Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

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**PLANNING AND PROGRAMMING COMMITTEE**
**CONSTRUCTION COMMITTEE**
**JUNE 18, 2025**

**SUBJECT: METRO COST BENEFIT ANALYSIS AND METHODOLOGY**

**ACTION: RECEIVE AND FILE**

## RECOMMENDATION

RECEIVE AND FILE the status report on Metro's Draft Cost Benefit Analysis and Methodology.

## ISSUE

At its February 2025 meeting, the Board approved Motion 14 by Directors Dutra, Najarian, Barger, Butts and Solis, and amended by Director Horvath, that directed staff to develop a framework for a Metro Cost Benefit Analysis (CBA) that could be used as one tool among others to support investment and funding decisions for Metro's capital projects. The consistent application of a Metro CBA is intended to inform a more data-driven and transparent decision-making process that also includes economic data and evaluation criteria approved by the Board in October 2023 as part of the Measure M 5-Year Comprehensive Assessment and Equity Report.

Staff have developed a draft framework that includes a methodology that is consistent with United States Department of Transportation (USDOT) and California Department of Transportation (Caltrans) guidance and incorporates benefits criteria aligned with Board adopted objectives and goals. These objectives are operationalized into performance metrics used to evaluate projects, especially in assessing their contributions to the economic output and vitality of the region, equity, and sustainability. This report provides an update on the progress of developing the methodology. Staff anticipate returning to the Board next month to seek the Board's approval of a final Metro CBA methodology that integrates comments received this month.

## BACKGROUND

Metro currently is planning for and delivering the largest portfolio of transportation capital projects in the nation, due in large part to the revenue streams provided by Measure R, Measure M, Senate Bill 1 - the Transit and Intercity Rail Capital Program, the Bipartisan Infrastructure Law, and other funding sources, all of which have been instrumental in providing local and state funds to leverage federal participation. With the magnitude of the capital program and increasing operating costs, coupled with recent years' rising construction costs and inflation as well as federal funding uncertainty, Metro and

other transit agencies across the country are grappling with project delivery and financial sustainability.

In February 2025, the Board passed Motion 14 (Attachment A), which directed staff to develop a CBA framework for Metro Capital Projects that could strategically position projects for funding opportunities and could evaluate contributions to the economic vitality of Los Angeles County and the United States. As amended, the motion also directed CBA evaluations to include project viability, competitiveness in funding programs, systemwide connectivity benefits, service to Equity Focus Communities and transit dependent riders, ridership, and connectivity with economic centers to increase sales tax growth. Additionally, the CBA methodology would be consistent with USDOT, California and Metro policy objectives and guidelines.

In April 2025, Program Management staff presented the Metro Annual Program Evaluation (APE) report and discussed the multifaceted strategies to mitigate cost and schedule risks and to support continuous improvement in capital program delivery. As part of the report, Planning staff presented an initial CBA framework that included criteria consistent with USDOT guidelines (e.g., travel time savings, safety, emissions reductions, operating cost savings, and health benefits), State criteria (e.g., accessibility, journey quality), and Metro criteria (e.g., community benefits, system and network benefits, economic benefits, and equity). Collectively, these form the Metro Cost Benefit Analysis (Metro CBA) criteria.

Current Metro Practices in Employing CBA

Metro currently uses various forms of cost and benefit analyses in project development and implementation. In selecting a Locally Preferred Alternative (LPA), Metro conducts robust analyses on proposed alternatives to identify capital costs and environmental and other benefits to the region; however, methodologies can differ from project to project, making it difficult to compare projects' benefits and costs. Additionally, capital cost analyses have been limited in that most estimates do not incorporate operations, maintenance, or asset replacement costs in early planning decisions, thus missing a full life-cycle assessment. Analyses also have been limited in addressing equity and economic impacts, as discussed below:

*Equity Impacts*: Equity evaluations currently are conducted on *most* projects, primarily centered on the geographic relationship of transportation infrastructure to Equity Focus Communities (EFC). The Office of Equity and Race (OER) is developing new tools to measure accessibility, as well as health, environmental, and economic equity and to answer the question of how proximity translates to access to opportunities and quality of life. These tools are anticipated to be developed over the next year and will inform the Metro CBA in terms of distributional and absolute contributions to mobility, health and safety, and other goals for disadvantaged communities. In the meantime, evaluations will continue to use existing tools (e.g., maps, geographic analyses, qualitative information).

*Economic Impacts*: Some federal grant programs require Benefit Cost Ratios (BCR) and USDOT prescribes a standardized accounting framework that includes parameters to be included (e.g., mobility, safety) and specific metrics for those parameters (e.g., travel time savings, fatalities avoided, etc.), monetized unit values, and calculations to be used. Other

federal grant programs require cost effectiveness measures (or the cost per additional unit of change, such as cost per new rider). Notably, USDOT grant guidance for competitive programs specifically prohibits the inclusion of local economic benefits in BCRs. From a federal/national perspective, economic benefits generated from federal funding to a project do not consider "the extent to which positive impacts in one region or industry may be accompanied by offsetting losses in another" (2024, USDOT).

Despite the exclusion from federal funding decisions, however, economic impacts to the region are important factors for local audiences (e.g., Metro Board, local elected officials, communities, advocates, etc.). Accordingly, staff are developing a regional economic modeling tool to assess and quantify economic output generated by project investment. As Metro projects reach critical milestone decisions, staff will conduct economic impact analysis on a project-by-project basis until a systematic methodology is incorporated into the Metro CBA.

## DISCUSSION

The draft Metro CBA framework reflects Board-defined goals and objectives adopted since a 2015 Performance Framework was used to support the Measure M Ordinance Expenditure Plan and the 2020 Long Range Transportation Plan (see Attachment B for more background). Based on Board direction over the past 10 years, staff recommend a Metro CBA framed by the thematic areas described below. Each thematic area includes a percentage weight that is based on the 2015 Performance Framework but adjusted to reflect emerging priorities since.

Note that equity has been and continues to be a prominent theme in Metro Board priorities as reflected in the Measure M 5-Year Comprehensive Assessment and Equity Report (October 2023). Mobility can advance equity by increasing access to high-quality mobility options, reducing air pollution, and enhancing economic opportunity in underserved areas. As a result, equity evaluations are embedded within the thematic areas, to ensure that this direction is integrated into transportation outcomes. Equity constitutes three percent (3%) in Mobility/Accessibility because this is the primary benefit area from transportation investments. It constitutes one percent (1%) within each of the areas of Safety and Health Benefits, Environmental Sustainability and Economic Benefits to the Region. Long Term Operational Sustainability does not include equity performance because its benefits directly accrue to the service provider. In total and across all thematic areas, Equity represents 6% of the total Metro CBA as described below.

### Proposed Metro CBA Objectives and Weighting

- **Mobility and Accessibility (40%) -** This is the primary benefit for most transportation modes, aligned with FTA and Caltrans methodologies. Easing congestion, increasing active transportation, and improving travel times, system connectivity, throughput, and reliability, are all key Metro objectives addressed by mobility improvement. The key metric in evaluating projects is travel time savings for different user groups and modes (transit riders, drivers and bicyclists). Travel time savings are critical for estimating travel demand and mode share, which influence regional congestion management goals. Other policy objectives reflected in

mobility and accessibility metrics include improvements in reliability, reductions in travel delay (for goods and people), and improved connectivity to jobs, housing, resources, and opportunities. Equity is also a consideration in mobility and access evaluations, **contributing** three percentage points (3%) **to** the Mobility and Access theme, and representing analyses conducted on outcomes by mode, geography and EFCs, and other socio-economic data.

The weighting factor for this category has been reduced from 45% since the 2015 Performance Framework because operating and life cycle costs, as well as extended life of equipment and long-term fiscal sustainability of operations - which had been considered as Mobility goals - are now proposed to constitute a new category, “Operational and Long-Term Sustainability,” reflecting the new financial criteria adopted by the Board in October 2023.

- **Safety and Health Benefits (15%)** - Transportation’s influence on safety and public health are objectives for Metro’s Vision 2028. Transportation projects’ benefits to health and safety are typically measured by reductions in exposure to risks posed by the transportation system across multiple modes. Safety and health benefits similarly result from improved access to safe active transportation infrastructure that promotes active transportation as a primary mode or connection to transit, health care facilities, and recreational opportunities, such as parks and open space.

  Since transportation is a social determinant of health, from an equity perspective, safety and health benefits may be analyzed through the lens of sensitive receptors (e.g., children younger than 5 and older adults above 65 years of age) or increased access to health care for particular socio-economic groups; equity contributes one percentage point (1%) to this category.

  In the Metro CBA, safety and health are proposed in one category, since in both policy areas, the transportation investments are intended to reduce exposure to (safety and health) risks posed by the transportation system across multiple modes and minimize safety and health risks introduced by the project. In 2015, safety was a separate category and health related performance was included as a goal for “Sustainability/Quality of Life” with 12.5% weight; the Metro CBA would instead include health and safety together (15%) and environmental sustainability (15%) as separate categories.

- **Environmental Sustainability (15%)** - Projects demonstrating the following improvements support Metro’s climate and sustainability goals as aligned with SB 375 targets. Policy criteria include reductions in greenhouse gas (GHG) emissions and criteria pollutants, reductions in urban heat island effects, reduced stormwater runoff impacts, and reduced biological and habitat impact. Equity in this category contributes one percentage point (1%) to this category. Objectives related to equitable environmental sustainability include accounting for disproportionate exposure and/or distribution of environmental benefits (i.e. air pollution, green space) by mode, geography and EFCs, or other socioeconomic data.

- **Long-Term Operational Sustainability (15%)** - The provision of timely, reliable, and efficient transportation services is critical for Metro riders as well as for goods movement in and

through our region. Just as environmental sustainability focuses on ensuring long-term viability of natural resources for future generations by exercising responsible resource management, operational sustainability focuses on fiscal decisions that ensure the continuity of infrastructure delivery and operational service over the long term. Identifying and measuring operational sustainability at the outset of project planning helps ensure that capital investments can be operated and maintained effectively throughout their lifecycle, reducing the risk of underutilized or deteriorating infrastructure. Doing so in turn is critical for providing continuity in service and thus maintaining public trust and for securing continued investment and support from state and federal funding partners. To this effect, the Metro CBA will include measures to evaluate the operational benefits and system productivity over time, the sufficiency of funding for operations and maintenance, system resiliency and recovery from service disruptions and/or emergencies, and the feasibility of project such as delivery in phases while maintaining high benefits relative to cost.

Aligned with the October 2023 Board-adopted motion and given the Board's attention to the transit "fiscal cliff," this new category of objectives evaluates Metro's investments today against fiscal and operational sustainability in the future.

**Economic Benefits to the Region (15%)** - While economic benefits are explicitly excluded from federal funding evaluations, infrastructure improvements for enhanced mobility of both goods and people can have significant positive effects on regional economic output. Reductions in travel times make it easier for workers to access jobs and for employers to reach a wider employment pool. Additionally, businesses benefit from more reliable and timely delivery of goods and services, and workers benefit from more time for work and leisure. Finally, travel time reductions can improve access to tourist destinations to increase visitation and spending, generating additional economic activity in the region, including sales tax revenue and growth. The direct benefits of travel time reductions are accounted for as mobility and accessibility, but the economic benefits to the region are indirect benefits including reallocation of time savings to productive activities that generate further economic activity in the region.

The economic impact analysis to estimate jobs created (from construction and operations), and countywide output associated with project investment. In addition to identifying productivity and consumption resulting from travel time savings to all users of the transportation system, staff also will estimate the socio-economic composition of those obtaining economic benefits to help with equity assessment of the project. For this reason, equity contributes one percentage point (1%) towards Economic Benefits to the Region.

## Implementation of Metro CBA

Staff will return to the Board next month for approval of finalized weighted objectives and operationalized metrics to be used in evaluating projects. As mentioned in previous sections, metrics for equity and the regional economic impact models are still under development. However, following Board's approval of objectives, staff will continue to refine technical calculations and modeling work

and begin conducting Metro CBA evaluations on projects that are nearing milestone decisions.

Staff will explore international and national cases in which CBA implementation has been successful not only in informing project development decisions but in yielding improvements to the development process itself. For example, *The Green Book*, issued by the United Kingdom's finance ministry, offers a standardized development process that varies the evaluation criteria based on a project's developmental stage and incorporates "design to budget" or "design to BCR" in early planning phases. These may provide insight into strategies for systematically incorporating the Metro CBA at project milestones across stages of planning, design, construction, and operations.

## EQUITY PLATFORM

This report provides an overview of the proposed Metro Cost Benefit Analysis methodology and proposes potential applications of CBA in project evaluations. A Metro CBA methodology would apply to multimodal transportation investments, and at various milestones of project development. The methodology presented includes equity as embedded within thematic areas of performance, receiving a six percent (6%) total weighting factor.

While traditional CBAs demonstrate aggregated net benefits, Metro's CBA process will examine equity through a quantitative analysis, spatial analysis (maps), qualitative narratives (cultural and/or historical description, etc.) or some combination. Additionally, as the technical methodology continues to be refined and as additional equity tools are developed (e.g., Access to Opportunities, Equity Toolkit, Equity Performance Measurement, etc.) the Metro CBA framework will continue to evolve and incorporate equity as an assessment factor.

## VEHICLE MILES TRAVELED OUTCOME

VMT and VMT per capita in Los Angeles County are lower than national averages, the lowest in the SCAG region, and on the lower end of VMT per capita statewide, with these declining VMT trends due in part to Metro's significant investment in rail and bus transit.* Metro's Board-adopted VMT reduction targets align with California's statewide climate goals, including achieving carbon neutrality by 2045. To ensure continued progress, all Board items are assessed for their potential impact on VMT.

While this item does not directly encourage taking transit, sharing a ride, or using active transportation, it is a vital part of Metro operations, as the development and implementation of CBAs provides a more data-driven and transparent decision-making process to support delivery of the capital program including transit, highways, ride sharing, and active transportation investments. Because the Metro Board has adopted an agency-wide VMT Reduction Target, and this item supports the overall function of the agency, this item is consistent with the goals of reducing VMT.

*Based on population estimates from the United States Census and VMT estimates from Caltrans' Highway Performance Monitoring System (HPMS) data between 2001-2019.

## IMPLEMENTATION OF STRATEGIC PLAN GOALS

The recommendation to implement Cost Benefit Analysis in project development decisions supports the following strategic plan goals:

- Goal 1 - Provide high-quality mobility options that enable people to spend less time traveling
- Goal 2 - Deliver outstanding trip experiences for all users of the transportation system
- Goal 3 - Enhance communities and lives through mobility and access to opportunity
- Goal 4 - Provide responsive, accountable and trustworthy governance within the Metro organization.

The implementation of CBA provides a tool for evaluating projects against strategic goals and supports Metro's capital investment decisions with transparent, trustworthy, data-based analysis.

## NEXT STEPS

- Refine the proposed scoring (weighting) framework based on any feedback from the Board
- Return to the Board in July with finalized evaluation criteria

## ATTACHMENTS

Attachment A - Board Motion 14: Cost-Benefit Analysis for Metro Capital Projects
Attachment B - Existing Plans and Policies
Attachment B1 - Long Range Transportation Plan - Potential Ballot Measure Framework, Assumptions and Input
Attachment B2 - Board Motion 17.1

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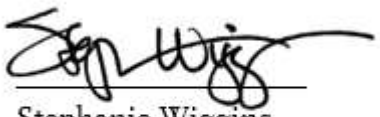

Stephanie Wiggins
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# Metro

Los Angeles County
Metropolitan Transportation
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## Board Report

**File #:** 2025-0149, **File Type:** Motion / Motion Response **Agenda Number:** 14.

**REVISED**
**REGULAR BOARD MEETING**
**FEBRUARY 27, 2025**

**Motion by:**

**DIRECTORS DUTRA, NAJARIAN, BARGER, BUTTS AND SOLIS**

COST-BENEFIT ANALYSIS FOR METRO CAPITAL PROJECTS

The U.S. Department of Transportation (USDOT) defines a cost-benefit analysis as a systematic process for identifying, quantifying, and comparing expected benefits of a potential infrastructure project. A cost-benefit analysis provides estimates of the anticipated benefits that are expected to accrue from a project over a specified period and compares them to the anticipated costs of the project.

While a cost-benefit analysis is just one of many tools that can be used to support funding decisions for infrastructure investments, it can be a meaningful method to evaluate and compare potential transportation investments for their contribution to the economic vitality of Los Angeles County and the United States.

Internationally, agencies such as Transport for London also utilize cost-benefit analysis to assess project viability and optimize funding opportunities. Incorporating a standardized cost-benefit analysis will help ensure that the projects Metro advances are positioned competitively for future funding opportunities and policy support.

**SUBJECT: COST-BENEFIT ANALYSIS FOR METRO CAPITAL PROJECTS MOTION**

**RECOMMENDATION**

APPROVE Motion by Directors Dutra, Najarian, Barger, Butts and Solis to direct the CEO to ~~incorporate~~ develop a standardized cost-benefit analysis framework, using USDOT analysis or a comparable methodology, for all Metro capital projects to help inform ~~the agency's~~ a more data-driven and transparent decision-making process ~~for projects Metro advances~~. This cost-benefit analysis framework should also include national economic impact data and a comparison to the cost-benefit analysis methodology currently used by Metro and required by State and Federal for significant grant opportunities. An update on this analysis framework shall be presented as part of the Annual Program Evaluation brought to the Board in 2025.

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**HORVATH AMENDMENT**: Direct the CEO to incorporate the project evaluation criteria approved by the Board in October 2023 and being applied to Metro's Short Range Transportation Plan Update, into the framework of a standardized cost-benefit analysis.

**File #:**2015-1608, **File Type:**Policy Agenda Number:17.

**3rd REVISED**
**PLANNING AND PROGRAMMING COMMITTEE**
**NOVEMBER 18, 2015**
**EXECUTIVE MANAGEMENT COMMITTEE**
**NOVEMBER 19, 2015**

**SUBJECT: LONG RANGE TRANSPORTATION PLAN - POTENTIAL BALLOT MEASURE FRAMEWORK, ASSUMPTIONS, AND INPUT**

**ACTION: APPROVE POTENTIAL BALLOT MEASURE FRAMEWORK AND WORKING ASSUMPTIONS**

## RECOMMENDATION

A. APPROVING the 2017 **Long Range Transportation Plan (LRTP) Update Proposed Performance Metrics Framework** (Attachment A) to be used in analyzing all proposed major transit and highway projects (including Measure R projects not yet under construction) in order to develop a Potential Ballot Measure Expenditure Plan; and,

B. RECEIVING AND FILING the LRTP Potential Ballot Measure Framework Working Assumptions in Attachment B, the Stakeholder Process Input (through an On-Line Link) in Attachment C, the Subregional Stakeholder Project Priorities in Attachment D, the Regional Facility Provider Needs Lists in Attachment E, and the Roadmap for LRTP Potential Ballot Measure Process in Attachment F.

**KUEHL AMENDMENT** to move “increased access to parks and open space” from Quality of Life to Accessibility category.

## ISSUE

Since Fall 2012, Metro has explored the feasibility of pursuing a new potential ballot measure in conjunction with updating the 2009 LRTP. By participating in over 190 meetings, Metro staff has worked with subregional representatives and other stakeholders including, but not limited to, business, public health, labor, environmental groups, Active Transportation stakeholders, and numerous other groups. These various stakeholders were asked to submit their priorities and policy input by September 1, 2015.

Adoption of the recommended performance metrics framework, working assumptions, and acceleration parameters is essential to conducting the substantial travel demand and financial

analytical staff work that comprises the next steps in our Roadmap process shown in Attachment F. For example, the travel demand modeling we are about to conduct requires complex system coding tasks that will enable us to provide a performance based recommendation to the Metro Board of Directors. Also, while all projects submitted are anticipated to be included in the LRTP update, they must be categorized in one of two ways: financially constrained (funding plan) or financially unconstrained (no funding plan). These financial constraints are defined in federal planning regulations as revenues that can be reasonably expected to be available. Deferring these analytical tasks will compromise our ability to provide the proper feedback necessary for a bottoms-up process.

## BACKGROUND

Through various correspondences, meetings, and actions, the Metro Board directed that a proposed ballot measure follow a “bottoms-up” process that began with the Mobility Matrix process. The Mobility Matrices, as directed by the Board in February 2014, were completed in collaboration with the subregions and received by the Board in April 2015. The work began with an inventory of projects that was drawn from prior planning processes, such as the LRTP Strategic (unconstrained) Plan, but went further to identify any new needs not identified previously. In January 2015, the Metro Board also created a Regional Facilities category that includes Burbank Bob Hope Airport, Los Angeles World Airports (LAX), Long Beach Airport, Palmdale Airport, the Ports of Long Beach and Los Angeles, and Union Station. Continuing discussions are being held with Regional Facilities representatives and other Stakeholders on the appropriate role for Metro in addressing the presence of these facilities within Los Angeles County. In the end, this process identified over 2,300 projects totaling over $273 billion in 2015 dollars.

Concurrent with the work of the subregional and regional facilities groups, staff worked closely with other stakeholder groups described above to determine their priorities and policy considerations. Metro executives attended several productive meetings with coalitions of leadership representatives from environmental, active transportation, business, and disadvantaged community organizations. These leaders jointly expressed significant support for a potential ballot measure, if it properly balances their mobility, economic development, and environmental justice concerns.

## DISCUSSION

Mobility is an essential ingredient necessary to support economic growth spurring job creation and the movement of goods. While Metro is fundamentally responsible for developing a transportation plan that best addresses the county’s mobility needs, this goal is intrinsically linked with the several policy objectives and the accessibility needs of its most vulnerable citizens. The LRTP Potential Ballot Measure Framework and Assumptions were first presented in draft form October 2015. The 2017 LRTP Proposed Performance Metrics Framework now found in Attachment A, if approved, will serve as the basis for evaluating the acceleration of existing major projects and the addition of new major highway and transit corridors in the LRTP.

### Metro Travel Demand Model

The staff has identified a set of highway and transit corridors to model after reviewing the 2,300 projects submitted by subregional agencies in the Mobility Matrix process. To achieve mobility and

other policy goals, Metro's Travel Demand Model outputs will require the Performance Metrics Framework to guide staff's recommendations. The Metro Travel Demand Model will be used to evaluate major transportation projects submitted through the Mobility Matrix process including major transit projects (bus rapid transit, light rail, or heavy rail transit corridor projects) and major highway projects (carpool lanes, managed lanes, or mixed flow lanes). We note that of the 2,300 projects submitted by subregional agencies in the Mobility Matrix process, many are not major projects, and therefore cannot be modeled. Those projects that cannot be modeled may be considered as part of other funding categories or for inclusion based on the priorities from the subregional priority setting process.

In addition to evaluating the performance of these new projects submitted by the subregions, we will also model major Measure R transit and highway projects that are not yet in construction, to use the performance measure analysis to inform the opportunity to accelerate Measure R projects.

Best Practices Framework

The recommended Framework draws from best practices of work done elsewhere in the nation and California. We reviewed performance measures used nationally to implement MAP-21 and the federal Clean Air Act and found that the best of these were modeled on work first performed in California. Specifically, the performance measure process used by the Southern California Association of Governments and the San Francisco Bay Area's Metropolitan Transportation Commission and others were the best fit for the Metro Board's policy objectives. For example, California is now again at the cutting edge of greenhouse gas performance analysis initiated by SB 32 and various state laws. Our work builds on these best practices.

Performance Measure Weights

The performance measures are organized under various themes, including accessibility, economy, mobility, safety, and sustainability/quality of life. Each of these theme groupings have been assigned percentage weights for the purpose of evaluating project performance of new highway and transit corridors, as follows:

- Mobility 35%
    - Easing congestion, increasing active transportation, and improving travel times, system connectivity, throughput, and reliability are all key Metro objectives addressed by mobility improvement. This weight reflects that emphasis.
- Economy 15%
    - Economic output, job creation and retention, goods movement, and addressing disadvantaged communities are goals that can be better achieved by implementing projects and services that address these needs. This weight enables us to identify the project's contribution to economic development.
- Accessibility 20%
    - The needs of the transit dependent, cyclists, youths, pedestrians, seniors, and people with disabilities are addressed here by increasing the population served by Metro

facilities. This weight reflects the strong relationships Metro has built with these populations and need to retain and improvement the services provided to them.

- Safety 15%
    - Safety is fundamental to the design, construction, and operation of highway and transit corridors, but it must also be considered in evaluating new highway and transit projects against each other. The relative safety benefit of major transportation capacity enhancement projects is accounted by this theme's weight.
- Sustainability and Quality of Life 15%
    - An important criteria for evaluating a project's impact on reducing greenhouse gases and improving air quality, improving public health, and improving the quality of life, including eliminating urban heat islands, storm water runoff, biological and habitat impact, noise mitigation, and access to parks and open space. This theme has been weighted to identify the project's contribution to addressing sustainability and quality of life.

Purpose, Use, and Limits of Performance Metrics

This evaluation process is intended to evaluate whether to include and how to sequence new projects to be added to the plan relative to other new projects. In addition, the Performance Metrics will be used to guide recommendations regarding the potential acceleration of some Measure R projects already in the LRTP relative to other Measure R projects. We are recommending that the Metro Board stipulate that these acceleration recommendations be considered by staff only to the extent that other existing LRTP projects remain on their current LRTP funding schedules and no later. The intent here is to prevent any existing LRTP project delays, while at the same time enabling the possible acceleration of highly beneficial major projects as a result of the potential replacement of the Measure R tax when it sunsets in 2039.

Authorizing Legislation and Expenditure Plan Requirements

The authorizing legislation for the potential ballot measure, SB 767 (de León), requires that an expenditure plan be developed using a transparent process to determine the most recent cost estimates for each project and program identified in the expenditure plan. Metro's transparent, inclusive, and bottoms-up process to date provided high and low cost estimates to aid stakeholders in making their priority setting decisions. Staff will continue to refine these costs in that same transparent manner and plans to use the performance metrics to guide our ultimate recommendations.

SB 767 (de León) was passed on September 15, 2015 and the Governor announced his approval on October 7, 2015. In addition to transparent process requirements, SB 767 (de León) requires that the expenditure plan include the following elements: the most recent cost estimates for each project and program; the identification of the accelerated cost, if applicable, for each project and program; the approximate schedule during which Metro anticipates funds will be available for each project and program; and, the expected completion dates for each project and program within a three-year range. To meet these requirements and the bottoms-up process requirements

originally directed by the Metro Board, a number of assumptions must be used in developing the expenditure plan, including a tax increase, tax extension, tax sunset, project cost inflation, revenue growth, subregional revenue targets, and population and employment data as described in Attachment B, the Framework Working Assumptions.

Potential Ballot Measure Process Characteristics and Results

The Potential Ballot Measure Funding Targets examined current (2017) and projected (2047) population and employment figures, which were given to each subregion to inform their ultimate funding target. As discussed in detail in Attachment B, if current population was the highest percentage figure for a specific subregion, that figure was used to develop that subregon's target. If another subregional percentage figure was higher, such as future employment, that figure was used instead. This funding allocation formula was deemed feasible because Metro staff anticipates that a portion of existing funding resources will be available beyond the year 2039. For example, Proposition A and Proposition C do not sunset, and no planning has yet occurred in the year 2040 and beyond for these taxes. Since our working assumption is a 40-year tax measure ending in 2057, there will be about 18 years of Proposition A and Proposition C resources for planning purposes. After establishing a consensus with all the subregional representatives on the Potential Ballot Measure Funding Targets earlier this year, Metro staff initiated the next steps in the process by requesting subregional priorities that were constrained to the Framework Funding Targets.

As of September 1, 2015, Metro received the project priority and policy input found in Attachment C to this report. Attachments D and E contain draft Stakeholder Input project lists that staff has attempted to synthesize in order to summarize the subregional and Regional Facilities priorities. Together, these attachments complete one phase of a multi-phase stakeholder and public input process summarized in the Roadmap in Attachment F. In addition to the input identified in Attachment C, many stakeholders also provided policies for Metro's consideration going forward. These are included in Attachment C as well. These attachments, previously presented to the Board in October 2015, have since been updated as indicated within the attachments.

If the Metro Board of Directors and/or the voters ultimately determine that additional taxes are not necessary at this time, the current LRTP will be updated consistent with that decision. Our LRTP process is scheduled to conclude in the fall of 2017, well after the potential vote, to permit either eventuality.

## DETERMINATION OF SAFETY IMPACT

The proposed approval will not have any adverse safety impacts on employees and patrons.

## FINANCIAL IMPACT

Approval of the LRTP Potential Ballot Measure Framework in Attachment A and Assumptions in Attachment B has no financial impact for the agency as the necessary funds remain budgeted for FY 2016.

Impact to Budget

Staff will continue to work within existing budgeted resources for development and outreach related to the LRTP update and potential ballot measure. Potential success of such a ballot measure would have a positive impact to future budgets if placed on the ballot and approved by voters.

## NEXT STEPS

Non-Project Needs and Contingencies

Further defining the other funding priorities not captured in the input process to date must now begin. This was reiterated in some of the Stakeholder Input received as part of Attachments C. These needs include, but are not limited to, transit operating and state-of-good repair needs; countywide bus system, Metrolink and paratransit services; local return, including local streets and roads and local transit; highway innovation and operating needs such as ExpressLane system improvements, highway systems and operations management, and other transportation needs not captured in any other way.

In addition to non-capital project needs, a contingency strategy will be needed to handle fluctuations in project costs and revenue forecasts that will arise over a four decade planning horizon. A reliable strategy to make allowances for variations in revenue and cost uncertainties, contingencies, escalation and assumptions in debt service costs will be developed within the recommended sequencing plan and then incorporated as necessary in the recommended Expenditure Plan to support the potential ballot measure and LRTP update.

Roadmap Process

Consultant support for the LRTP process was secured and kicked-off on September 15, 2015 and staff is now working on travel demand modeling and other related tasks to enable the Potential Ballot Measure Framework in Attachment A and the subsequent Expenditure Plan and Ordinance processes to be completed by June 2016. Though staff proposes a final decision by the Metro Board of Directors on whether to support the agendizing of a November 2016 Ballot Measure in June 2016, the Metro Board must make a go/no go decision no later than the regularly scheduled meeting in July 2016 in order to ensure placement on the November 2016 ballot. The next steps in the LRTP and potential ballot measure framework are as follows:

1. Continue stakeholder outreach;
2. Finalize non-project needs assessment and constraints in January 2016;
3. Conduct final needs and performance metrics and project scheduling analysis February 2016;
4. Release preliminary Expenditure Plan and Ordinance in March 2016;
5. Subregional and stakeholder outreach in April/May 2016;
6. Approve final Expenditure Plan and Ordinance in June 2016; and
7. Submit final Expenditure Plan and Ordinance to the County of Los Angeles Board of Supervisors in July/August 2016.

The LRTP update will be finalized and provided to the Board for adoption in 2017, after the results of the potential ballot measure process are known.

**ATTACHMENTS**

Attachment A - LRTP Potential Ballot Measure Performance Metrics Framework;
Attachment B - LRTP Potential Ballot Measure Framework Working Assumptions;
Attachment C - Stakeholder Process Input (through an On-Line Link);
Attachment D - Subregional Stakeholder Project Priorities;
Attachment E - Regional Facility Provider Needs Lists; and
Attachment F - Roadmap for LRTP Potential Ballot Measure Process.

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**Attachment A**

**2017 LRTP Update**
**Proposed Performance Metrics Framework for Major Projects**

| Metro Theme | Goals and Objectives | System Performance Measures | Weight (%) | Highway Project Performance Measures | Transit Project Performance Measures |
|---|---|---|---|---|---|
| **Mobility** | • Relieve ~~Ease~~ congestion<br>• Increase travel by transit, bicycle, and pedestrians<br>• Improve travel times<br>• Improve system connectivity<br>• Increase person throughput<br>• Improve effectiveness & reliability for core riders<br>• Address operating & life cycle costs<br>• Extend life of facility & equipment | • Reduced person hours of delay<br>• Increased person throughput<br>• Reduced single-occupant vehicle mode share<br>• Increased annual boardings per mile<br>• Increased annual hours of delay savings/mile<br>• Improve roadway condition rating<br>• Reduced portion of transit assets past useful life | ~~**35%**~~<br>**45%** | • Increased person throughput<br>• Reduced person hours of delay[2] | • Increased transit ridership<br>• Increased person throughput<br>• Improved ~~system~~ travel time reliability<br>• Improved service frequency |
| **Economy** | • Increase economic output<br>• Support job creation & retention<br>• Support goods movement<br>• Invest in disadvantaged communities | • Improved linkages to major employment/activity centers[1]<br>• Increased number of jobs<br>• Improved REMI Model economic benefit results<br>• Reduced vehicle hours of delay for trucks<br>• Dollars invested in transportation projects in disadvantaged communities | ~~**15%**~~<br>**12.5%** | • Reduced truck vehicle hours of delay[2]<br>• Improved job access<br>• Dollars invested in transportation projects in disadvantaged communities | • Increased transit oriented development<br>• Improved job access<br>• Dollars invested in transportation projects in disadvantaged communities |

[1] Employment/activity centers include major employment centers, retail centers, education facilities, and healthcare facilities

[2] Reduced person and truck hours will serve as the best proxy available for person and truck travel time reliability for Highway projects.

**Attachment A**

| Metro Theme | Goals and Objectives | System Performance Measures | Weight (%) | Highway Project Performance Measures | Transit Project Performance Measures |
|---|---|---|---|---|---|
| **Accessibility** | • Increase population served by facility<br>• Increase service to transit-dependent, cyclist, pedestrian populations including youth, seniors, and people with disabilities<br>• Improve first-last mile connections<br>• Utilize technology | • Job accessibility by population subgroup<br>• Mode choice by income quintile<br>• SB 535 Disadvantaged Communities mapping (CalEnviroScreen)<br>• Increased number of households with access to transit<br>• Increased number of households with access to bicycle infrastructure<br>• Increased number of households with disabled persons with access to transit<br>• Increased access to parks and open space areas | ~~**20%**~~<br>**17.5%** | • Increased number of disadvantaged population served<br>• Improved access or system connectivity<br>• Improved access to parks and open space<br>• See note 3 | • Increased number of ~~households~~ population served by frequent transit<br>• Increased number of transit dependent households served<br>• Improved system connectivity<br>• Improved access to parks and open space<br>• See note 3 |
| **Safety** | • Reduce incidents<br>• Improve personal safety | • Fatalities by mode<br>• Injuries by mode<br>• Fatalities per capita | ~~**15%**~~<br>**12.5%** | • High fatal and severe injury collision area addressed<br>• Reduced safety conflicts | • Improved transit system safety<br>• High collision area addressed [4] |

[3] Metro considered measuring "increased network connectivity for walking and biking" and found that while major highway and transit projects may offer accommodations for bicycling and walking, the improvements to bicycle and pedestrian system connectivity will likely be minimal and impossible to compare effectiveness quantitatively from one project to another.

[4] The Statewide Integrated Traffic Records System (SWITRS) is maintained by the California Highway Patrol (CHP) and does not log fatalities and severe injuries on the transit system.

**Attachment A**

| Metro Theme | Goals and Objectives | System Performance Measures | Weight (%) | Highway Project Performance Measures | Transit Project Performance Measures |
|---|---|---|---|---|---|
| **Sustainability & Quality of Life** | Improve environmental quality<br>• Reduce greenhouse gas (GHG) emissions<br>• Reduce urban heat island effect<br>• Reduce storm water runoff impacts<br>• Reduce biological and habitat impact<br>Improve public health<br>Improve quality of life<br>• Improve access to parks and recreation<br>• Reduce noise impacts | Improve environmental quality<br>• Reduced VMT per capita<br>• Reduced GHG per capita<br>• Reduced impact on habitat preservation and open space areas<br>Improve public health<br>• Reduced EPA air quality conformity criteria pollutants<br>• Increased bike, pedestrian, and transit trips<br>Improve quality of life<br>• ~~Increased access to parks and open space areas~~ | ~~15%~~<br>**12.5%** | Reduced impact on environment<br>• Reduced GHG emissions<br>• Reduced urban heat island effect<br>• Reduced storm water runoff impact<br>• Reduced impact on habitat preservation and open space areas<br>Improved public health<br>• Support for active transportation<br>• ~~Improved access to healthcare facilities~~<br>Improve quality of life<br>• Reduced noise impacts<br>• ~~Improved access to parks and open space~~ | Reduced impact on environment<br>• Reduced GHG emissions<br>• Reduced VMT<br>• Reduced urban heat island effect<br>• Reduced storm water runoff impact<br>• Reduced impact on habitat preservation and open space areas<br>Improved public health<br>• Support for active transportation<br>• ~~Improved access to healthcare facilities~~<br>Improve quality of life<br>• Reduced noise impacts<br>• ~~Improved access to parks and open space~~ |

Attachment B

**Long Range Transportation Plan and Potential Ballot Measure**
**Framework Working Assumptions**
October 1, 2015

Augment, Extend, and Sunset Assumptions

The 2017 LRTP is currently assumed to cover the time period from 2017 – 2057 (forty years) and incorporate projects funded by the Metro Board in the 2009 LRTP that sunsets in the year 2039 with Measure R. The three principle alternatives to this assumption revolve around these decisions: extend the existing tax or not; augment the existing tax or not; and place a sunset on the new tax or not.

SB 767 (de León) provides the Metro Board maximum flexibility for all three of these alternatives. For example, the Metro Board could alternatively elect to propose an extension only, like Measure J, or it could elect to propose only an increase, without an extension, like Measure R. Finally, the Metro Board could change the sunset year of the tax (now tentatively assumed to be 2057) or eliminate it altogether, like Proposition A and Proposition C.

The following considerations led staff to the 2057 LRTP augment, extend, and sunset assumption, as follows:

- Unmet transportation infrastructure improvement needs: The Mobility Matrix process concluded that the entire inventory of needs for transportation capital improvements countywide was between $157 and $273 billion (in 2015 dollars). Shorter sunsets did not provide enough resources to develop the necessary level of consensus given this need;

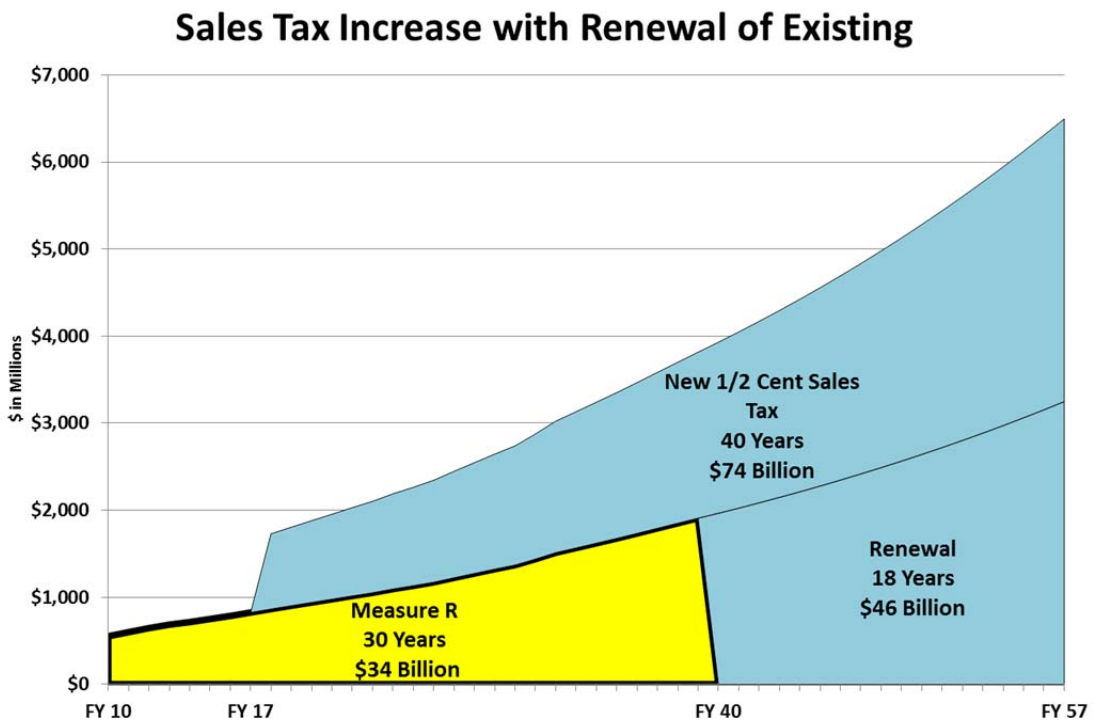
- Market research indicates public support for transportation improvements: Past statistically reliable quantitative surveys conducted found no significant advantage to including a sunset clause in a Los Angeles County transportation sales tax ballot measure;

- Alameda County super majority: In November 2014, 70% of voters in Alameda County approved a ballot measure that augmented an existing ½ cent transportation sales tax while at the same time extending the original ½ cent transportation sales tax when it expired; and

- Subregional feedback included a desire to accelerate existing Measure R priority projects, which could be facilitated, in part by replacing the Measure R tax when it sunsets.

As a result of these considerations, the LRTP Framework assumes an augment and extend approach similar to the Alameda County strategy, as shown in Table 1 below:

# Potential Ballot Measure Structure




Augmenting Metro's existing transportation sales taxes for at least a 40 year period (through the year 2057) and also extending an existing sales tax (Measure R) expiring in 2039 will provide the best opportunity to secure the necessary resources to address the public's desire for transportation improvements. Prior to making a final decision next year, the results of further market research will be provided to the Metro Board.

Project Cost Inflation and Sales Tax Revenue Growth Assumptions

The SB 767 (de León) expenditure plan requirement to schedule projects and show approximate completion dates raises the need to assume the impact of inflation over time on project and program costs. The initial project costs were requested in 2015 dollars and our cost inflation assumption is 3% per year.

The sales tax revenue growth assumption is 3.8% per year through 2040 and 3% thereafter. The difference between inflation cost growth and revenue growth through 2040 is primarily economic growth from the UCLA Anderson School Forecast of taxable sales for Los Angeles County. Countywide Planning staff has found the UCLA Anderson School Forecast to be the best available for our long term planning needs.

Optimal Subregional Target Assumptions

The transparent process required by SB 767 (de León) and the bottoms-up process directed by the Metro Board required Countywide coordination of subregional revenue assumptions. To prioritize the enormous unmet transportation capital needs identified in the Mobility Matrix process, the subregions needed to know roughly what they could

expect for capital improvements from the assumed augment and extend approach to the potential ballot measure.

Staff worked with the subregions to develop subregional revenue targets they could use for their priority setting process. To divide revenues into subregional targets, staff considered prior discussions with the subregions before developing a new approach. The purely current population and employment approach in Measure R led to later disagreements about extending that approach beyond 2039 in Measure J. Representatives from high population and/or employment growth areas felt the 2005 data used for Measure R was inequitable for taxes that would extend well beyond 2039, as proposed in Measure J.

To respond to these very valid concerns, staff interpolated Southern California Association of Governments 2008 population and 2035 employment information to establish 2017 and 2047 population and employment data points, as shown in Table 2:

## Basis for Optimal Targets Vary by Subregion

**Optimization Will Require Supplemental Non-Measure Funds by the LRTP Horizon Year**

| 40 Years | 12.11% = | $4.5 billion |
|---|---|---|

| Subregion | Population | | Employment | | Pop/Emp, 2017/2047 Blend | Optimal Sub-Regional Share % | Δ% |
|---|---|---|---|---|---|---|---|
| | 2017 | 2047 | 2017 | 2047 | | | |
| Arroyo Verdugo | 4.99% | 4.79% | 7.54% | 7.82% | 6.28% | 7.82% | 1.53% |
| Central Los Angeles | 18.98% | 19.12% | 18.05% | 18.01% | 18.54% | 19.12% | 0.58% |
| Gateway Cities | 19.84% | 19.27% | 16.63% | 16.15% | 17.97% | 19.84% | 1.87% |
| Las Virgenes/Malibu | 0.85% | 0.81% | 1.38% | 1.42% | 1.12% | 1.42% | 0.30% |
| North Los Angeles County | 7.42% | 9.40% | 5.42% | 6.84% | 7.27% | 9.40% | 2.13% |
| San Fernando Valley | 14.66% | 14.19% | 14.21% | 14.09% | 14.29% | 14.66% | 0.37% |
| San Gabriel Valley | 16.17% | 16.14% | 13.10% | 12.76% | 14.54% | 16.17% | 1.63% |
| South Bay | 10.62% | 10.13% | 10.60% | 10.16% | 10.38% | 10.62% | 0.24% |
| Westside Cities | 6.46% | 6.14% | 13.06% | 12.75% | 9.60% | 13.06% | 3.46% |
| Grand Total | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 112.11% | 12.11% |

- Source Data: SCAG RTP12 Socio-economic Data (SED)
- 2017 and 2047 year data interpolated/extrapolated from SCAG 2008 and 2035 Projections. Back-up data available on request.
- In this version, Arroyo Verdugo consists of Burbank, La Crescenta-Montrose, La Canada Flintridge, Glendale, Pasadena and South Pasadena. That means both Pasadena and South Pasadena have been taken out of San Gabriel Valley to be included in Arroyo Verdugo subregion.

**REVISION #3**

As one can see from the data in Table 2, at least one subregion had a credible argument to use each of four differing basis for the targets. To avoid disagreements over the basis of the targets to be used, Metro staff offered a blended approach and an optimal approach. The blended approach added-up to 100%, but the optimal approach would not at 112%. This meant the optimal approach would require approximately $4.5 billion in non-measure funds from existing taxes beyond the 2009 LRTP planning horizon of 2039, but within the

new LRTP planning horizon of 2057. The subregion's all preferred the optimal target approach and Metro staff found it to be workable and concurred, making the optimal basis the consensus choice for the initial subregional priority setting exercise.

Before calculating the subregional revenue targets, assumptions were also needed about how much of the anticipated revenue from the augment and extend approach might be dedicated to multi-modal capital improvement purposes. Measure R had 55% dedicated to these purposes. It should be emphasized that for discussion purposes, staff assumed that roughly half of the new tax, about $60 billion, could go for multi-modal capital improvement purposes, though we cautioned that this was ultimately a decision expressly reserved for the Metro Board when more information about all needs were known.

Roughly half the tax, about $60 billion, is on a year of expenditure basis while the project cost data identified in the Mobility Matrices is based on current year dollars instead. This required that the value of the $60 billion, again roughly half the tax, be deescalated before being made available to each subregion as a target on a current dollar basis. This enabled the subregions to directly compare their target to the project cost data they already possessed.

Table 3 shows the end result of the target setting consensus, subregional targets in deescalated dollars comparable to project cost data on the same basis:

Table 3, Consensus Subregional Targets:

## Optimal Capital Improvement Targets

### Year of Expenditure $'s (includes inflation) vs. Current $'s (excludes inflation)

| Subregion | Optimal Sub-regional Share % | Pay-Go (YOE, No Bonds) | | | De-escalated to Current 2014 $ | | |
|---|---|---|---|---|---|---|---|
| | | Tier 1 - New 1/2 Cent 40 Years (FY 18-57) | Tier 2 - 1/2 Cent Renewal 18 Years (FY 39-57) | Total | Tier 1 - New 1/2 Cent 40 Years (FY 18-57) | Tier 2 - 1/2 Cent Renewal 18 Years (FY 39-57) | Total |
| Arroyo Verdugo | 7.82% | $ 2,889 | $ 1,772 | $ 4,661 | $ 1,125 | $ 506 | $ 1,631 |
| Central Los Angeles | 19.12% | $ 7,062 | $ 4,332 | $ 11,394 | $ 2,750 | $ 1,237 | $ 3,987 |
| Gateway Cities | 19.84% | $ 7,328 | $ 4,495 | $ 11,823 | $ 2,853 | $ 1,284 | $ 4,137 |
| Las Virgenes/Malibu | 1.42% | $ 525 | $ 322 | $ 842 | $ 204 | $ 92 | $ 296 |
| North LA County | 9.40% | $ 3,472 | $ 2,130 | $ 5,602 | $ 1,352 | $ 608 | $ 1,960 |
| San Fernando Valley | 14.66% | $ 5,415 | $ 3,321 | $ 8,736 | $ 2,108 | $ 949 | $ 3,057 |
| San Gabriel Valley | 16.17% | $ 5,973 | $ 3,663 | $ 9,636 | $ 2,325 | $ 1,046 | $ 3,371 |
| South Bay Cities | 10.62% | $ 3,923 | $ 2,406 | $ 6,329 | $ 1,527 | $ 687 | $ 2,214 |
| Westside | 13.06% | $ 4,824 | $ 2,959 | $ 7,783 | $ 1,878 | $ 845 | $ 2,723 |
| Subregional Total | 112.11% | $ 41,411 | $ 25,399 | $ 66,810 | $ 16,123 | $ 7,255 | $ 23,378 |

1) Optimal targets are each subregion's share of the proposed revenues based on the greatest percentage of four possible measures: i) current population; ii) future population; iii) current employment; or, iv) future employment. The following table has more information.
2) Dollars in millions.
3) YOE = Year of Expenditure.
4) Santa Clarita included in North LA County.
5) Arroyo Verdugo includes Burbank, Glendale, Pasadena, So. Pasadena and La Canada-Flintridge, and La Crescenta-Montrose.

## Financial Constraints

All projects submitted are anticipated to be included in the LRTP update, they must be categorized in one of two ways: financially constrained (funding plan) or financially unconstrained (no funding plan). These financial constraints are defined in federal planning regulations as revenues that can be reasonably expected to be available. The assumptions focus on revenues reasonably expected to be available. Tax and other revenues not yet authorized in law or by a policy body can only be included if based on reasonable assumptions, such as a pattern of periodic authorizations by the applicable legislature or policy making body. Aggressive assumptions that have no reasonable basis are not permitted by the Clean Air Act and other policy actions of the federal government. For transit agencies seeking New Starts funds, periodic reviews of financial capacity reasonableness are also required. These reviews can be stricter than regulatory reviews stemming from the federal planning regulations.

## Cost Effectiveness

One key performance metric that is applied to all major highway and transit projects is an evaluation of costs versus benefits, with the benefits defined as those in the Performance Metrics Framework. While a specific cost effectiveness measure is not shown in Attachment A, it will be calculated through the performance evaluation process using the other measures of project benefit. This explains why a specific weight is not assigned to cost effectiveness, even though it is important that all projects recommended through this process meet cost effectiveness criteria.

**ATTACHMENT C**

# Stakeholder Process Input

**Document Available Online at:**

**http://media.metro.net/projects_studies/images/lrtp_stakeholder_input.pdf**

# Subregional Stakeholder Draft Project Priorities

**ATTACHMENT D**

(2015 $ in thousands)

| for reference only - not priority order | Project | Notes | Cost Assumption | Draft Subregional Target (2015$) | Difference |
|---|---|---|---|---|---|
| 1 | **Arroyo Verdugo** | | | | |
| 2 | North Hollywood to Pasadena Bus Rapid Transit Corridor | a | $ 283,000 | $ 283,000 | $ - |
| 3 | Active Transportation Projects | | $ 136,500 | $ 136,500 | $ - |
| 4 | Goods Movement Projects | | $ 81,700 | $ 81,700 | $ - |
| 5 | Highway Efficiency, Noise Mitigation and Arterial Projects | | $ 602,800 | $ 602,800 | $ - |
| 6 | Modal Connectivity and Complete Streets Projects | | $ 202,000 | $ 202,000 | $ - |
| 7 | Transit Projects | | $ 257,100 | $ 257,100 | $ - |
| 8 | Unprogrammed | | $ 67,900 | $ 67,900 | $ - |
| 9 | **Arroyo Verdugo Subtotal** | | $ 1,631,000 | $ 1,631,000 | $ - |
| 10 | **San Fernando Valley** | | | | |
| 11 | ~~Active Transportation Program~~ | ~~b,c~~ | ~~$ 65,000~~ | ~~$ 65,000~~ | $ - |
| | City of San Fernando Bike Master Plan | b | $ 5,000 | $ 5,000 | |
| | Complete LA River Bike Path Across the Valley | b | $ 60,000 | $ 60,000 | |
| 12 | Complete East Valley Transit Corridor Project as LRT | | $ 1,000,000 | $ 1,000,000 | $ - |
| 13 | North Hollywood to Pasadena Bus Rapid Transit Corridor | a | $ 230,000 | $ 230,000 | $ - |
| 14 | Orange Line BRT Improvements | | $ 300,000 | $ 300,000 | $ - |
| 15 | Orange Line Conversion to Light Rail | | $ 1,400,000 | $ 62,000 | $ 1,338,000 |
| 16 | Sepulveda Pass Transit Corridor | d | $ 3,390,000 | $ 1,400,000 | $ 1,990,000 |
| 17 | **San Fernando Valley Subtotal** | | $ 6,450,000 | $ 3,057,000 | $ 3,328,000 |
| 18 | **Westside** | | | | |
| 19 | Active Transportation and First/Last Mile Connections Prog. | | $ 650,000 | $ 650,000 | $ - |
| 20 | I-10 Multi-Modal Circulation Improvement Project | | $ 50,000 | $ 50,000 | $ - |
| 21 | Crenshaw Line Extension to West Hollywood/Hollywood | e | $ 580,000 | $ 300,000 | $ 280,000 |
| 22 | Lincoln Blvd BRT | | $ 307,000 | $ 307,000 | $ - |
| 23 | Purple Line Extension to Santa Monica | | $ 2,647,100 | $ 16,000 | $ 2,631,100 |
| 24 | Sepulveda Pass Transit Corridor | d | $ 3,390,000 | $ 1,400,000 | $ 1,990,000 |
| 25 | **Westside Subtotal** | | $ 7,624,100 | $ 2,723,000 | $ 4,901,100 |
| 26 | **Central City Area** | | | | |
| 27 | Crenshaw Line Extension to West Hollywood/Hollywood | e | $ 1,750,000 | $ 1,185,000 | $ 565,000 |
| 28 | Vermont "Short Corridor" Subway from Wilshire to Exposition | | $ 1,700,000 | $ 425,000 | $ 1,275,000 |
| 29 | Bus Rapid Transit and 1st/Last Mile Solutions such as DASH | b | $ 280,000 | $ 280,000 | $ - |
| 30 | Freeway Interchange and Operational Improvements | b | $ 200,000 | $ 200,000 | $ - |
| 31 | Historic Streetcar | b | $ 107,000 | $ 107,000 | $ - |
| 32 | LA River Waterway & System Bikepath | b | $ 370,000 | $ 370,000 | $ - |
| 33 | Los Angeles Safe Routes to School Initiative | b | $ 250,000 | $ 250,000 | $ - |
| 34 | LA Streetscape Enhancements & Great Streets Program | b | $ 470,000 | $ 470,000 | $ - |
| 35 | Active Transportation, 1st/Last Mile, & Mobility Hubs | b | $ 210,000 | $ 210,000 | $ - |
| 36 | Traffic Congestion Relief/Signal Synchronization Program | b | $ 50,000 | $ 50,000 | $ - |
| 37 | Public Transit State of Good Repair Program | b | $ 440,000 | $ 440,000 | $ - |
| 38 | **Central Cities Subtotal** | | $ 5,827,000 | $ 3,987,000 | $ 1,840,000 |
| 39 | **North County** | | | | |
| 40 | Active Transportation Program | b | $ 264,000 | $ 264,000 | $ - |
| 41 | Arterial Program | b | $ 726,130 | $ 726,130 | $ - |
| 42 | Goods Movement Program | b | $ 104,000 | $ 104,000 | $ - |
| 43 | High Desert Corridor (HDC) Right-of-Way | | $ 270,000 | $ 170,000 | $ 100,000 |
| 44 | Highway Efficiency Program | b | $ 128,870 | $ 128,870 | $ - |
| 45 | I-5 North Capacity Enhancements (Parker Rd. + 1.5 miles) | | $ 785,000 | $ 240,000 | $ 545,000 |
| 46 | Multimodal Connectivity Program | b | $ 239,000 | $ 239,000 | $ - |
| 47 | Transit Program | b | $ 88,000 | $ 88,000 | $ - |
| 48 | **North County Subtotal** | | $ 2,605,000 | $ 1,960,000 | $ 645,000 |
| 49 | **Las Virgenes-Malibu** | | | | |
| 50 | Active Transportation, Transit, and Technology Program | b | $ 32,000 | $ 32,000 | $ - |
| 51 | Highway Efficiency Program | b | $ 133,000 | $ 133,000 | $ - |
| 52 | Modal Connectivity Program | b | $ 68,000 | $ 68,000 | $ - |
| 53 | Traffic Congestion Relief and Improvement Program | b | $ 63,000 | $ 63,000 | $ - |
| 54 | **Las Virgenes-Malibu Subtotal** | | $ 296,000 | $ 296,000 | $ - |

## Subregional Stakeholder Draft Project Priorities

**ATTACHMENT D**

(2015 $ in thousands)

| for reference only - not priority order | Project | Notes | Cost Assumption | Draft Subregional Target (2015$) | Difference |
|---|---|---|---|---|---|
| 55 | **Gateway Cities** | | | | |
| 56 | Gold Line Eastside Extension Phase II - Washington Blvd. | ~~f, j~~ | $ 1,500,000 | $ 543,000 | $ 957,000 |
| 57 | Green Line Eastern Extension (Norwalk) | ~~j~~ | $ 500,000 | $ 500,000 | $ - |
| 58 | I-5 Corridor Improvements (I-605 to I-710) | | $ 1,100,000 | $ 1,059,000 | $ 41,000 |
| 59 | I-605 Corridor "Hot Spot" Interchange Improvements | ~~j~~ | $ 850,000 | $ 300,000 | $ 550,000 |
| 60 | I-710 South Corridor Project | ~~g, j~~ | $ 4,000,000 | $ 500,000 | $ 3,500,000 |
| 61 | SR 60/I-605 Interchange HOV Direct Connectors | h | $ 260,000 | $ 200,000 | $ 60,000 |
| 62 | West Santa Ana Branch (Eco Rapid Transit Project) | ~~j~~ | $ 2,000,000 | $ 1,035,000 | $ 965,000 |
| 63 | Active Transportation Program (ATP) | j | To be determined | ~~Included above (see footnote j)~~ | |
| 64 | **Gateway Cities Subtotal** | | $ 10,210,000 | $ 4,137,000 | $ 6,073,000 |
| 65 | **San Gabriel Valley** | | | | |
| 66 | Active Transportation Program (Bicycle/Pedestrian Facilities) | b | $ 231,000 | $ 231,000 | $ - |
| 67 | Bus System Improvement Program | b | $ 55,000 | $ 55,000 | $ - |
| 68 | Goods Movement Program (Improvements & RR Xing Elim.) | b | $ 33,000 | $ 33,000 | $ - |
| 69 | Highway Demand Based Program (HOV Ext. & Connectors) | b | $ 231,000 | $ 231,000 | $ - |
| 70 | Highway Efficiency Program | b | $ 534,000 | $ 534,000 | $ - |
| 71 | I-605/I-10 Interchange | | $ 126,000 | $ 126,000 | $ - |
| 72 | ITS/Technology Program (Advanced Signal Technology) | b | $ 66,000 | $ 66,000 | $ - |
| 73 | Metro Gold Line Eastside Transit Corridor Phase II - SR-60 | f | $ 1,500,000 | $ 543,000 | $ 957,000 |
| 74 | Metro Gold Line Foothill Light Rail Extension - Phase 2B | i | $ 1,130,000 | $ 1,019,000 | $ 111,000 |
| 75 | First/Last Mile and Complete Streets | b | $ 198,000 | $ 198,000 | $ - |
| 76 | SR 60/I-605 Interchange | h | $ 130,000 | $ 130,000 | $ - |
| 77 | SR-57/SR-60 Interchange Improvements | | $ 205,000 | $ 205,000 | $ - |
| 78 | **San Gabriel Valley Subtotal** | | $ 4,439,000 | $ 3,371,000 | $ 1,068,000 |
| 79 | **South Bay** | | | | |
| 80 | South Bay Highway Operational Improvements | | $ 1,100,000 | $ 500,000 | $ 600,000 |
| 81 | I-405 South Bay Curve Widening | | $ 150,000 | $ 150,000 | $ - |
| 82 | I-405/I-110 Int. HOV Connector Ramps & Intrchng Improv | | $ 355,000 | $ 355,000 | $ - |
| 83 | I-110 Express Lane Ext South to I-405/I-110 | | $ 81,500 | $ 51,500 | $ 30,000 |
| 84 | I-105 Hot Lane from I-405 to I-605 | | $ 350,000 | $ 200,000 | $ 150,000 |
| 85 | Green Line Extension to Crenshaw Blvd in Torrance | | $ 607,500 | $ 607,500 | $ - |
| 86 | Transportation System and Mobility Improvements Program | b | $ 350,000 | $ 350,000 | $ - |
| 87 | **South Bay Subtotal** | | $ 2,994,000 | $ 2,214,000 | $ 780,000 |
| 88 | **GRAND TOTAL** | | $ 42,076,100 | $ 23,376,000 | $ 18,635,100 |

a. Cost Assumption equals subregional funding share proposed by the Arroyo Verdugo and San Fernando Valley areas.

b. Cost Assumption equals proposed subregional funding.

~~c. Program includes City of San Fernando Bike Master Plan and LA River Bike Path Across the Valley projects.~~

d. Final cost, scope, and subregional shares will be determined by the environmental process. The working assumption here for any existing available LRTP funding is 50% San Fernando Valley area and 50% Westside.

e. Final cost, scope, and subregional shares will be determined by the environmental process. The working assumption here is 75% Central-25% Westside.

f. Final cost, scope, and subregional shares will be determined by the environmental process. The working assumption here for any existing available LRTP funding (including Measure R) is 50% Gateway area and 50% San Gabriel Valley area.

g. At least $3.5 B in funding needs for this project is not shown here. We are pursuing a strategy to fund 12.5% from existing resources, 12.5% from State resources, 12.5% from Federal resources, & 12.5% from subregional target. The remaining 50% is to come from private tolls or fees originating from freight.

h. Final cost, scope, & subregional shares will be determined by the environmental process. The working assumption here is 2/3 Gateway & 1/3 San Gabriel Valley.

i. Subregional target does not include full 25% contingency.

j. The ATP is to be based upon the Gateway COG's Strategic Transportation Plan. ~~These Gateway COG projects will include ATP (bicycle/pedestrian) elements. The COG reserves its right to change these prioritiesas their Strategic Planning Process progresses.~~

Current as of November 24 ~~16~~ ~~12~~, 2015

# Regional Facility Provider Draft Needs List

**ATTACHMENT E**

(2015 $ in thousands)

| | Project | Notes | | Cost Estimate |
|---|---|---|---|---|
| 1 | **Bob Hope Airport** | | | |
| 2 | Burbank/Glendale LRT | | $ | 1,604,000 |
| 3 | Clybourn Ave: Grade separation at railroad tracks / Vanowen St / Empire Ave | | $ | 60,000 |
| 4 | Hollywood Way/San Fernando Rd Metrolink station pedestrian bridge | | $ | 8,350 |
| 5 | I-5/Buena Vista Ave: Reconfigure ramps and connect with Winona Ave | a | $ | 30,000 |
| 6 | Metro Red Line Extension: North Hollywood to Burbank Airport | | $ | 1,800,000 |
| 7 | North Hollywood to Bob Hope Airport to Pasadena Transit Corridor | a, b | $ | 2,550,000 |
| 8 | **Subtotal** | | **$** | **6,052,350** |
| 9 | **Long Beach Airport** | | | |
| 10 | 3138-Bellflower Blvd./ Spring St. Improv. | | $ | 5,000 |
| 11 | 9078-Lakewood Blvd./ Rosemead Blvd. (59) signals-San Gabriel Blvd. to Stearns St. | | $ | 10,325 |
| 12 | 3137-Lakewood Blvd. / Spring St. Improv. | | $ | 5,000 |
| 13 | 9659-LGB Bicycle access improvements | | $ | 50,000 |
| 14 | 3082-Wardlow Rd. / Cherry Ave. Intersection Widening | | $ | 5,000 |
| 15 | 9094-Willow St. (23) signals from I-710 to I-605 | | $ | 2,450 |
| 16 | **Subtotal** | | **$** | **77,775** |
| 17 | **Los Angeles Airport** | | | |
| 18 | Automated People Mover (APM) system | | $ | 175,000 |
| 19 | Connection: Manchester Square to I-405 southbound and I-105 eastbound ramp | | $ | 450,000 |
| 20 | Gateway LAXpress Employee Transport: capital cost of existing/new transit vehicles | | $ | 50,000 |
| 21 | Gateway LAXpress Employee Transport: Mobility Hubs at Regional Transit Centers | | $ | 75,000 |
| 22 | Gateway LAXpress Employee IT Platform Services | | $ | 250 |
| 23 | I-405: Construct LAX Expressway | | $ | 1,120,000 |
| 24 | Interstate 405 (I-405) Direct High Occupancy Vehicle (HOV) Connector to LAX | | $ | 135,000 |
| 25 | Provide an on-ramp to I-405 northbound from northbound La Cienega Boulevard | | $ | 90,000 |
| 26 | Trench Cover (Crenshaw/LAX Transit Corridor) | | | TBD |
| 27 | **Subtotal** | | **$** | **2,095,250** |
| 28 | **Palmdale Airport** | | | |
| 29 | Bicycle/Pedestrian Connector from the Palmdale Regional Airport | | $ | 50,000 |
| 30 | High Desert Corridor from SR 14 to 50th Street East | c | $ | 670,000 |
| 31 | People Mover from PTC to the Palmdale Regional Airport | | $ | 100,000 |
| 32 | RVB Roadway Improvements from 15th Street East to 50th Street East | | $ | 75,000 |
| 33 | Rancho Vista Grade Separation Project from Fairway Drive to 15th Street East | | $ | 100,000 |
| 34 | **Subtotal** | | **$** | **995,000** |

# Regional Facility Provider Draft Needs List

**ATTACHMENT E**

(2015 $ in thousands)

| | Project | POLA Priority | Notes | | Cost Estimate |
|---|---|---|---|---|---|
| 35 | **Port of Los Angeles (POLA)** | | | | |
| 36 | Terminal Island Container Transfer Facility Expansion (additional loading track) | 1 | | $ | 4,000 |
| 37 | West Basin Container Terminal Automated/Electrified On-Dock Railyard | 2 | | $ | 86,000 |
| 38 | Alameda Corridor Terminus - West Basin Track (West Basin 2 nd Mainline Track) | 3 | | $ | 5,000 |
| 39 | Alameda Corridor POLA/POLB Access Rail (Thenard Junction Connection) | 4 | | $ | 20,000 |
| 40 | Pier 300 On-Dock Railyard Expansion (2 additional loading tracks) | 5 | | $ | 35,000 |
| 41 | Pier 400 On-Dock Railyard Expansion (2 additional loading tracks) | 6 | | $ | 75,000 |
| 42 | Pier 400 Second Lead Track | 7 | | $ | 12,000 |
| 43 | Alameda Corridor Terminus - Cerritos Channel Bridge (5004) | 8 | | $ | 170,000 |
| 44 | Alameda Corridor Terminus-West Basin Railyard Expansion (additional tracks) | 9 | | $ | 45,000 |
| 45 | SR 47/V. Thomas Bridge/Harbor Blvd. Interchange | 10 | | $ | 25,000 |
| 46 | SR 47/Navy Way Interchange | 11 | | $ | 50,000 |
| 47 | Alameda Corridor Terminus/SR 47 Rail Crossing Advanced Warning System. | 12 | | $ | 5,000 |
| 48 | San Pedro Waterfront Regional Access Improvement: | 13 | | $ | 41,000 |
| 49 | Alameda Corridor Terminus/California Coastal Trail Extension Grade Separation | 14 | | $ | 15,000 |
| 50 | California Coastal Trail - Ports O' Call Promenade | 15 | | $ | 29,000 |
| 51 | New Terminal Island On-dock railyard | 16 | | $ | 150,000 |
| 52 | Terminal Island Rail Support Yard | 17 | | $ | 50,000 |
| 53 | Container Movement Efficiency Program | 18 | | $ | 383,000 |
| 54 | **Subtotal** | | | **$** | **1,200,000** |
| 55 | **Port of Long Beach** | | | | |
| 56 | Coastal Trail Gap Closure Projects (Regional Connectivity) | | | $ | 21,800 |
| 57 | Gerald Desmond Bridge Replacement Project | | | $ | 200,000 |
| 58 | Pico Avenue Freight Corridor Street Improvements | | | $ | 160,000 |
| 59 | Port Area Advanced Transportation Management and Information System 2.0 | | | $ | 6,000 |
| 60 | Port Access Road Improvements | | | $ | 50,015 |
| 61 | Rail Efficiency Improvement Project at Pier B | | | $ | 440,000 |
| 62 | Rail Efficiency Improvement at Pier G South Rail Yard | | | $ | 66,000 |
| 63 | Terminal Island On-Dock Rail Efficiency Improvements | | | $ | 173,710 |
| 64 | **Subtotal** | | | **$** | **1,117,525** |
| 65 | **Union Station** | | | | |
| 66 | Los Angeles Union Station-40 year component State of Good Repair Cost | | | $ | 106,260 |
| 67 | Southern California Regional Interconnector Project (Metrolink Run-Through) | | | $ | 150,000 |
| 68 | Union Station Linkages Program (Connect US Action Plan) | | | $ | 26,000 |
| 69 | Union Station Master Plan (USMP) Stage 2A Multi Modal Passenger Concourse | | | $ | 300,000 |
| 70 | USMP Enabling Development (Stage 2C) | | | $ | 12,000 |
| 71 | USMP Enabling Development and Open Space Network (Stage 2E and 2F) | | | $ | 114,000 |
| 72 | USMP Perimeter Improvements (Stage 1) | | | $ | 31,111 |
| 73 | USMP Relocated Patsaouras Bus Plaza (Stage 2B) | | | $ | 770,000 |
| 74 | **Subtotal** | | | **$** | **1,509,371** |
| 75 | **GRAND TOTAL** | | | **$** | **13,047,271** |

a. Project also identified as priority in Arroyo Verdugo Subregion project list

b. Project also identified as priority in San Fernando Valley Subregion project list

c. Project also identified as priority in North County Subregion project list

# Transportation Plan Roadmap

Attachment F

| | OCTOBER 2015 | NOVEMBER–<br>DECEMBER 2015 | JANUARY–<br>MARCH 2016 | APRIL–<br>JUNE 2016 | JULY–<br>SEPTEMBER 2016 | OCTOBER–<br>DECEMBER 2016 |
|---|---|---|---|---|---|---|
| **EXPENDITURE PLAN**  | > Plan Framework | > Finalize Framework | > Evaluate Project Sequencing | > Finalize Project Sequencing | > Submit Ballot Measure | ★★★<br>**ELECTION NOV 8, 2016** |
| **STAKEHOLDER & COMMUNITY OUTREACH**  | > COG Coordination<br>> Stakeholder and Sub-Regional Briefings | > Stakeholder and Sub-Regional Briefings | > Public meetings<br>> Survey<br>> Focus Groups<br>> Community Workshops<br>> Stakeholder and Sub-Regional Briefings | > Stakeholder and Sub-Regional Briefings | > Voter Information Begins | |
| **EDUCATION**  | > Annual Report<br>> Launch LRTP Website | > Education Campaign Begins | > Quality of Life Report | > Telephone Town Halls | > Voter Information Begins | |
| **BOARD ACTIVITIES**  | > Framework Presented | > Action on Framework | > Expenditure Plan Draft Released | > Final Expenditure Plan Action | | |

Metro

# Long Range Transportation Plan

## Potential Ballot Measure Framework, Assumptions, and Input

Board Agenda Item 17 – December 3, 2015

Metro

# Potential Ballot Measure Framework

- Transforming transportation will include projects in all sub-regions of Los Angeles County
- Approximately half of the plan will include capital improvement projects
- Evaluating the major transit and highway projects will occur through established Performance Metrics
- The proposed Performance Metrics reflect feedback from Board Members and regional stakeholders

Metro

# Potential Ballot Measure Assumptions

- The project evaluation process is guided by some assumptions:
  - Augment the current tax
  - Replace the current tax when it expires
  - Extend the sunset year

- These assumptions would generate an estimated $120 billion (YOE) through 2057
  - Roughly $60 billion for capital projects
  - Roughly $60 billion for local investments, operations, etc.

Metro

# Project Evaluation Process

- The evaluation process will be the foundation for developing the Expenditure Plan
- This process provides an opportunity to potentially accelerate some Measure R projects while keeping other existing projects on their current schedule
  - All regional projects, including unbuilt Measure R projects, will be evaluated to provide the Board with a comparative assessment across the County

Metro

# Recommendation

- APPROVE the 2017 Long Range Transportation Plan Update Proposed Performance Metrics Framework to be used in analyzing all proposed major transit and highway projects (including Measure R projects not yet under construction) in order to develop a Potential Ballot Measure Expenditure Plan

Metro

# Proposed Performance Metrics Themes & Weights

- **Mobility: Relieve Congestion** — **45.0%**
  - Improve travel times and reliability; increase active transportation
- **Accessibility: Provide Access** — **17.5%**
  - Increase service to the transit dependent, cyclists, youths, pedestrians, seniors, and people with disabilities; increase those served by Metro; improve first-last mile
- **Economy: Grow Economic Benefits** — **12.5%**
  - Create jobs; increase goods movement; invest in disadvantaged communities
- **Safety: Improve Safety** — **12.5%**
  - Enhance personal and public safety; reduce incidents
- **Sustainability and Quality of Life: Enhance Quality of Life** — **12.5%**
  - Reduce greenhouse gases; improve air quality; positively impact public health

Metro

# Draft Proposed Performance Metrics Framework

| Theme | Goals and Objectives | System Performance Measures | Wt. (%) | Highway Project Performance Measures | Transit Project Performance Measures |
|---|---|---|---|---|---|
| **Mobility** | • Relieve ~~Ease~~ congestion<br>• Increase travel by transit, bicycle, and pedestrians<br>• Improve travel times<br>• Improve system connectivity<br>• Increase person throughput<br>• Improve effectiveness & reliability for core riders<br>• Address operating & life cycle costs<br>• Extend life of facility & equipment | • Reduced person hours of delay<br>• Increased person throughput<br>• Reduced single-occupant vehicle mode share<br>• Increased annual boardings per mile<br>• Annual hours of delay savings/mile<br>• Improve roadway condition rating<br>• Reduced portion of transit assets past useful life | ~~35%~~ 45% | • Increased person throughput<br>• Reduced person hours of delay [2] | • Increased transit ridership<br>• Increased person throughput<br>• Improved ~~system~~ travel time reliability<br>• Improved service frequency |
| **Economy** | • Increase economic output<br>• Support job creation & retention<br>• Support goods movement<br>• Invest in disadvantaged communities | • Improved linkages to major employment/activity centers[1]<br>• Increased number of jobs<br>• Improved REMI Model economic benefit results<br>• Vehicle hours of delay for trucks<br>• Dollars invested in transportation projects in disadvantaged communities | ~~15%~~ 12.5% | • Reduced truck vehicle hours of delay [2]<br>• Improved job access<br>• Dollars invested in transportation projects in disadvantaged communities | • Increased transit oriented development<br>• Improved job access<br>• Dollars invested in transportation projects in disadvantaged communities |

[1] Employment/activity centers include major employment centers, retail centers, education facilities, and healthcare facilities

[2] Reduced person and truck hours will serve as the best proxy available for person and truck travel time reliability for Highway projects.

# Draft Proposed Performance Metrics Framework (continued)

| Theme | Goals and Objectives | System Performance Measures | Wt. (%) | Highway Project Performance Measures | Transit Project Performance Measures |
|---|---|---|---|---|---|
| **Accessibility** | • Increase population served by facility<br>• Increase service to transit-dependent, cyclist, pedestrian populations including youth, seniors, and people with disabilities<br>• Improve first-last mile connections<br>• Utilize technology | • Job accessibility by population subgroup<br>• Mode choice by income quintile<br>• SB 535 Disadvantaged Communities mapping (CalEnviroScreen)<br>• Increased number of households with access to transit<br>• Increased number of households with access to bicycle infrastructure<br>• Increased number of households with disabled persons with access to transit<br>• Increased access to parks and open space areas | ~~20%~~<br>17.5% | • Increased number of disadvantaged population served<br>• Improved access or system connectivity<br>• Increased access to parks and open space areas<br>• See note 3 | • Increased number of ~~households~~ population served by frequent transit<br>• Increased number of transit dependent households served<br>• Improved system connectivity<br>• Increased access to parks and open space areas<br>• See note 3 |
| **Safety** | • Reduce incidents<br>• Improve personal safety | • Fatalities by mode<br>• Injuries by mode<br>• Fatalities per capita | ~~15%~~<br>12.5% | • High fatal and severe injury collision area addressed<br>• Reduced safety conflicts | • Improved transit system safety<br>• High collision area addressed [4] |

[3] Metro considered measuring "increased network connectivity for walking and biking" and found that while major highway and transit projects may offer accommodations for bicycling and walking, the improvements to bicycle and pedestrian system connectivity will likely be minimal and impossible to compare effectiveness quantitatively from one project to another.

[4] The Statewide Integrated Traffic Records System (SWITRS) is maintained by the California Highway Patrol (CHP) and does not log fatalities and severe injuries on the transit system.

# Draft Proposed Performance Metrics Framework (continued)

| Theme | Goals and Objectives | System Performance Measures | Wt. (%) | Highway Project Performance Measures | Transit Project Performance Measures |
|---|---|---|---|---|---|
| **Sustainability & Quality of Life** | Improve environmental quality<br>• Reduce greenhouse gas (GHG) emissions<br>• Reduce urban heat island effect<br>• Reduce storm water runoff impacts<br>• Reduce biological and habitat impact<br>Improve public health<br>Improve quality of life<br>• Improve access to parks and recreation<br>• Reduce noise impacts | Improve environmental quality<br>• Reduced VMT per capita<br>• Reduced GHG per capita<br>• Reduced impact on habitat preservation and open space areas<br>Improve public health<br>• Reduced EPA air quality conformity criteria pollutants<br>• Increased bike, pedestrian, and transit trips<br>Improve quality of life<br>• ~~Increased access to parks and open space areas~~ | ~~15%~~ 12.5% | Reduced impact on environment<br>• Reduced GHG emissions<br>• Reduced urban heat island effect<br>• Reduced storm water runoff impact<br>• Reduced impact on habitat preservation and open space areas<br>Improved public health<br>• Support for active transportation<br>• ~~Improved access to healthcare facilities~~<br>Improve quality of life<br>• Reduced noise impacts<br>• ~~Improved access to parks and open space~~ | Reduced impact on environment<br>• Reduced GHG emissions<br>• Reduced VMT<br>• Reduced urban heat island effect<br>• Reduced storm water runoff impact<br>• Reduced impact on habitat preservation and open space areas<br>Improved public health<br>• Support for active transportation<br>• ~~Improved access to healthcare facilities~~<br>Improve quality of life<br>• Reduced noise impacts<br>• ~~Improved access to parks and open space~~ |

# Framework Timeline

- **Board Action on Framework** – December 2015
- **Performance Metrics and Financial Modeling** – December 2015-March 2016
- **Recommended Expenditure Plan Presentation to Board** – March 2016
- **Public Comment** – March-June 2016
- **Board Action on Ordinance and Expenditure Plan** – June 2016

Metro


Thank you
Metro

# Metro

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

## Board Report

**File #:**2015-1704, **File Type:**Motion / Motion Response

Agenda Number:17.1

**REGULAR BOARD MEETING**
**DECEMBER 3, 2015**

**Motion by:**

**Ridley-Thomas, Garcetti, Butts and DuBois**

December 3, 2015

**Relating to Item 17, File ID 2015-1608**
**Prioritizing Mobility through the Long Range Transportation Plan Performance Metrics Framework**

The next step in developing an updated Long Range Transportation Plan (Plan) will be an analysis of all the major highway and transit projects that have been identified by sub-regional stakeholders following a comprehensive planning process.

The proposed Performance Metrics provide a framework for evaluating these major projects, and incorporates a diverse range of criteria, including mobility, economy, accessibility, safety and sustainability. All of these criteria are critical to consider when designing a balanced transportation system.

However, Metro's primary mission must be to improve commute times, increase public transit options, and enhance the connectivity of our entire transit system. Therefore, the most significant criteria in assessing future regional transportation investments throughout Los Angeles County should be mobility.

**AMENDING MOTION by Ridley-Thomas, Garcetti, Butts and DuBois** that the Board of Directors revise the Performance Metrics Framework for Major Projects to allocate a 45% weight to the Mobility category and proportionally reduce all other categories equally.

# Attachment B: Existing Plans and Policies

The proposed Metro CBA builds upon the USDOT's *2024 Benefit-Cost Analysis Guidance for Discretionary Grant Programs*, integrates components from *California's Life-Cycle Benefit/Cost Analysis (Cal-B/C)* model and reflects the goals of California's Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375). The methodology emphasizes systematic identification, quantification, and comparison of expected benefits and costs over specified project lifecycles, ensuring alignment with both federal requirements for grant applications and state-level best practices. Key components include standardized benefits and costs, comprehensive benefit categories encompassing user and non-user impacts, and transparent analytical frameworks that support both internal decision-making and external funding applications.

The Metro draft CBA framework also includes Metro Board-defined goals and objectives as outlined in agency policies such as the 2016 Measure M Ordinance and Expenditure Plan, Metro's 2020 Long Range Transportation Plan, Vision 2028 Strategic Plan, Metro's Equity Platform, and the 2023 Measure M 5-Year Comprehensive Assessment and Equity Report.

- In December 2015, the Metro Board adopted a policy (Attachment B-1) that directed the evaluation of and methodology for prioritizing projects to be recommended for inclusion in the **2016 Measure M Ordinance and Expenditure Plan**. This policy, called the Performance Metrics Framework for Major Projects, proposed five main categories of objectives that included Mobility, Economy, Accessibility, Safety, and Sustainability/Quality of Life. The final weighting of these categories was amended by Board motion (Attachment B-2) and the goals and objectives were adopted as shown in Table 1.
- The Performance Metrics Framework supported not only Measure M's success in being approved with over 71% of the vote in the November 2016 election but also served as the foundation for Metro's **2020 Long Range Transportation Plan** (LRTP).

**Table 1: Performance Metrics Framework for Major Projects (adopted December 2015)**

| Category | Goals and Objectives | Weight |
|---|---|---|
| Mobility | Relieve congestion; increase travel by transit, bicycle, and pedestrians; improve travel times, system connectivity; increase person throughput; improve effectiveness & reliability for core riders; address operating & lifecycle costs; and extend life of facility & equipment | 45% |
| Economy | Increase economic output; support job creation & retention; support goods movement; and invest in disadvantaged communities | 12.5% |
| Accessibility | Increase population served by facility; increase service to transit-dependent, cyclist, pedestrian populations including youth, seniors, and people with disabilities; improve first-last mile connections; and utilize technology; improve access to parks and open space | 17.5% |
| Safety | Reduce incidents and improve personal safety | 12.5% |
| Sustainability / Quality of Life | Improve environmental quality by reducing Greenhouse Gas (GHG) emissions, urban heat island effect, storm water runoff impacts, biological and habitat impact; improve public health; reduce noise impacts | 12.5% |

- **Vision 2028 Strategic Plan** was adopted by the Metro Board in 2018, and it serves as a blueprint for improving mobility and quality of life across the region. The goals included (1) providing high quality mobility options that enable people to spend less time driving, (2) delivering outstanding trip experiences for all users of the transportation system, (3) enhancing communities and lives through mobility and access to opportunity, (4) transforming LA County through regional collaboration and national leadership, (5) providing responsive, accountable, and trustworthy governance within the Metro organization. Its strategic actions addressed broader issues beyond traditional transportation criteria, and included housing, safety, security, fare policy and job creation.

- Also in 2018, Metro adopted its **Equity Platform**, a framework that addresses and reduces longstanding disparities in access to opportunities across Los Angeles County. One of its pillars is to clearly define and measure equity to influence investments and policy decisions throughout project development.

- The **Measure M 5-Year Comprehensive Assessment and Equity Report** was the first major performance evaluation of the Measure M Ordinance and Expenditure Plan and included significant analysis on equity and financial performance. Prior to the assessment, in October 2023, the Metro Board adopted a set of equity and financial criteria to be incorporated into the next comprehensive assessment, which informs the proposed Metro CBA. These project criteria included: (1) feasibility of delivery, (2) ability to leverage local, state and federal funding, (3) enhancement of system-wide connectivity, (4) service of Equity Focus Communities and/or transit dependent riders, (5) ridership increases and systemwide enhancements, and (6) connectivity with economic centers and sales tax increase to sustain Measure M tax revenues in the long run.

These Board policies adopted over the past 10 years serve as the foundation for the current Metro CBA, as the methodology operationalizes goals and objectives into metrics.

COUNTYWIDE PLANNING AND DEVELOPMENT

# Metro Cost Benefit Analysis and Methodology

## Planning and Programming Committee
## Construction Committee
## June 18, 2025

Metro

# Receive and File Metro Cost Benefit Analysis (CBA) Methodology

This report provides the Metro Board an update on the draft Metro CBA methodology, consistent with the framework presented as part of the Annual Program Evaluation report and the February 2025 Board motion (Dutra, Najarian, Barger, Butts, Solis and amended by Horvath).

Metro staff will return to the Board in July to seek Board concurrence on the final methodology.

# Proposed Themes, Objectives and Weights in Metro CBA

| Evaluative Theme (weight) | Goals/Objectives | Sources | Examples of Metrics |
|---|---|---|---|
| **Mobility and Accessibility (40%)** | Reliability, Reduction in Travel Delay, Connectivity to Regional Destinations, Access to Resources and Opportunities, Management of Congestion Growth<br><br>*Equity (3%): Improved Access to Opportunities, Mobility Improvements for Historically Underserved Areas* | USDOT Guidance<br>Caltrans Methodology<br>Metro 2020 LRTP<br>Metro Vision 2028<br>2023 MM Evaluation | Travel Time Savings<br>Person Throughput<br>Mode shift<br>Passenger Miles Traveled<br>Vehicle Hours Traveled |
| **Safety/Health (15%)** | Minimize Exposure to Health/Safety Risks<br>Increase Access to Health Opportunities<br><br>*Equity (1%): Reductions in Exposure to Health/Safety Risks for Sensitive Populations, Improved Access to Health Opportunities* | SB374<br>Vision Zero<br>2020 LRTP<br>Metro Vision 2028 | Reduction in noise<br>Reduced # of injuries, fatalities<br>Reduced travel time to health care facilities |
| **Environmental Sustainability (15%)** | Reductions in Greenhouse Gas (GHG) Emissions, Urban Heat Island Effects, Stormwater Runoff Impacts, Biological and Habitat Impact<br><br>*Equity (1%): Reduction in Exposure to Environmental Negative Externalities, Improved Environmental Amenities, Reduction of Impacts to Sensitive Receptors* | USDOT Guidance<br>Caltrans Methodology, SB374<br>2020 LRTP<br>Metro Vision 2028<br>2023 MM Evaluation | Reduced GHG per capita<br>Reduced EPA air quality conformity criteria pollutants |
| **Operational Sustainability (15%)** | Sustainable Operations and Service Provision<br>System resiliency<br>Long Term Fiscal Sustainability and System Productivity | USDOT Guidance<br>2020 LRTP<br>2023 MM Evaluation | Extended life of facility and equipment<br>Operating costs avoided<br>Sufficiency of O&M funding<br>Security and personal safety program availability<br>System redundancy for emergency recovery |
| **Economic Impact (15%)** | Economic Growth, Sales Tax Growth, Industry/Commerce Activities, Goods Movement Efficiency, Workforce Access, Visitors to Region<br><br>*Equity (1%): Equitable distribution of economic benefits to different socio-economic groups* | 2023 MM Evaluation | Economic Output (as a result of transportation investments)<br>Jobs Created (by sector)<br>Land Use and Development, Property Value Increases |

# Modeling: Inputs and Outputs

**Federal & State**

*(Based on Cal B/C)*

Mobility / Accessibility
- Ridership increases
- Person Hours of Time Saved
- Travel Time Savings ($)
- Travel Time Reliability ($)
- Changes in VMT, VHT ($)

Safety and Health
- Fatalities Avoided ($)
- Injuries Avoided ($)
- Emissions Avoided ($)
- Access to Health Care, Recreational Opps

Environmental
- Tons of Emissions Saved ($)
- Noise Avoidance
- Urban Heat Island Effects Avoided
- Stormwater Runoff Reduced
- Biological/Habitat Impact Reductions

Operational Sustainability
- Vehicle Operating Savings ($)
- Sufficiency of O&M Funding
- Resiliency and Recovery

County Economic Benefits
- Changes in Transportation Cost ($)
- Jobs Creation ($)
- Economic Output ($)

Equity
- Service to Equity Focus Communities
- Transit Dependent Riders

**Metro Cost Benefit Analysis**

## PROJECT PROFILES INCLUDE:

Federally Defined Benefit/Cost Ratio
- Federally defined benefits
- Federal valuations and calculations
- Costs include capital expenditures
- Excludes Economic Impact to Region

Metro Defined Benefit/Cost Ratio
- Metro defined benefits
- Metro valuations and calculations
- Costs include capital, O&M and state of good repair/asset replacement
- Includes Regional Economic Impact

Non-Monetized Performance Indicators
- Cost effectiveness
- Demographics served

Other Analyses
- Spatial analysis
- Regional Economic Impacts
- Economic Impact to Nation

Qualitative Narratives
- Project History
- Community Engagement and Preferences
- Support and/or Partnerships

Met

# Next Steps

- Refine and finalize the Metro CBA methodology including the proposed core objectives and weights to reflect Metro priorities when evaluating project performance.  (Return to the Board in July for final concurrence.)

- Apply Metro CBA to projects as they reach critical milestones; conduct sensitivity testing of the analyses; continue to refine the CBA as a continuously evolving tool.

- Draw from national and international best practices and case studies to integrate the Metro CBA into project development and implementation procedures.

Metro