



Transportation Committee

October 23, 2014

2016 MTP/SCS Update: Framework for Draft Preferred Scenario

Issue: What should be the Framework—guidelines, tasks and process—for developing a preferred scenario for the 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (2016 MTP/SCS)?

Recommendation: None. This item will be presented to all three Board committees for information and discussion.

Discussion: The Board initiated the 2016 MTP/SCS update in December 2013 with adoption of a Policy Framework that focused the plan update on refinement and implementation of the current plan. Over the course of the year, the Board has progressively directed more defining work that will lead incrementally to an updated plan. This direction has occurred through the adoption of frameworks that provide guidance to staff on research, analysis, and public and stakeholder engagement. The table in Attachment A summarizes the key board actions, past and future, that are guiding the development of a draft update of the MTP/SCS.

This item, the Draft Preferred Scenario Framework (Attachment B), is built upon the results of the research and analysis conducted to date and vetted through the SACOG Board policy committees, SACOG advisory committees, stakeholder sounding board, and member and partner agencies. This Draft Preferred Scenario Framework is designed to identify necessary changes to the current plan that would allow the updated plan to align with the Board's implementation themes and meet state and federal regulatory requirements.

Next Steps

After presenting the Draft Preferred Scenario Framework to all three committees, staff will present the same information to the stakeholder sounding board and the Regional Planning Partnership and Planners Committee. The Board will also hear the results of the public opinion poll and public workshops at its November meeting. Staff will refine and finalize the attached framework based on Board comments and feedback from the sounding board and advisory committees. Staff will then bring the refined Draft Preferred Scenario Framework back to the Board for action in December.

If the Board adopts the Draft Preferred Scenario Framework, staff will commence development of a preliminary draft preferred scenario according to the actions identified in the framework. The preliminary draft preferred scenario will be circulated to all member and partner agencies in late January to allow for a full six weeks of vetting with local agencies.

At the conclusion of that vetting period, staff will develop a draft preferred scenario (Framework 3.0 in Attachment A) for the Board to consider and direct staff to use in the creation of a Draft Plan (2016 MTP/SCS) and accompanying draft environmental impact report.

Approved by:

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Attachments

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Board Action	Date of Action	Contents/Direction
Framework 1.0: Policy Framework	Adopted December 2013	<ul style="list-style-type: none"> • Set implementation-focused theme for plan update with five policy themes: transportation funding, investment strategy, investment timing, land use forecast, plan effects. • Set region-level growth projections of population, employment and housing for the plan horizon year (2036). • Set overall schedule for the plan update.
Framework 1.5: Scenarios Development Framework	Adopted March 2014	<ul style="list-style-type: none"> • Set parameters for three regional land use and transportation scenarios for use in public workshops and plan development. • Initiated phasing analysis of transportation investments in current plan. • Initiated analysis of different levels and types of transportation revenue sources. • Set schedule for creation of Framework 2.0.
Framework 2.0: Draft Preferred Scenario Framework	Targeted for November or December 2014 adoption	<ul style="list-style-type: none"> • Sets guidelines, task and process for developing a draft preferred scenario (land use forecast, revenue forecast, project list, performance outcomes). • Sets a minimum of six weeks for review and vetting of a preliminary draft preferred scenario.
Framework 3.0: Draft Preferred Scenario	Targeted for April 2015	<ul style="list-style-type: none"> • Sets details of Draft Preferred Scenario (for years 2020, 2035, and 2036) for use in development of Draft Plan and EIR: <ul style="list-style-type: none"> ○ Land use forecast ○ Revenue Forecast ○ Budget and Project List ○ Performance Outcomes
Draft Plan (2016 MTP/SCS)	Targeted for September 2015	<ul style="list-style-type: none"> • Release Draft 2016 MTP/SCS for public comment. Draft Plan includes written discussion of the detailed land use and transportation information above plus: policies and strategies, an environmental justice analysis, discussion of natural resources.
Final Plan (2016 MTP/SCS)	Targeted for February 2016	<ul style="list-style-type: none"> • Adopt 2016 MTP/SCS, certify Final EIR, adopt air quality conformity finding.

Framework for the 2016 MTP/SCS Draft Preferred Transportation and Land Use Scenario

This framework for a Draft Preferred Scenario provides the guiding principles, method and process for developing a preferred scenario for the 2016 MTP/SCS Update. The Draft Preferred Scenario consists of a land use forecast, revenue forecast, transportation projects and programs, and performance outcomes. There are policy and regulatory objectives that need to be met in the development of the draft preferred scenario. These key requirements include:

- **Land Use Forecast:** The land use forecast must be based on the most recent information about regulatory, policy and market conditions and a reasonable economic growth forecast of employment, population and housing. It must identify general location of uses, residential densities and building intensities, and areas within the region sufficient to house all of the projected population of the region.
- **Revenue Forecast:** The MTP/SCS must constrain its budget by assuming only revenues that can reasonably be expected over the planning period. This is a financial constraint test.
- **Balance revenues and expenditures over the planning period:** Projects must be scheduled to match the pace at which revenues are available to pay for them, proportionally over 20 years, which limits the number of projects that can be planned for any given year and forces decisions about relative priority. This is a financial constraint test.
- **Performance Outcomes:** For several plan cycles SACOG has evaluated land use and transportation scenarios with a number of [performance outcomes](#)¹. Many of these are helpful to determining if a scenario is achieving policy goals of the plan. Others measure the co-benefits of the MTP/SCS. Two performance outcomes are important for the added reason that they are required under federal and state law:
 - **Support attainment of air quality standards:** The MTP/SCS must be analyzed as an overall package via technical modeling to verify that its implementation would meet federal air quality requirements in the region's Rate of Progress State Implementation Plan, and the sequence in which projects are scheduled could make a difference in that analysis. This is the air quality conformity test.
 - **Achieve regional greenhouse gas emissions reduction targets set by the California Air Resources Board (CARB):** The MTP/SCS must demonstrate a reduction in GHG emissions via technical modeling of the forecasted land use pattern and supporting transportation network designed to serve the regional transportation needs. This is the SB 375 test.

Knowing with certainty how different Plan scenarios will perform against SB375 greenhouse gas emission targets and Federal Clean Act conformity budgets for criteria pollutants is more problematic

¹ Appendix G-6 Performance Measures for the MTP/SCS, <http://sacog.org/mtpscs/files/MTP-SCS/appendices/G-6%20Performance%20Measures.pdf>

this plan update cycle than in the past. It is known that the current plan barely meets the SB375 target for greenhouse emission reductions for 2035 and that the region must pass a test for PM2.5 emissions that basically does not allow any more emissions than the current plan. But current uncertainties regarding which version of CARB's air quality model will be required for this plan cycle, plus the very lengthy technical requirements for determining air emissions at multiple time periods for the conformity analysis, make it impossible for SACOG to know precisely at this time the answers to these questions. This information is expected to be available before the Board acts on the detailed land use forecast and transportation investment portfolio in April, 2015. For now, the most prudent perspective is to assume the air quality performance of the updated plan must be at least as good as the current plan.,

Conceptual Basis of the Preferred Scenario: Policy Framework

In August 2013, staff began engaging the board and stakeholders on an approach to the 2016 MTP/SCS update that focuses on implementation. During this early issue identification and exploration period, the board heard a number of presentations related to funding challenges and needs, road and transit maintenance needs, the 2012 Regional Transportation Monitoring Report, and regional growth projections. This led to a Board action in December of 2013 to adopt a [Policy Framework](#)² for the 2016 MTP/SCS, which focuses the plan update on five policy themes: revenues, investment strategy, investment timing, land use forecast, and plan commitments. These implementation-focused policy themes, combined with public and stakeholder input and scenario analysis, are the conceptual basis for creating a draft Preferred Scenario. A discussion of each of these input pieces is provided below.

1. Scenario Analysis

Three land use and transportation scenarios were developed to inform the development of a draft plan. These three scenarios are the same general scenarios used for the 2012 MTP/SCS update, in keeping with the update and refinement theme set by the SACOG Board. In practice, the three scenarios represent a range of reasonable potential land use and transportation futures based on updated economic, demographic, revenue, regulatory, environmental and market factors. The three scenarios bracket a reasonable range of possible futures. Essentially the current MTP/SCS was updated to a new base year of 2012 and became Scenario 2. Scenarios 1 and 3 were then created as bookends to Scenario 2 and followed the regional themes and targets of Scenario 1 and 3 in the last plan cycle. A summary of the transportation and land use inputs and performance outcomes for each of the three scenarios is provided here and in Table 1, based on the current scenario definitions and modeling results:

Scenario Performance

- Scenario 2, based closely (but not precisely) on the current plan, performs well on a range of metrics, but has degraded slightly in greenhouse gas emission performance in 2036 and will need to be improved by a small margin on that variable. Modeling for federal air quality conformity is very complex and is not completed but a similar result is expected (i.e. meet or just slightly fail all of the tests). One key outcome of the current adopted plan, which is not reported in Table 1, is the rate of growth in travel on congested roadways, relative to the 2008 base year—the current adopted plan was the first long range plan for SACOG for which the per

²Policy Framework for MTP/SCS Update Process, <http://www.sacog.org/calendar/2013/12/board/pdf/12B-Framework.pdf>

capita rate of travel on congested roadways declines rather than increases. This key outcome still holds true for Scenario 2 as well as Scenarios 1 and 3.

- Scenario 1, the scenario designed to measure the impacts of a less compact land use pattern than Scenario 2, performs worse than last round's Scenario 1 on congestion and air quality and a few other indicators. Although there are some higher performing new Developing Communities in this scenario there are also some lower performing Developing Communities. The performance data will be one of the factors considered when determining which Developing Communities in Scenario 1 might be added to Scenario 2.
- Scenario 3, the scenario designed to measure the impacts of a more compact land use pattern than Scenario 2, performs quite a bit better than the Scenario 3 created for the last plan cycle, especially on vehicle miles travelled, greenhouse gas emissions, air quality and congestion. Some elements of Scenario 3 can be added to the current Scenario 2 to boost its performance.

Federal and state law, and good planning practice, require SACOG to use the most up to date information whenever it updates its plan. This includes using current forecasts for the future price of gas, incomes, household structure (i.e. age, number of people in households). Sometimes this means a new air quality model and/or improved travel model are used to forecast future travel patterns and air emissions. And because 4 years go by on the calendar with every plan update what actually was built in the region in those 4 years compared to what was forecasted must be trued up. Some of these details are still being tied down for this plan update, but it is the sum of them in their current form that has led to the conclusion that Scenario 2 performs slightly worse on greenhouse gas emissions than the currently adopted plan. It's not a very big change, but when plan performance is right on the margin it is important.

It is worth reminding that the land use forecast is not a prescriptive, regulatory element of the plan. SACOG has no land use authority, and local governments retain their exclusive ability to make land use decisions which are either consistent or not consistent with the plan. In fact, because SACOG's basic responsibility is to forecast the land use pattern most likely to occur its technical approach to executing this requirement includes some very important flexibility, reflective of how development markets actually function. Within each of the Community Types there is more capacity for growth in the currently adopted (or expected to be adopted) local plans than forecast to occur by 2036. The current plan has approximately 69 percent more housing capacity and 198 percent more employment capacity than forecasted to be built by 2035. In other words, many Developing Communities and infill areas included in the plan are not expected to be fully built-out by 2035. One of the implications of this real world approach to building the land use forecast is that it inherently provides flexibility. In other words, the plan provides the appropriate flexibility If market and policy/regulatory factors lead to more or less construction in infill areas. And because transportation investments have some impact on shaping that growth pattern, the Board can choose to build the transportation investment portfolio to incentivize high performing land use patterns. The "fix it first" discussion the Board is having is one example.

Table 1. Description of Regional Land Use and Transportation Scenarios

Performance Outcomes	Scenario 1	Scenario 2	Scenario 3	Adopted 2012 Plan
Vehicle miles traveled (VMT) (<i>percent change in total vehicle miles traveled per person from 2008</i>)	-5%	-7%	-12%	-7%
Vehicle miles traveled in heavy traffic (<i>percent of total vehicle miles traveled</i>)	5%	6%	5%	6%
Travel time spent in car per person (<i>percent change from 2008</i>)	-3%	-4%	-4%	-4%
Trips by transit, bike, or walk (<i>percent increase in per capita transit, bike, walk share from 2008</i>)	+12%	+24%	+27%	+33%
Transit costs recovered by ticket sales (<i>percent</i>)	38%	41%	51%	38%
Share of new jobs near high-frequency transit (<i>percent of new jobs</i>)	40%	44%	43%	39%
Share of new homes near high-frequency transit (<i>percent of new homes</i>)	27%	39%	39%	38%
Total homes in environmental justice areas near high-frequency transit (<i>percent of homes, 30% in 2012</i>)	51%	53%	56%	55%
Square miles of farmland converted to development (<i>out of 4,193 square miles of farmland in 2010</i>)	93	61	45	45
Square miles of vernal pools affected by development	7	5	2	2
Weekday passenger vehicle CO2 emissions (<i>percent change per person from 2005</i>)*	-13.0%	-14.8%	19.7%	-15.6%
<i>*Final GHG reduction percentages are subject to state review and approval of technical methodology. This review won't take place until updated SCS is complete in 2015.</i>				
Transportation inputs	Scenario 1	Scenario 2	Scenario 3	Adopted 2012 Plan
New or expanded roads (<i>lane miles, percent increase from 2008</i>)	34%	31%	25%	32%
Transit service (<i>vehicle service hours, percent increase from 2008</i>)	54%	88%	127%	98%
Additional miles of bicycle paths, lanes and routes (<i>Class 1, 2 and 3 = 1,700 in 2008</i>)	800	1100	1300	1100
Funding for maintaining and operating the road and highway system	\$10.9	\$11.5	\$11.0	\$11.0
Funding for maintaining and operating the transit system	\$7.5	\$7.9	\$9.6	\$9.6
Funding for new or expanded bus and light rail lines	\$3.2	\$3.4	\$4.1	\$4.1
Funding for new or expanded roads and highways	\$8.7	\$7.4	\$6.7	\$6.7
Funding for bike and pedestrian routes, trails and paths	\$2.8	\$2.8	\$3.0	\$3.0
Funding for Programs and planning (<i>e.g., Community Design, Spare the Air, Sacramento Region 511, May is Bike Month</i>)	\$1.5	\$2.2	\$1.7	\$1.7
Land Use inputs	Scenario 1	Scenario 2	Scenario 3	Adopted 2012 Plan
Share of growth in Center and Corridor Communities (<i>percent of new homes</i>)	20%	31%	36%	30%
Share of growth in Established Communities (<i>percent of new homes</i>)	29%	25%	27%	26%
Share of growth in Developing Communities (<i>percent of new homes</i>)	47%	42%	36%	42%
Share of growth in Rural Residential Communities (<i>percent of new homes</i>)	4%	2%	2%	1%
Share of growth in large-lot, single-family homes	39%	28%	24%	28%
Share of growth in small-lot, single-family homes	29%	28%	23%	28%
Share of growth in attached homes	32%	43%	53%	43%

2. Member Agency, Stakeholder and Public Input to Date

Early collaborations between SACOG staff and local agency staff have included the work on the land use assumptions, the call for projects, and the development of regional-scale land use and transportation scenarios. The following partner and member agency coordination has occurred to date:

- The first vetting of plan update assumptions occurred in summer 2013, with local staff review of the 2012 existing conditions land uses.
- In Fall 2013, local staff provided input on the proposed scope, cost, and timing of transportation investments for consideration in the plan update.
- The next period of land use review occurred in winter 2013 with local staff review of the modeled inventory of adopted and proposed local land use plans.
- In July 2014, both transportation and land use assumptions the regional scenarios were vetted through local staffs in preparation for the October public workshops and information to the SACOG Board.
- For each of the aforementioned milestones, staff has also been coordinating with partner agency staff at the El Dorado County Transportation Commission (EDCTC) and Placer County Transportation Planning Agency (PCTPA). The objective has been to align planning assumptions as each of these agencies concurrently update their long-range transportation plans.

As a result, the land use projections and the range of investments for the workshop scenarios were taken from existing plans and new proposals developed through agency collaborations.

Additionally, most of the research and discussion items presented to the Board throughout the year have also been shared with the SACOG advisory committees, including the Regional Planning Partnership, the Transit Coordinating Committee, the Bicycle and Pedestrian Advisory Committee and the Planners Committee. Many of the key items relating to the policy framework issues have also be shared with and informed by the “Sounding Board,” a cross-sector stakeholder group formed for this 2016 MTP/SCS update.

Public workshops for the 2016 MTP/SCS Update are still underway. The results of public opinion at these workshops (or the online version of them) plus the results of the telephone poll are still being gathered. A full report and analysis of these results will be presented at the SACOG Board meeting in November. Staff will consider the results of these outreach efforts in developing the Draft Preferred Scenario Framework and will present as part of that package the places where the framework reflects or varies from this input. Early results from six of the eight workshops indicate a large percentage of participants identifying increased funding for road and/or transit system maintenance as very important or important. Many cited funding for new and expanded roads the funding source they would like to see this some or all of this money come from.

3. Implementation Theme: Land Use Forecast

What is the economic viability of the projected greenfield and infill growth?

The land use forecast must represent the future development pattern judged to be the most likely to occur, based on a large number of market/economic and policy/regulatory factors. While many aspects of the land use forecast affect performance, the three most significant are:

- The share of future growth projected in Centers and Corridors and Established Communities, and the performance of the projects included as Developing Communities;
- The share of housing growth projected for small-lot single-family and attached products, compared to large-lot single-family;
- The amount of housing projected to be added near primary and secondary jobs centers in the region, and the amount of jobs realistically expected to be added in a few “housing rich” areas of the region.

Plan Development Status:

In short, research supports the conclusion that the ultimate Preferred Scenario for this plan cycle can meet or slightly exceed these three components in the current plan. There are not sufficient data to support making major changes in any of these areas from the current plan, but targeted and measured improvements in some or all of these three areas may be warranted after additional research scheduled for the next few months is completed.

The current plan forecasts a gradual ramp up of the three Blueprint-based land use practices described above, i.e. the market shares of growth in Centers and Corridors and Established Communities, small-lot single-family and attached housing, and improved jobs-housing balance in subareas of the region are highest in the later plan years and lowest in the earlier years. A variety of market and policy/regulatory factors point towards the conclusion that some or all of these three practices might realize higher market shares in the early years of the planning period than forecast in the current plan. Again, large changes in the assumptions probably are not justifiable, but some earlier penetration of those on average higher performing projects likely will be warranted.

Given that Scenario 2 greenhouse gas emissions do not quite achieve the SB375 target for 2035 and the unique condition of our PM2.5 compliance requirement that does not allow any increase in emissions at all from the current plan, the land use components of the plan will likely need to need refined some from Scenario 2 to improve performance. IT was always expected that the final plan would contain some elements of Scenarios 1 and 3. With additional time for study and refinement, it is very likely that it will be possible to develop a preferred alternative that meets all air quality standards.

Recommended Implementation Theme Actions:

1. **Prepare a Preliminary Draft Land Use Forecast that fulfills federal requirements and is based on the best available information that can be researched and analyzed and that includes at least as much: a) growth in Centers and Corridors and Established Communities; b) growth in construction of small lot single family and attached housing; and c) improvement in sub-regional jobs-housing balance as the current plan.**
2. **Continue to monitor, and update as needed, the market and regulatory/policy factors that could influence the pace, location, and shape of growth in the region for the planning period. Factors that have been researched and reported on to date include the following:**
 - [Inventory of Adopted and Proposed Land Use Plans](http://www.sacog.org/calendar/2014/04/transportation/pdf/6B-Inventory.pdf)³
 - [Habitat Conservation Plans/Natural Communities Conservation Plans Development](http://www.sacog.org/calendar/2014/06/Transportation/pdf/6B-Habitat.pdf)⁴

³ <http://www.sacog.org/calendar/2014/04/transportation/pdf/6B-Inventory.pdf>

⁴ <http://www.sacog.org/calendar/2014/06/Transportation/pdf/6B-Habitat.pdf>

- [Floodplain and Levee Improvement](#) ⁵
- [Research of Water Supply Factors Influencing Development Pattern](#) ⁶
- [Airports Constraints Analysis](#) ⁷
- [Trends in Demographics and Housing Demand](#) ⁸
- [Suburban Economics Research](#) ⁹

4. Implementation Theme: Transportation Funding

Can the region capture the revenues projected to come from all sources (local, state, federal)?

Federal law requires the MTP/SCS to be financially constrained, meaning that the plan must contain a budget forecast that estimates the revenues that can be “reasonably expected” to come to the region during the period covered by the plan. Forecasting future revenue is challenging, particularly at this time of uncertainty for state and federal transportation funding programs. In the near term, funding projections are fairly specific and frequently based on funding formulas that provide some level of certainty about the level of funding available. However, as with many of the assumptions in long-range planning documents, the uncertainty about funding levels grows as the projections move farther into the future.

Plan Development Status:

To address the key policy question behind this implementation theme, staff efforts have focused on updating the plan’s revenue projections. Efforts involved the analysis of long-term and historic trends, near-term and recent economic changes, and potential changes in the local, state, and federal funding landscape. In August, staff presented a preliminary revenue discussion and recap of the 2012 MTP/SCS financial assumptions. Since that time staff has prepared the Preliminary Revenue Analysis update in Attachment B-1. The item is intended to provide the Board with some background on the current set of financial assumptions underlying the 2012 MTP/SCS and to receive Board input and direction on new revenues and additional considerations to address through the development of the draft preferred scenario.

The revenue forecasts are provided as a range due to considerable variability at the federal, state and local level:

- The current federal transportation authorization, Moving Ahead for Progress in the 21st Century (MAP-21), was extended through the Spring of 2015. In anticipation of new legislative actions next year, Congress is considering a number of proposals to shore up the Highway and Transit Trust Funds and adopt a new authorization package that will fund federal transportation investments for a number of years.

⁵ <http://www.sacog.org/calendar/2014/06/Transportation/pdf/6C-Floodplain.pdf>

⁶ <http://www.sacog.org/calendar/2014/06/Transportation/pdf/6D-Water.pdf>

⁷ <http://www.sacog.org/calendar/2014/06/Transportation/pdf/6E-Airport%20Revised.pdf>

⁸ <http://www.sacog.org/calendar/2014/08/transportation28/pdf/6A-Housing.pdf>

⁹ <http://www.sacog.org/calendar/2014/09/board/pdf/18-HANDOUT%20First%20Tier%20Suburbs%20Presentation.pdf>

- At the state level, new revenue from the Cap and Trade program and other competitive, discretionary grant sources are not yet clear.
- Local funding structures, including fees and taxes, are also subject to considerable change based on rates of development and commercial activity, so SACOG staff has been working with its member agencies to better understand the likely trajectory of these funding sources.

As described in greater detail in Attachment B-1, there are a number of new revenue sources that are also being analyzed as part of the ongoing efforts on the 2016 MTP/SCS update. If the new revenue sources are determined to be reasonable-to-assume then they may be added to the plan budget. In some cases, the new revenues are simply meant to supplant existing sources that are declining over time. In other cases, the new revenues can support new types of transportation investment that would not otherwise be possible.

Staff analysis of new revenue sources, along with further review of the existing sources, will continue over the next month or so. The revenue forecast that results from this effort will be the basis of a draft budget for the 2016 MTP/SCS. The draft budget will establish new investment-level targets for each of the categories in the 2012 MTP/SCS. The categories: Road Maintenance & Rehabilitation, Road Capital & Operations, Transit Capital & Operations, Bike/Pedestrian, and Programs/Planning/Enhancements.

As with prior plans, maintaining financial constraint is a likely challenge in the preparation of the draft preferred scenario. Transportation project nominations received from local, member agencies exceed the budget availability of the current plan. If the forecasted revenues for the 2016 MTP/SCS are at the same level, or lower, a number of new project nominations will not be able to be included in the financially constrained project list. Beyond financial constraint, other considerations, such as air quality conformity, will inform how many new system capacity projects can be included in the plan update.

Recommended Implementation Theme Actions:

- 1. Prepare a Preliminary Draft Revenue Forecast that fulfills federal requirements and is based on the best available information that can be researched and analyzed. To the extent possible, apply revenue growth rates for federal and state sources that result in consistency with the forecasts developed for the El Dorado County Transportation Commission (EDCTC) and Placer County Transportation Planning Agency (PCTPA) long-range transportation plan updates.**
- 2. Continue coordinating with local member agency staff on local revenue forecasts, focusing on whether impact fees assumed to be captured from land development are well documented and consistent with the amount of build-out anticipated in the 2016 MTP/SCS land use allocation.**
- 3. Research new and innovative funding sources that are reasonable-to-assume for the plan and prepare budget strategies to optimize the use of such funds to support Board investment priorities in the 2016 MTP/SCS.**
- 4. Based on the updated revenue forecast, prepare a preliminary draft transportation budget that establishes new investment-level targets in each of the budget categories from the 2012 MTP/SCS. Coordinate with EDCTC and PCTPA to align all three transportation plan updates to the greatest extent possible at this stage of plan development.**

5. Implementation Theme: Investment Strategy

Is there enough emphasis on system maintenance (“fix-it-first”) investments?

The 2012 MTP/SCS puts an emphasis on the preservation of the existing transportation system when making investment decisions with revenues that can be used for maintenance and rehabilitation purposes. Unfortunately, revenues for road maintenance are forecasted to be limited in the early years of the current plan and do not keep pace with escalating costs and deteriorating conditions for the balance of the planning period. As a result, there is a shortfall in the funds available for the maintenance of roads and operation of transit services to maintain a state-of-good repair. Unless there is an increased policy commitment to system maintenance investments in the 2016 MTP/SCS, the overall condition of the region’s roadways will not improve and transit vehicles will be kept in service long past their useful life.

Plan Development Status:

The first staff briefing on this investment theme covered transit capital and operation needs. As shared with the Board in February, significantly higher levels of funding for transit are needed for the region to meet its goals for a safe, efficient and robust transit system.

Transit providers in the region have limited dedicated revenues for operations and maintenance costs, and often use flexible funds that could otherwise be utilized for capital expansion to help support operational costs. Limited state and federal funding places a higher emphasis on local sources. Over time, the methods of paying for transit operations have changed and funding sources have shrunk. Increasingly, Congress and the State Legislature have restricted the use of federal and state funds for transit operations (with the exception of vehicle preventative maintenance), on the principle that transit is a local responsibility.

As federal and state funding support for transit operations declined, transit operators have been increasingly dependent on more volatile sources of local funds that have been most affected by the sagging economy. A significant percentage of total operating revenues for the region’s operators now come from volatile sales taxes sources.

Although not as underfunded as operating needs, transit capital needs in the current plan exceed available revenues. Funding shortfalls include improving light rail stations and bus stops and covering the significant replacement costs for the region’s nearly 400 transit buses, 200 paratransit small buses and 100 light rail vehicles. In addition, new state clean air rules will require many suburban operators to convert fleets from diesel fuels to clean fuels in upcoming years, making buses costlier, posing new fueling arrangements, and perhaps requiring earlier retirement of older diesel coaches.

A second Board dialogue on the fix-it-first implementation theme followed in April. This presentation focused on road maintenance funding needs. Information and analysis was offered on the challenges facing the region to keep up with the growing backlog of maintenance investment needs. A key performance indicator, the Pavement Condition Index (PCI) was presented as a commonly used tool to monitor performance over time. Road conditions vary considerably across the region today, ranging from good to poor, but the trend line for the future is clearly towards a declining PCI average in the region towards an “at-risk” or “poor” level.

The staff presentation explained that ongoing and regular preventive maintenance is important for controlling long-term costs, but limited funding levels lead many agencies to put off these activities and end up with more costly reconstruction expenses later. The challenge is especially acute in local jurisdictions where the only local funds available for maintenance are local shares of the gas tax and local general funds. In many jurisdictions, maintenance and reconstruction expenses already consume about 70 percent of the typical local road budget today, leaving 30 percent for any local improvements and new construction.

In light of the significant Fix-it-First funding challenge, the April briefing to the Board committees offered four funding scenarios for discussion. Two of the scenarios do not result in the region reaching a state-of-good repair over the course of the MTP/SCS planning period. One of these scenarios is the current 2012 MTP/SCS. The other two scenarios do result in the region reaching a state-of-good repair for roads and transit, but vary considerably in cost. One scenario requires \$1.7 billion more in funding from the funding level in the current plan and the alternative scenario requires \$10.5 billion more in funding. The key difference in cost is that more funding in the early plan years towards Fix-it-First investment is ultimately less expensive in the latter years of the planning period because only routine maintenance will be required. While each of these promising state-of-good repair scenarios have practical implementation challenges, they illustrate the potential for the 2016 MTP/SCS to support the Board's Fix-it-First policy priority.

Staff efforts continue on developing a recommendation for the level of Fix-it-First funding in the draft preferred scenario. The recommended investment target will not be available by December, but included as part of the preliminary draft budget that is prepared in early 2015.

Recommended Implementation Theme Actions:

- 1. Develop a Preliminary Draft Budget that increases the Fix-it-First funding commitment in the 2016 MTP/SCS.**
- 2. Find budget capacity in the 2016 MTP/SCS for an increase in Fix-it-First investments from either adding new revenues that are reasonable-to-assume or reducing the funding available for system expansion projects.**

6. Implementation Theme: Investment Timing

Should there be changes in the timing of transportation investments?

Increasing a plan policy commitment towards Fix-it-First investments will require that some system expansion projects are delayed or deferred in the 2016 MTP/SCS. The challenge is that to actually change the completion date of transportation projects varies widely by project. Transportation projects with the least flexibility in the current plan are those currently in the Metropolitan Transportation Improvement Program (MTIP), with project development, right-of-way acquisition, or even construction activity already started and some portion of funds already expended. Some transportation projects are tied to land development projects through impact fees, CEQA mitigations, or fronting improvements; in these cases, the transportation and land development projects are linked and must be phased together. Transportation projects with the most flexibility are those in later years of the MTP/SCS, with no direct ties to specific land development projects.

Plan Development Status:

One focus of staff work on this investment theme has been the collection and analysis of project nominations from local agency sponsors. Since sending out a call for projects in the fall of 2013, staff has been working with local agencies to prepare a database of proposed additions or changes to the current MTP/SCS project list. As mentioned in the preceding investment theme, project nominations received exceed the funding level in the current plan for road expansion projects. Specifically, local agencies have proposed a number of new road capacity projects in developing community areas and want to build many of these projects within the first 10 years of the planning period. The timing and need for these projects needs to be carefully aligned with the phasing of the plan's land use forecast. Additionally, other policy and regulatory objectives for the 2016 MTP/SCS will only be met if a financially constrained project list is prepared and the sequence of investments phased in a manner that allows the region to meet air quality conformity requirements and maintain the high performance of the current plan.

Staff has also been analyzing project nominations against the Board's Fix-it-First policy priority. As such, increased staff efforts have gone towards gathering more information on local agency levels of investment towards ongoing operations and maintenance needs. This information can ultimately inform the staff recommendation on the right balance between the maintenance of the existing transportation system and strategic transportation system expansion investments.

Another focus of staff work on this investment theme has been the detailed documentation of project phasing in the 2012 MTP/SCS. The purpose of this effort has been to provide new information to help the Board decide whether the timing of some projects in the current plan should be altered, i.e., moved sooner, moved later, possibly in a few instances even moved past the horizon year of the plan. Capital projects that are delayed in the plan provide an opportunity to make earlier investments on system maintenance needs that move the region towards a state-of-good repair.

The main source of transportation project data has been the 2012 MTP/SCS project list, which includes line-item descriptions, costs, and completion dates for over a thousand projects. Where project listings were specific enough, this information was used to create a geographic database of projects for this analysis. However, a high percentage of project costs were included in "lump sum" projects, without specific geography or phasing listed.

Significant progress has been achieved in getting data on all transportation projects listed in the MTP/SCS into a form usable for the phasing analysis. The focus has been on significant projects in the later years of the MTP/SCS with the most flexibility in their timing. Late year projects in the plan typically have limited, if any, project development financial commitments.

With this information and discussion in mind, the following policy framework elements will guide the development of project phasing in the draft preferred scenario:

Recommended Implementation Theme Actions:

- 1. Prepare a draft transportation project list that has a strategic and phased sequence of investments that aligns with a draft land use allocation, meets the Board's policy priorities and fulfills all regulatory objectives.**

2. **Focus the recommendations for phasing changes on projects with limited project development phases completed and/or limited amounts of secured funding.**
 - Projects already in the MTIP, and with funding commitments already made to the project, and with significant design work and right-of-way already acquired have little-to-no flexibility to significantly change project phasing.
 - Projects in the later years of the plan, with no firm funding commitments, and with little or no project development work completed, typically have maximum flexibility to consider changes in project phasing (e.g. delaying or advancing the project).

2. **Optimize the performance potential of the 2016 MTP/SCS project list through strategic changes in project phasing.**
 - Projects which are targeted to serve growth beyond the MTP/SCS planning horizon are candidates for delaying in the MTP/SCS, including delaying past the 2036 horizon year in order to free up budget capacity for Fix-it-First investments.
 - Projects which address existing or future notable access and mobility needs, and which are currently phased in the later years of the MTP/SCS, are candidates for advancement in the MTP/SCS.

7. Implementation Theme: Plan Effects

Can the plan update follow through on the implementation commitments of the 2012 MTP/SCS to better measure the effects of the plan on different people and issue areas?

Because the MTP/SCS is a long-range plan, the degree to which it enhances the performance of the region's transportation system, protects the environment and improves quality of life of residents over time are key measures of success.

As the first plan after the adoption of Senate Bill 375, the 2012 MTP/SCS planning effort focused more attention on the land use-transportation connection than prior plans, and required a much higher level of effort on the part of all SACOG's member agencies and planning partners to maximize the connection between the land use pattern and the multi-modal transportation system.

The 2012 MTP/SCS offers high performance while also fulfilling statutory and regulatory requirements. Following through on the implementation commitments in the plan will require addressing the plan requirements and sharpening the focus on measuring and reporting plan effects.

Plan Development Status:

Transportation performance indicators — the basic relationships between land use, the transportation system, and travel outcomes — have been a focus of the process to prepare the 2016 MTP/SCS update.

Technical work and Board briefings have spotlighted the emphasis in the current plan on a balance of transportation projects that collectively offer high performance and promising implementation opportunities. As part of that work, a set of performance outcomes was prepared for the regional scenarios used in the public workshops and CEQA alternatives. These performance outcomes are being used again for the plan update work. They provide critical insights into the performance of each of the three plan scenarios and for the work ahead to develop a draft preferred scenario.

Ideally, project timing and phasing recommendations would be made through an analysis of plan effects at the project-level. Several staff presentations on this subject were made to the Board over the past several months and support was received for developing this capacity over a period of time. An initial focus has been on a benefit-cost method that is largely based on the Metropolitan Transportation Commission's national best practice. Initial results are promising, but also confirm that the application of this method require considerable time and staff resources to implement.

There is an opportunity to continue developing project-level performance evaluation methods. Schedule and resource constraints will require many of these methods to be implemented over an extended period of time. Other performance measurement commitments of the current plan include working to enhance our ability to measure the impact of the plan on public health, safety and active transportation, are also underway.

Recommended Implementation Theme Actions:

- 1. Analyze the Scenarios Performance Outcomes as a key input for shaping a high-performing Draft Preferred Scenario that meets statutory requirements and supports Board policy objectives.**
- 2. Report a broad set of performance measures in the Draft Preferred Scenario that go deeper than these workshop measures and reflect the range and diversity of policy areas in the six guiding principles of the MTP/SCS.**
- 3. Continue the development of project-level performance evaluation methods, such as a benefit/cost method to compare the performance benefit of large projects or programs. Provide the Board a proposed strategy for incorporating a benefit/cost method into SACOG planning and programming activities.**

The Collaborative Process for Developing a Draft Preferred Scenario

The following coordination would occur after the Board acts on the Framework 2.0 that directs the development of a preferred scenario at the end of 2014:

- SACOG staff will develop a preliminary draft preferred scenario based on this framework and vet it again through EDCTC, PCTPA, and member agency planning and public works staff in January 2015. This vetting period will provide opportunity for local elected bodies to provide input on the assumptions in early 2015 if desired
- In addition to coordinating directly with member agency staffs, input from the Sounding Board and SACOG advisory groups will also be sought on the preliminary draft scenario that circulates in January 2015.

Attachment B1: Preliminary Budget Analysis and Ranges for the 2016 MTP/SCS

One of the implementation themes included in the Policy Framework for the 2016 MTP/SCS asks whether the region can capture the revenues projected to come from all sources (federal, state, and local). To answer this question and ensure that the 2016 MTP/SCS passes federal financial constraint tests, SACOG is exploring a number of factors that could affect the revenues forecast for the plan. The tables and descriptions below provide a range of potential future revenues for existing and new sources of funding and discuss what variables could affect the amount of revenues generated from these various sources.

Existing Revenue Sources Supporting the MTP/SCS

	2012 MTP/SCS Adopted Budget	2016 MTP/SCS Budget Framework	
	<i>Amount (in billions of 2012 dollars)</i>	<i>Revised Range (in billions of 2012 dollars)</i>	<i>Reason for Change</i>
Federal Highway Administration funds including formula funds that pay for SACOG's regional funding programs (CMAQ & RSTP) and other federal discretionary programs funded through the Highway Trust Fund	\$2.1	\$1.7 - \$2.1	-Federal Highway and Transit Trust Funds are dependent on federal taxes on fuel. Improvements to average fuel economy of passenger and freight vehicles have eroded the purchasing power of these funding source over time and required transfers from the general fund to maintain the accounts' solvency.
Federal transit programs that come to the region and/or directly to transit operators including formula funds and federal discretionary programs such as New Starts	\$1.4	\$1.0 - \$1.4	-Federal and state forecasts predict that fuel economy will continue to improve faster than growth in vehicle miles traveled, further reducing the ability of current fuel taxes to support transportation needs. -Fuel prices are predicted to rise, but have not increased as fast as forecast in the current MTP/SCS.

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Caltrans funding for state system expansion and preservation including SHOPP funding, highway maintenance, and the Interregional Improvement Program	\$5.2	\$4.6 - \$5.3	<p>-State transportation funding programs are dependent on transfers from the Federal Trust Fund and statewide diesel and gasoline taxes that feed the State Highway and Public Transportation Accounts.</p> <p>-As described above, improvements in fuel economy resulting in overall lower fuel consumption impact state resources in the same way federal resources have the potential to decline over the MTP/SCS planning period.</p>
State discretionary grant programs	\$0.6	\$0.5 - \$0.7	
State formula (STIP) funds that contribute to SACOG's regional funding programs	\$1.4	\$1.1 - \$1.4	
State transit programs that flow directly to transit operators including State Transit Assistance and Intercity Rail *LTF funds included under sales taxes below	\$1.2	\$1.1 - \$1.2	
Portion of state excise taxes on transportation fuels (currently \$0.36/gallon) distributed to cities and counties for transportation purposes.	\$3.0	\$2.3 - \$3.0	
State and local sales taxes supporting transportation investments	\$6.1	\$5.9 - \$6.1	<p>-Annual revenues generated by state and local (Sacramento County's Measure A) sales taxes have kept pace with the forecasts in the current plan.</p> <p>-A new 1/2 cent sales tax or equivalent (Measure B) included in the current plan needs to be revisited for this plan update.</p> <p>-The Sacramento Transportation Authority (STA) is testing public support for a new measure through polling and a public outreach campaign.</p> <p>-The revenues that would be generated by a new measure are an important component of funding the level of transit service and road maintenance contained in the current MTP/SCS.</p>

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Locally derived streets and roads funding (developer fees, general fund contributions, special assessments, etc.)	\$9.1	\$9.1 - \$9.9	-Locally derived revenues will be based on a combination of historic allocations reported to the state controller and growth in new land use developments forecast for the preferred scenario. -Faster annual housing and employment growth in the later years of the plan could result in higher total revenues than the current plan.
Transit Fares	\$2.2	\$2.2 - \$2.5	-Transit fare revenues will be based on modeled ridership and forecasted average fares.
SUBTOTAL EXISTING REVENUES	\$32.3	\$29.5 - \$33.6	

State and Federal Fuel Taxes

A large part of the MTP/SCS budget is dependent on funding sources supported by state and federal transportation fuel taxes. Current projections at the state and federal level foresee a continued decline in these revenue sources resulting from improvements in average fuel economy and lower overall consumption. The lower budget ranges for these sources are consistent with projections for fuel price and fleet-wide fuel efficiency proposed by the Regional Targets Advisory Committee (RTAC) for the next round of sustainable communities strategies. The potential decrease in these revenue sources based on projected vehicle miles traveled in the SACOG region and the updated RTAC assumptions could be as much as \$2.6 billion over the life of the plan.

State and Local Sales Taxes

The region has kept pace, or even slightly exceeded, the anticipated growth in sales tax revenues forecast in the current plan for both the state sales tax and the local Measure A sales tax in Sacramento County. The primary risk to sales tax revenues supporting the plan surrounds the uncertainty of an additional ½ cent sales tax measure or its equivalent in Sacramento County (Measure B). The current plan assumes these new revenues would become available beginning in 2014. However, it is unlikely given current progress on a new measure that action by voters is possible within the timeframe anticipated by the plan. For the 2012 MTP/SCS, the Board elected to push the assumption for a new measure back by two years, from 2012 to 2014, to be consistent with financial constraint requirements of the Metropolitan Transportation Improvement Program (MTIP). If the Board took similar action for this plan, the effect would be fairly small, only around \$200 million. For reference, the Measure B assumption contributes \$2.3 billion to the MTP/SCS budget.

Locally Derived Street and Roads Funding

These revenues are supported by local developer fees, general funds, special assessments, and other local funding programs. These programs are expected to stay fairly stable over the planning period, but are fairly dependent on future housing and employment growth. The Board has elected to maintain the same amount of total housing and employment growth from the 2012 MTP/SCS for this plan update. Due to the shorter planning period, this would require slightly faster growth, likely in the later years of

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the plan, to catch the region up from a slower than anticipated growth since the current plan was adopted. The effect of this faster growth would be slightly higher local revenues adding up to \$800 million to the budget. However, these revenues can vary depending on the final land use assumptions for the draft preferred scenario and feedback from local staff.

Transit Fares

SACOG bases the forecast of transit fares on ridership and average fares paid by riders. The total fare revenue captured by the plan will be dependent on the productivity of transit services included in the plan. The fairly wide range in potential transit fares is due to uncertainty about how a draft preferred scenario will perform. The current plan achieves a very productive transit system that covers nearly 40% of the operating costs of transit in fare revenue by 2035. However, without sufficient funding support from state and federal revenue sources, and in particular without additional local revenues from a Measure B assumption in Sacramento County, achieving this same level of productivity will be very difficult. Assuming that the draft preferred scenario can perform at least as well as the current MTP/SCS, there would be little change in fare revenues. If the draft preferred scenario can outperform the current plan, fare revenue could increase by as much as \$300 million (up to 45% farebox recovery).

Potential New Revenue Sources to Support the MTP/SCS

	2016 MTP/SCS Budget Framework	
	<i>Range (in billions of 2012 dollars)</i>	<i>Reason for Change</i>
Placer County 1/2 cent Sales Tax	\$0.0 - \$1.5	-Per the Placer County Transportation Commission's draft RTP financial plan and recent polling that shows significant support for a potential county-wide sales tax measure.
State Cap and Trade Program through 2020	\$0.5 - \$2.5	-Based on forecasts from the California Association of Councils of Government (low-end) and the Legislative Analyst's Office (high-end)
State Cap and Trade Program if extended 2021 through 2036	\$1.0 - \$5.0	-Maintain the Cap and Trade Program through 2036 with slight reductions in annual revenues generated from the purchase of allowances to account for improvements in technology

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State and/or federal mileage-based user fee (2025-2036) to replace existing gas taxes (net over existing revenue sources)	\$2.2 - \$5.5	<p>-Two national reports commissioned under SAFETEA-LU call for the long term replacement of existing fuel taxes with a mileage-based system.</p> <p>-A \$0.05 per mile tax would yield roughly \$0.8 to \$1.1 billion per year to the region based on SACOG's projections of annual VMT.</p> <p>-These fees would replace existing federal and state gas taxes, yielding a net increase of \$200 to \$500 million per year that could be distributed through existing state and federal programs in a manner consistent with current formulas.</p>
New state discretionary program	\$0.1 - \$0.5	-Assume a future state bond program or similar funding mechanism roughly equivalent to Propositions 1A & 1B
New federal discretionary program	\$0.5 - \$1.0	-Assume future federal discretionary programs for transportation purposes supported by funds outside of the Highway Trust Fund similar to the TIGER program
SUBTOTAL POTENTIAL NEW REVENUES	\$4.3 - \$16.0	
TOTAL CORE AND NEW REVENUES	\$33.8 - \$49.6	

Potential New Revenue Sources

There are a number of new revenue sources that can be considered as part of this plan update. These funding sources carry an additional level of uncertainty and risk beyond forecasts of the more traditional funding sources included in the current plan. However, additional funding could be an important part of making up any gap left by a more conservative estimate of existing resources. One of the new funding sources, as proposed by the Placer County Transportation Planning Agency, is a ½ cent county-wide sales tax in its updated regional transportation plan that would add up to \$1.5 billion to its financial plan. Another new funding source is a program funded with revenues generated from California’s Cap and Trade program. Funding from cap and trade is anticipated to begin this fiscal year and could generate anywhere from \$9 to \$45 billion statewide by 2020. The more conservative estimate from the California Association of Councils of Government (CALCOG) could add \$500 million to the MTP/SCS budget, while the Legislative Analyst’s Office more aggressive forecast could bring in as much as \$2.5 billion. If the program is assumed to run beyond 2020, it could bring in an additional \$1.0 to \$5.0 billion for the region.

The Board could also consider additional revenues coming from state and/or federal mileage-based user fees or equivalent adjustments that would replace or modify existing taxes on transportation fuels. Two national reports commissioned by the previous federal transportation bill (SAFETEA-LU) suggested that mileage-based fees should be considered as a long-term solution to the shortfalls plaguing the Highway Trust Fund. California is also just beginning a pilot program to look at the feasibility of such programs in

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the state. These types of programs, assumed in the later years of the MTP/SCS, could generate between \$2.2 and \$5.5 billion for the region based on SACOG forecasts of regional vehicle miles traveled.

New federal or state discretionary programs funded through sources other than the Highway Trust Fund or State Highway Account such as through new bond measures or TIGER style programs provide another potential stream of funding for the region. Based on the region's competitiveness in previous programs, these sources could provide between \$600 million and \$1.5 billion for the region.