950–51	$63	$5,657	$222	$157	$246	$105	$13,230
1951–52	$77	$5,797	$240	$174	$275	$114	$13,728
1952–53	$86	$6,581	$282	$198	$322	$130	$15,126
1953–54	$78	$6,723	$305	$199	$331	$134	$15,000
1954–55	$79	$7,428	$370	$228	$371	$144	$16,542
1955–56	$85	$8,320	$480	$268	$435	$163	$18,750
1956–57	$84	$8,793	$539	$294	$479	$175	$19,823
1957–58	$81	$8,472	$577	$302	$506	$179	$19,468
1958–59	$88	$9,047	$704	$333	$521	$200	$21,343
1959–60	$94	$9,883	$869	$361	$542	$215	$23,378
1960–61	$97	$9,741	$932	$356	$545	$229	$23,275
1961–62	$99	$10,400	$1,073	$391	$597	$260	$24,995
1962–63	$106	$11,095	$1,264	$449	$672	$293	$26,835
1963–64	$117	$11,861	$1,458	$513	$768	$342	$29,246
1964–65	$120	$12,249	$1,613	$552	$812	$376	$30,769
1965–66	$125	$12,966	$1,750	$583	$846	$383	$33,305
1966–67	$125	$13,461	$1,880	$581	$849	$397	$34,412
1967–68	$137	$14,257	$2,212	$660	$950	$450	$36,861
1968–69	$149	$15,629	$2,616	$760	$1,084	$541	$40,669
1969–70	$147	$16,167	$2,819	$803	$1,149	$607	$43,263
1970–71	$156	$16,206	$3,084	$899	$1,236	$650	$44,393
1971–72	$176	$17,716	$3,593	$1,036	$1,353	$731	$49,527
1972–73	$219	$20,602	$4,456	$1,237	$1,634	$872	$58,540
1973–74	$256	$22,350	$4,982	$1,321	$1,759	$949	$64,467
1974–75	$294	$23,863	$5,402	$1,425	$1,879	$1,072	$70,148
1975–76	$343	$26,210	$6,386	$1,646	$2,168	$1,251	$78,455
1976–77	$352	$29,747	$7,840	$2,010	$2,625	$1,433	$91,519
1977–78	$388	$33,762	$9,310	$2,458	$3,125	$1,681	$105,725
1978–79	$432	$38,835	$10,825	$2,871	$3,639	$2,050	$121,902
1979–80	$500	$44,596	$12,287	$3,230	$4,129	$2,344	$138,351
1980–81	$561	$47,934	$13,437	$3,458	$4,413	$2,571	$149,197

Fiscal Year	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	CA Total
1981–82	$579	$49,478	$14,233	$3,607	$4,664	$2,766	$155,124
1982–83	$479	$48,603	$14,630	$3,766	$4,843	$2,812	$158,435
1983–84	$527	$54,774	$17,582	$4,612	$5,713	$3,405	$183,573
1984–85	$605	$60,280	$19,530	$5,192	$6,518	$3,725	$201,498
1985–86	$571	$62,937	$20,813	$5,649	$7,278	$4,037	$211,830
1986–87	$607	$66,072	$22,570	$6,369	$8,164	$4,443	$224,225
1987–88	$749	$70,628	$24,417	$7,102	$9,038	$4,831	$241,300
1988–89	$839	$75,021	$26,561	$8,222	$10,084	$5,242	$260,352
1989–90	$886	$80,435	$28,127	$9,353	$11,240	$5,684	$279,923
1990–91	$927	$77,903	$27,094	$9,179	$11,129	$5,452	$275,173
1991–92	$968	$75,555	$26,688	$9,138	$11,258	$5,518	$272,654
1992–93	$1,031	$74,024	$26,586	$9,249	$11,133	$5,484	$271,022
1993–94	$1,029	$74,277	$27,457	$9,517	$11,414	$5,762	$277,539
1994–95	$1,013	$78,571	$29,268	$10,088	$12,206	$6,148	$293,066
1995–96	$1,018	$80,843	$31,159	$10,088	$12,865	$6,417	$312,164
1996–97	$1,003	$84,192	$33,585	$11,460	$13,527	$6,734	$328,788
1997–98	$1,095	$88,309	$36,081	$12,502	$14,371	$7,254	$350,171
1998–99	$1,147	$93,052	$38,437	$14,032	$15,853	$7,841	$372,994
1999–00	$1,416	$102,743	$42,554	$16,132	$17,886	$8,775	$420,352
2000–01	$1,364	$107,571	$45,058	$17,586	$19,376	$9,334	$447,477
2001–02	$1,411	$107,238	$44,208	$18,775	$20,051	$9,628	$436,998
2002–03	$1,490	$110,993	$45,908	$20,434	$21,753	$10,032	$447,906
2003–04	$1,602	$118,042	$49,757	$23,425	$24,120	$10,819	$480,065
2004–05	$1,831	$126,061	$53,101	$26,646	$27,891	$11,486	$515,298
2005–06	$2,116	$134,350	$56,396	$29,646	$31,212	$12,211	$553,520
2006–07	$2,159	$137,934	$57,900	$29,699	$31,110	$12,471	$564,837
2007–08	$2,255	$136,815	$56,234	$27,729	$29,459	$11,796	$552,895
2008–09	$1,971	$120,032	$48,509	$23,468	$25,085	$10,387	$484,424

The next section of the model collects information from the county transportation commission (CTC) forecasts. Each CTC in the SCAG region prepares a financial forecast relevant to the economic conditions, financial funding sources, and legal requirements in its county. The level of detail varies according to what is historically important to the county. For example, LACMTA has historically relied on revenue bonds to ensure that funds are available when needed for transportation projects. The estimation of debt service is very important for the LACMTA financial model. Several other counties recently passed or extended sales tax measures, so their focus is estimating future sales tax revenues.

The SCAG revenue model takes the most recent CTC financial forecasts available and places them into standardized revenue categories. The SCAG model includes the following revenue categories:

Local Sources

1. Local Option Sales Tax Measures
2. Local Transportation Fund from Transportation Development Act
3. Gas Excise Tax Subventions
4. Farebox Revenues
5. Highway Tolls
6. Mitigation Fees
7. Local Agency Funds

State Sources

1. State Transportation Improvement Program (STIP)
   a. Regional Improvement Program (RIP)
   b. Interregional Improvement Program (IIP)
2. State Highway Operation and Protection Program (SHOPP)
3. State Gasoline Sales Tax Swap
4. State Transit Assistance Fund (half of the Public Transportation Account)
5. Highway Safety, Traffic, Air Quality, and Port Fund (Proposition 1B)
6. Other State Funds

Federal Sources

1. Congestion Mitigation Air Quality (CMAQ) Program
2. Regional Surface Transportation Program (RSTP)
3. FTA Formula (5307, 5310, 5311, 5309a Fixed Guideway)
4. FTA Discretionary (5309b New Starts, 5309c Bus)
5. Other Federal Funds (e.g., Highway Bridge Program)
6. American Recovery and Reinvestment Act (ARRA)

The model also includes several tables that show how CTC revenue estimates are grouped into the standardized regional categories. **TABLE 11** shows an example for Orange County. In addition to grouping the revenue sources by standard category, the SCAG model also makes sure that costs are estimated in the same "dollars" and treat inflation consistently. The SCAG revenue model is capable of estimating revenues in any set of constant dollars or nominal dollars (year of expenditure). The default is 2010 constant dollars, although the 2012 RTP reports revenue estimates in nominal dollars as required by USDOT.

TABLE 11 Orange County Transportation Authority (OCTA) (Nominal Dollars)

Revenue Source (in order provided)	Modal Category
Local	
ST-CASH - STATE CASH	7
S-PARK - STATE PARK FUNDS	7
Gas Tax Subventions exchange (transit)	3
ORA-TRN - ORANGE M - TRANSIT	1
ORAM2TR - ORANGE CO. MEASURE M2 - TRANSIT	1
TDA4 - TDA ARTICLE #4 (1)	2
TDA - TDA (14)	2
FARE REVENUE	4
Stationlink	7
Advertising	7
Fare Stab	7
Interest	7
Misc.	7
Alt. Fuel Tax	7
GEN - GENERAL FUNDS - City MOE (7)	7
Gen - GENERAL FUNDS - NON MOE	7
DEV FEE - DEVELOPER FEES (5)	6
M2 Environmental Cleanup	1
M2 Taxpyr & Audits	1
M2 SBOE Fees	1
P-TAX - PROPERTY TAX (3)	7
Toll revenues (12)	5
Non-toll revenue (13)	7
ORAFWY2 - ORANGE M2 - FREEWAY	1
ORA-FWY - ORANGE M - FREEWAY	1
Service Authority for Freeways and Expressways (SAFE)	7
Gas Tax Subventions (local arterials)	3
ORA-PAH - ORANGE M - MPAH (Local streets and roads)	1
ORA-RIP - ORANGE M - REG I/C (Regional streets and roads)	1
TDA3 - TDA ARTICLE #3	2
ORAM2RC - ORANGE CO. MEASURE M2 - Roadways	1
State	
P116 - PROP 116	6
PTMISEA - PUBLIC TRANS MODERNIZATION IMP AND SERV. ENHANCEMENT ACCT. (Prop 1B)	5
TSSSDRA - TRANSIT SYSTEM SAFETY, SECURITY AND DISASTER RESPONSE ACCOUNT	5
STAF	4
Prop 1A High-Speed Rail (11)	3
STIP - RIP (PTA + TIF) (4)	1a

Revenue Source (in order provided)	Modal Category
SLP - STATE LOCAL PARTNER (Prop 1B)	5
TCIF - TRADE CORRIDOR PROGRAM (Prop 1B)	5
STIP - IIP (PTA + TIF)	1b
SHOPPAC - SHOPP - ADVANCE CONSTRUCTION (9)	2
STCASHS - STATE CASH - SHOPP (9)	2
LBSRA - LOCAL BRIDGE SEISMIC RETROFIT ACCOUNT (1)	6
HRCSA - HIGHWAY-RAILROAD CROSSING SAFETY ACCOUNT (Prop 1B)	6
TLSP - TRAFFIC LIGHT SYNCHRONIZATION PROGRAM (Prop 1B)	6
Prop 42 subventions (County and City)	3
Federal	
5307 - FTA 5307 UZA FORMULAR	3
5309a - FTA 5309(a) GUIDEWAY (6)	3
5309c - FTA 5309(c) BUS (6)	4
5310 - FTA 5310 ELD AND DISABI	3
5316 - FTA 5316 JOB ACCESS PROGRAM	3
5317 - FTA 5317 NEW FREEDOM PROGRAM	3
AR-5307 - ARRA - FTA 5307	6
AR-5309 - ARRA - FTA 5309	6
FTA New Starts (project S)	4
FRA08 - FFY 2008 Administration Earmark (1)	4
FRA09 - FFY 2009 Administration Earmark (1)	4
1112 - RECREATIONAL TRAILS (1)	5
2006EAR - FFY 2006 APPROPRIATIONS EARMARKS (1)	4
ARRA-TE - ARRA - TRANSPORATION ENHAN	6
HBRR-L - BRIDGE - LOCAL (1)	5
STPE-R - STP ENHANCE-RIP TEA (TE)	5
STPE-I - STP ENHANCE-IIP TEA	5
ARRA-SH - ARRA - SHOPP (1)	6
ARRA-HM - ARRA - HIGHWAY MAINTENANCE (HM) (1)	6
CMIA - CORRIDOR MOBILITY PROGRAM (Prop 1B)	State 5

Revenue Source (in order provided)	Modal Category
DEMISTE - DEMO - ISTEA (1)	4
ARRRSTP - ARRA - REGIONAL SURFACE TRANSPORTATION PROGRAM	6
CMAQ - CMAQ (Congestion Mitigation and Air Quality Improvement Program)	1
DEMOSTL - DEMO-SAFETEA-LU (1)	4
EDA - EDA GRANT (1)	4
STPL-R - STP LOCAL - REGIONAL (Regional Surface Transportation Program (RSTP))	2

Source: 2010 LRTP Forecast for SCAG, August 25, 2010

The SCAG model uses several economic assumptions to forecast future revenues. The most important assumptions are:

- Growth in retail sales for each county
- Changes in fuel consumption
- Increases in farebox revenues for major operators and transit agencies in general
- Changes in toll revenues for the Transportation Corridor Agencies (TCA) in Orange County
- Collection of mitigation fees
- Status of the Federal Highway Trust Fund
- Changes in CMAQ funding due to air quality attainment
- Percentage of local roads that are regionally significant
- Annual inflation for converting revenues to nominal dollars

The assumptions are based on the published historical data. Values are adjusted to ensure consistency with the county transportation commission forecasts and across the region. As an example, **TABLE 12** shows a subset of the model assumptions for retail sales growth and fuel consumption. The historical data show that retail sales growth has been slowest in the Los Angeles urban core, while faster growth has been occurring in the Inland Empire. The historical growth rates are for the last 30 years and reflect the drop in sales tax revenues due to the recession. In fact, the 30-year averages are lower than the ones reported in the 2008 RTP due to the recent economic downturn appearing in the historical data.

The county transportation commissions have provided retail sales forecasts for the future, which are used in the regional model. For example, LACMTA expects retail sales to grow faster during the early years of the RTP planning period as the region recovers from the Great Recession. This growth rate is expected to taper, with slower growth occurring in Los Angeles County than in the Inland Empire in the later years of the forecast. Retail sales growth is expected to be slow in Orange County, although still higher than in Los Angeles, consistent with historical trends. In the case of Imperial County, no retail sales forecasts are available, so sales are expected to grow consistent with historical trends.

TABLE 12 also shows the expected growth in fuel consumption. SCAG expects that fuel consumption will be impacted by a number of changes anticipated over the next several decades, including changes in vehicle miles traveled, changes in vehicle fuel economy (due to new CAFE standards), and the adoption of alternative fuel vehicles. The SCAG revenue model assumes that these changes cause fuel consumption to drop by 1 percent annually over the period of the RTP/SCS—a more conservative assumption than historical trends would suggest. These two examples illustrate how published data are used to supplement and validate the forecasts in the regional revenue model. The sensitivity of the forecasts to these assumptions was tested through Monte Carlo simulation.

TABLE 12 Revenue Model Assumptions

Assumption	Used in Model	Source/Other Information
ANNUAL GROWTH RATES		
Retail Sales		
Imperial	1.9%	Table 2 (State Sales and Use Tax Statistics by County)
Los Angeles	3.9%	Table 2; Percentage to match 2009 LRTP Technical Document
	1.7%	Table 2; Percentage to match 2009 LRTP Technical Document
	1.2%	Table 2; Percentage to match 2009 LRTP Technical Document
Orange	1.7%	Table 2; Percentage to match 2010 OCTA LRTP forecast
Riverside	1.6%	Table 2; Percentage to match 2010 Measure A forecast
San Bernardino	2.3%	Table 2; Percentage to match 2010 SANBAG Measure I growth forecasts
Ventura	2.3%	Table 2
Statewide	1.5%	Table 2
Fuel Consumption	-1.0%	Table 6B (Taxable Distributions of Diesel Fuel and Gasoline)

The regional model generates forecasts of annual revenues by source for each of the counties in the SCAG region through FY2035. **TABLE 13** shows an example for the California State Transit Assistance Fund, which is equal in revenues to half of the state's Public Transportation Account.

TABLE 13 State Transit Assistance Fund (in Millions of Dollars)

Fiscal Year	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Total
2004–05	$0	$34	$7	$3	$4	$1	$49
2005–06	$0	$62	$12	$6	$6	$2	$89
2006–07	$1	$191	$37	$19	$20	$7	$275
2007–08	$1	$61	$17	$10	$6	$3	$99
2008–09	$0	$44	$9	$5	$5	$2	$65
2009–10	$0	$59	$12	$6	$7	$2	$86
2010–11	$0	$60	$12	$7	$7	$2	$89
2011–12	$0	$61	$12	$7	$7	$3	$90
2012–13	$0	$63	$13	$7	$7	$3	$92
2013–14	$1	$64	$13	$7	$7	$3	$94
2014–15	$1	$65	$13	$7	$7	$3	$95
2015–16	$1	$66	$13	$7	$7	$3	$97
2016–17	$1	$67	$14	$7	$8	$3	$99
2017–18	$1	$69	$14	$7	$8	$3	$101
2018–19	$1	$70	$14	$8	$8	$3	$103
2019–20	$1	$71	$14	$8	$8	$3	$105
2020–21	$1	$73	$15	$8	$8	$3	$107
2021–22	$1	$74	$15	$8	$8	$3	$109
2022–23	$1	$75	$15	$8	$8	$3	$111
2023–24	$1	$77	$15	$8	$9	$3	$113
2024–25	$1	$78	$16	$9	$9	$3	$115
2025–26	$1	$80	$16	$9	$9	$3	$117
2026–27	$1	$81	$16	$9	$9	$3	$119
2027–28	$1	$83	$17	$9	$9	$3	$121
2028–29	$1	$84	$17	$9	$9	$3	$124
2029–30	$1	$86	$17	$9	$10	$4	$126
2030–31	$1	$87	$18	$10	$10	$4	$128
2031–32	$1	$89	$18	$10	$10	$4	$131
2032–33	$1	$91	$18	$10	$10	$4	$133
2033–34	$1	$92	$19	$10	$10	$4	$136
2034–35	$1	$94	$19	$10	$11	$4	$138
2035–36	$1	$96	$19	$10	$11	$4	$141
2036–37	$1	$98	$20	$11	$11	$4	$144
2037–38	$1	$99	$20	$11	$11	$4	$146
2038–39	$1	$101	$20	$11	$11	$4	$149
2039–40	$1	$103	$21	$11	$12	$4	$152

APPENDIX E: Implementation Plan for Reasonably Available Revenue Sources

In developing the 2012–2035 RTP/SCS, SCAG held a number of meetings with the RTP Subcommittee, Transportation Committee, and the Regional Council, to discuss the institutional and policy context for pursuing reasonably available funding sources. SCAG's Policy Committees identified the need to pursue new, reasonably available sources of funding for transportation—providing that mechanisms are in place to ensure local control. Specifically, the following adopted set of key guiding principles form the basis for the RTP/SCS financial strategies:

- Establish a user-based system that better reflects the true cost of transportation, provides firewall protection for transportation funds, and ensures an equitable distribution of costs and benefits.
- Promote national and state programs that include return-to-source guarantees while maintaining flexibility to reward regions that continue to commit substantial local resources.
- Leverage locally available funding with innovative financing tools (e.g., tax credits and expansion of TIFIA) to attract private capital and to accelerate project delivery.
- Promote funding strategies that strengthen federal commitment to the nation's goods movement system, recognizing the pivotal role that our region plays in domestic and international trade.

Further, recognizing that many of the financial strategies identified require additional planning and legislative steps toward implementation, the following section highlights some requisite actions and key milestones for implementing new funding sources identified as a part of the financially constrained RTP/SCS.

Value Capture Strategies

Value capture strategies refer to capturing the incremental value generated by transportation investments. A number of techniques can be utilized to capture this enhanced value including the formation of special districts, such as benefit assessment districts. Benefit assessments are fees on properties used to pay for the cost of capital improvements. Charges are assessed on those properties that benefit from the capital improvements being financed. A benefit of certain special districts is that the boundaries can be drawn across local jurisdictional lines or within well-defined or targeted areas.

Special assessments are subject to Proposition 218, which establishes a common formation and ratification procedure that local jurisdictions would need to pursue as outlined below. To further pursue this strategy, SCAG would need to work with local/regional stakeholders to pursue the following course of actions.

1. Conduct feasibility analysis/engineering report with rates, proposed district boundaries, methodology, and rationale for assessments
2. Polling/Public Awareness Surveys
3. Hold public hearing and receive approval from a majority of affected property owners casting ballot (by FY2020–FY2021)

The formation of a Mello-Roos Community Facilities District presents another type of special district financing opportunity. A special district of this type allows a developer or group of property owners to self-impose a special tax, collected on the property tax roll, to finance a variety of public improvements. Mello-Roos CFDs require two-thirds approval of those voting. There may be a landowner election or a registered voter election, depending on whether there are 12 or more registered voters within the proposed Mello-Roos district (§53326(b)).

Assessment districts and community facilities districts (CFDs) are long-standing and widely-used mechanisms in California to fund public infrastructure, including transportation investments. Each has unique benefits, voter threshold, and procedural requirements, but both place the funding burden on those who benefit. Assessments districts and CFDs can be used for local projects, such as a road improvement, or fund regional transportation projects, such as rail or highway extensions.

The districts are an area created by the property owners (or, in some instances, registered voters for a CFD) within its boundaries for the purposes of funding public improvements. The property owners agree to impose assessments on each parcel that are proportional to the benefit created by the public improvements. There are many assessment districts currently in existence in the SCAG region—most of which are relatively small and were created to fund local streets, water and sewer laterals, and street lighting. There are also much larger assessment districts, such as the Los Angeles County parks and open space district that imposes a countywide assessment. It is conceivable that an assessment district or CFD can be formed to fund a portion of major highway projects in the RTP/SCS. These projects produce a benefit for residents and business along the corridor as it reduces congestion on local streets and improves access to business.

The formation of an assessment district requires approval from a majority of the assessments, as opposed to the two-thirds requirement for any new tax, including CFDs, local general obligation bond tax (excluding schools), or transportation sales tax. CFDs result in the creation of a special tax that can be used to secure bonds or pay for approved capital and operating costs. The tax may increase over time and have a term that is longer than the bonds.

Often utilized by redevelopment agencies for community improvement projects, tax increment financing can be a critical financing tool to support transportation investment strategies as well. Tax increment establishes a base-year tax level for a project area. Taxes generated above this base-year amount through increases in property values are targeted for improvements/services within the project area. Outside of redevelopment areas, local jurisdictions can establish infrastructure financing districts to use property tax increment financing to pay for public works (Government Code §53395, et seq). To further pursue this strategy, SCAG and its local jurisdiction stakeholders would need to adhere to the following requisite procedures for establishing IFDs by FY2020–FY2021:

1. Resolution of intention to establish district (§53395.11)
2. Continue to develop Infrastructure financing plan (§53395.14–53395.16)
3. Hold public hearing (§53395.12)
4. Formation of district elections (§53395.20)
    - Tax increment bonds (§53397.1–53397.9)
    - Two-third vote needed for issuance (§53397.6)
    - Adopt resolution per majority vote

Highway Tolls

With diminishing traditional state and federal funding, the 2012–2035 RTP/SCS identifies toll road financing as a mechanism to support transportation investments. Within the time horizon of the 2012–2035 RTP/SCS, a number of toll road facilities are expected to be implemented, including, for example, SR-710 Transportation Improvement Options, I-710 South Freight Corridor, and East-West Freight Corridor. Additionally, the 2012–2035 RTP/SCS identifies a regional network of Express/HOT Lanes.

The financing of toll road facilities has become sophisticated in recent years, with increasing levels of participation by the private sector. SCAG is fully aware of the need to carefully consider the economics of specific projects as there is not a "one size fits all" solution. Various toll road financing models are being evaluated including public and private concessions, shadows tolls, and direct user-paid tolls. For purposes of developing the RTP/SCS financial plan, projections of traffic and revenue generation potential were based on a review of toll feasibility studies and consideration of comparable facilities. Revenue potential from tolling facilities depends on several factors including length of lanes, configuration of the facilities, and tolling policies. SCAG continues to evaluate traffic and revenue projections for toll facilities/priced lanes identified in the 2012–2035 RTP/SCS. Efforts to date have included allocation of resources to collect data to better understand the behavioral response of travelers. SCAG recently conducted stated-preference surveys as part of the Express Travel Choices study. The purpose of the stated-preference survey was to estimate toll sensitivity, or the value of time (VOT), in the region as well as travelers' elasticities in shifting mode, route, time of day, and destination. The survey also sought to estimate the levels of trip reduction that could result from various pricing strategies. Additionally, SCAG continues to evaluate the legal framework under which the region's proposed projects can move forward. Since the adoption of the 2008 RTP, tolling and express lane provisions have progressed considerably. Specific to LACMTA's existing state enabling authority for tolling, SB 1422 (Ridley-Thomas) was enacted on September 28, 2008, providing LACMTA with legal authority to implement the ExpressLanes projects' congestion pricing component by adding Section 149.9 to the California Streets and Highways Code. Two years later, on September 29, 2010, AB 1224 (Eng) was enacted, which extends LACMTA's tolling authority until January 2015.

In October 2009, the Governor signed AB 798 establishing the California Transportation Financing Authority (CTFA). The CTFA may grant tolling authority to Caltrans or to any

regional transportation agency so long as certain conditions are met. AB 798 also lifts the requirement for the HOT lane projects authorized under AB1467 (such as I-10 and I-110 ExpressLanes) to have separate legislative approval. These changes will significantly increase the potential use of tolling as a financing and traffic management tool in the State. The following general actions/steps highlight some key implementation procedures for tolling anticipated in the region:

1. Continue ongoing feasibility and/or environmental review process necessary for proposed toll facilities (e.g., SR-710 Transportation Improvement Options, I-710 Freight Corridor, East-West Freight Corridor)
2. Conduct Express Travel Choices Phase II with regional stakeholders grant awarded under federal Value Pricing Pilot Program (VPPP) to develop regional concept of operations/implementation plan for regional Express/HOT network
3. Continue traffic and revenue studies for specific facilities
4. Continue to refine business plans outlining institutional arrangement and financial plan—LACMTA is currently developing business plans for potential P3s and/or toll initiatives
5. Pursue toll authorization for specific facilities as may be applicable—includes federal tolling authority through VPPP for interstate highways as may be necessary and state authorization
6. Anticipated project implementation dates vary for facilities throughout the region—as early as 2013 for initial demonstration of specific facilities to 2035 for full deployment and operation across the region

Private Equity Participation

Recent toll road financing experience in the U.S. (e.g., Indiana Toll Road and the Chicago Skyway) represents significant change from past practices. With private ownership of toll facilities, equity considerations have been introduced to facilitate financing. Debt levels under these private transactions tend to be significantly higher and repayment schedules often extend beyond the traditional 20–30 year period. These transactions often rely heavily on refinancing. Also, concession terms are considerably longer (75–99 years) than they have been under typical concession financing in the past.

These project finance models have generally been applicable to existing toll facilities with strong cash flow generation. In this context, SCAG continues to evaluate various business models appropriate for new facilities or start-up facilities. As stated under the highway tolls discussion, numerous legislative initiatives over the past several years, have established enabling authority for the region to consider private equity strategies as a part of the RTP/SCS. Additional work related to business plan development and feasibility analyses (traffic and revenue studies) are currently underway. As specific projects progress beyond environmental review, further work would entail continued refinement of project specific business plans and coordination with the California Transportation Financing Authority as well as the California Transportation Commission as may be applicable.

Bond Proceeds from Local Sales Tax Measures

The 2012–2035 RTP/SCS financial plan also assumes the issuance of long-term debt against existing local sales tax measure revenues. This is assumed for Los Angeles, Orange, Riverside, and San Bernardino Counties. Issuance of debt is subject to each county transportation commission's board policies. No additional enabling authority is needed. However, efforts are underway by regional partners to pursue legislative revisions that would allow for expanded access to lower-cost and more flexible direct loan and credit programs.

State Bond Proceeds, Federal Grants & Other for California High Speed Rail Program

Funding for the California High-Speed Rail project is documented in their 2012 Business Plan. Identified funding includes state general obligation bonds authorized under the Bond Act approved by California voters as Proposition 1A in 2008; federal grants authorized under the American Recovery and Reinvestment Act, and High Speed Intercity Passenger Rail Program. Potential use of qualified tax credit bonds and private sources are also considered in the business plan. A final business plan is anticipated to be released before the end of FY2011–FY2012.

E-Commerce Tax

E-commerce sales generally refers to the sale of goods and services where an order is placed, or price and terms of the sale are negotiated over an Internet, electronic mail or other online system. E-commerce sales may also include orders placed by phone or mail. Upon making an e-commerce purchase, California law requires that residents pay a use tax on the purchase amount, which is equal to the sales tax rate. The state estimates that most residents do not report use tax and this resulted in $1.1 billion in forgone use tax revenue during 2010. The state cannot compel out-of-state retailers to pay a sales or use tax, as federal law requires that retailers have a physical presence in the state. Many out-of-state retailers have a common corporate presence in the state (i.e., work with an entity that is part of a combined corporate reporting group that performs services in the state in connection with the retailer) or work with California residents that provide referrals (i.e., affiliates) to out-of-state retailers for compensation. In its FY2012 budget, the state attempted to compel out-of-state retailers that are part of a commonly controlled group or work with affiliates to pay a use tax (through ABX1 28). In September 2011, the state repealed ABX1 28 and enacted AB 155, which includes many of the same provisions of ABX1 28, but delays implementation until September 2012.

The Governor's office estimated that ABX1 28 would have generated $200 million during FY2012. Given that AB 155 would implement much of the same provisions as ABX1 28, it could generate a pro rata amount of the estimated $200 million in FY2013 and the full amount in each year thereafter. However, there are several events that may affect the amount the state collects. The provisions of AB 155 may not take effect if federal legislation passes that allows states to impose the collection of use taxes on out-of-state retailers. Also, in reaction to the tax, one of the most well-known out-of-state retailers, Amazon, stopped working with affiliates and began collecting petitions to repeal ABX1 28. As part of passage AB 155, Amazon reports that it has stopped collecting petitions and will support AB 155, but Amazon is not required to do so.

Notwithstanding the uncertainty in the amount of revenue that is available from AB 155, the revenue could be used for transportation purposes, given the relationship between e-commerce and the resultant delivery of goods to California purchasers. Actions to realize this revenue would entail working with the Governor, the State Legislature, and potentially Congress.

National Freight Fees/Freight Program

Substantial investment is needed to provide the infrastructure to carry goods to and through Southern California safely, quickly, and efficiently. Although strategies to identify funding sources have focused on user or beneficiary fees to support infrastructure investment and mitigation needs, analysis to date indicates the importance of implementing such a strategy at the national level. The following general actions/steps highlight some key implementation procedures:

1. Continue to work with goods movement stakeholders to evaluate potential revenue strategies for specific projects—work is currently underway with SCAG's Comprehensive Regional Goods Movement Plan and Implementation Study
2. Continue to work with regional partners in pursuing efforts to secure federal funding program for our freight system
3. Continue working with Congressional Delegation to support the establishment of a National Freight Program (consistent with the Senate-proposed MAP-21), emphasizing high priority needs in the system such as the Southern California Goods Movement System

State and Federal Gasoline Excise Tax Adjustment

A critical component of the 2012–2035 RTP/SCS financial plan includes an adjustment to the state and federal gasoline excise taxes to maintain historical purchasing power. The adjustment is equivalent to an additional fifteen cents-per-gallon excise tax at both the state and federal levels starting in 2017. Historical tax rate adjustments provide the basis for this assumption. The current state gasoline excise tax was last increased over a five-year window period from 1990 through 1994, when it was doubled from 9 to 18 cents-per-gallon as shown in **TABLE 14**. The current federal gasoline excise tax was last adjusted from 9 to 18.4 cents-per-gallon over a five-year period as well (**TABLE 15**). Historical extrapolation provides the basis for adjustments within the time horizon of the RTP/SCS.

Consistent with the recommendations provided by the two national commissions established by Congress, SCAG's policy committees have concluded that the best near- to mid-term options for both state and federal resources are increases to current fuel taxes through conventional mechanisms. Since 2008, Congress has authorized $34.5 billion in transfers from the General Fund to the Federal Highway Trust Fund (HTF), in part to

provide revenues that would have otherwise been achieved with a gas tax increase. Given the state of transportation funding today, it is critical to consider increases in fuel taxes to ensure the integrity of the system. Some key requisite actions over the next few years to realize this revenue strategy in the 2017–2024 timeframe are as follows:

1. Immediately incorporate the 2012–2035 RTP/SCS fuel tax and/or transportation funding stabilization recommendations into SCAG's legislative program
2. Work to implement a legislative strategy of consensus building with partner transportation agencies to communicate recommendations and coordinate as appropriate with the State Legislature and Congressional Delegation
3. Advance legislative proposals that would address stabilizing both the State Highway Account (SHA) and the HTF as identified in the 2012–2035 RTP/SCS

TABLE 14 State Gasoline Excise Tax

Effective Date	Tax Rate (cents-per-gallon)
October 1, 1923	2.0
July 29, 1927	3.0
July 1, 1947	4.5
July 1, 1953	6.0
October 1, 1963	7.0
January 1, 1983	9.0
August 1, 1990	14.0
January 1, 1991	15.0
January 1, 1992	16.0
January 1, 1993	17.0
January 1, 1994	18.0

Source: State Board of Equalization

TABLE 15 Federal Gasoline Excise Tax

Effective Date	Tax Rate (cents-per-gallon)
June 21, 1932	1.0
June 17, 1933	1.5
January 1, 1934	1.0
July 1, 1940	1.5
November 1, 1951	2.0
July 1, 1956	3.0
October 1, 1959	4.0
April 1, 1983	9.0
January 1, 1987	9.1
September 1, 1990	9.0
December 1, 1990	14.1
October 1, 1993	18.4
January 1, 1996	18.3
October 1, 1997	18.4

Source: FHWA Federal Tax Rates

Mileage-Based User Fee

The 2012–2035 RTP/SCS financial plan strategies assume the transition from the current transportation funding model based on fuel taxes to a new mileage-based user fee system. Mileage-based user fees would be implemented to replace existing fuel taxes and applicable to all roads and types of vehicles. SCAG's analysis assumes $0.05 (in 2011 dollars) per mile starting in 2025 and indexed through the RTP/SCS horizon year of 2035. In recognizing the importance of establishing critical pathways to implementation, SCAG identifies the following requisite actions related to research, development, demonstration (RD&D), and eventual broad deployment of a mileage-based user fee system—to replace the current fuel tax mechanisms at both the state and federal levels.

1. Finalize current SCAG regional congestion pricing study, Express Travel Choice Phase I—this study evaluates a number of options for congestion management and revenue stabilization, including mileage-based user fees
2. Establish a core working group of business and other key parties to conduct RD&D—this would include public education initiatives
3. Evaluate and demonstrate mileage-based user fee concept of operations addressing key implementation factors such as:
   a. Technology and associated privacy issues
   b. Cost of implementation and administrative methods for fee collection/revenue allocation
   c. Equity concerns and exemptions/credits, as applicable
   d. Rate structures and associated impacts including evaluation of flat rates, differential pricing by type of vehicle including size and weight, time-of-day, and potentially emissions, including greenhouse gas emissions
   e. Economic assessment
4. Apply lessons-learned from demonstrations and evaluations of mileage-based fees to inform the State Legislature and Congress about the unique characteristics of Southern California and help tailor state and federal programs to meet the needs of the SCAG region
5. Evaluate the impacts of the mileage-based user fee system on existing local transportation funding mechanisms, including toll facilities and sales tax measures—and consider how best to integrate the various transportation funding mechanisms
6. Consider how best to develop mileage-based user fee systems to address system preservation needs
7. Work with state, federal, and local partners to include provisions in upcoming reauthorization(s) to develop a national roadmap for transitioning to a mileage-based user fee system
8. Work with other MPOs and transportation stakeholders in California to develop a statewide initiative to stabilize and secure transportation funding

REGIONAL TRANSPORTATION PLAN
2012–2035
SUSTAINABLE COMMUNITIES STRATEGY
Towards a Sustainable Future

RTP

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