METROPOLITAN
TRANSPORTATION
COMMISSION

Joseph P. Bort MetroCenter
101 Eighth Street
Oakland, CA 94607-4700
TEL 510.817.5700
TDD/TTY 510.817.5769
FAX 510.817.5848
E-MAIL info@mtc.ca.gov
WEB www.mtc.ca.gov

Memorandum

TO: Equity Working Group DATE: March 9, 2011

FR: Dave Vautin and Lisa Klein W.I.

RE: Plan Bay Area (SCS/RTP) Project Performance Assessment – Equity Considerations

MTC will conduct a project performance assessment of transportation projects and programs similar to that performed as part of *Transportation 2035*. We would appreciate your input on the following question:

> ***Will the proposed approach generate useful information about how potential transportation investments perform with respect to equity, within the context of the adopted Plan Bay Area targets and goals?***

What is Project Performance Assessment?
Project performance assessment is designed to identify projects and programs that advance the Plan Bay Area goals and targets, support the land use strategy, and are cost-effective. The analysis will:

- Aim to identify outliers that perform either very well or very poorly relative to other potential transportation investments.
- Help inform the Commission's discussions of the trade-offs of various transportation investment strategies when selecting a set of projects for inclusion in the financially-constrained Draft Plan Bay Area.

This information will be supplemented by the Detailed Scenario Assessment results and Equity Analysis, which will capture the interactions among projects and between transportation projects and land use, as well as the Commission's policy discretion.

Approach to Project Performance Assessment
Over the coming months, we propose to conduct the assessment based on quantitative and qualitative methodologies.

Goals Assessment *(largely qualitative)* – We propose to conduct a goals assessment for all projects. Due to the large number of projects (700+), this analysis will be based for the most part on project types and will assess the degree to which project types meet the Plan Bay Area goals and targets (as shown in **Attachment 1**) based on a defined set of criteria.

Benefit-Cost Assessment *(quantitative)* – For a subset of larger projects (cost > $50 million) with regional impacts, we propose to conduct a quantitative assessment. As with Transportation 2035, For the most part, MTC will use the regional travel demand model to estimate the future impacts of projects. Examples of projects subject to benefit-cost assessment include: specific new bus rapid transit services, rail extensions and HOV lanes. We propose to use quantitative, off-model analysis for regional programs such as TLC, the Lifeline program, and 511/Ridesharing.

The quantitative assessment will be based primarily on a comparison of benefits and costs. It will capture benefits corresponding with the adopted Plan Bay Area targets - to the extent they can be

assessed quantitatively – and may include other measures important for capturing a full range of impacts.

Attachment 2 includes a summary of the project performance analysis from Transportation 2035. It shows how the results called attention to outliers in terms of benefit-cost and goals achievement. Note that several programs with low benefit-cost scores were included in the Transportation 2035 Plan because they were high local priority projects or because they addressed a special need (e.g. lifeline transportation).

Equity Considerations in Project Performance Assessment
Staff proposes to consider equity impacts within the overall Project Assessment as shown in **Attachment 3**.

Goals Assessment - We will qualitatively rate each project for the Equitable Access goal. The following proposed criteria are under review by the technical committee advising MTC staff:

- **Does the project improve access from low-income and minority communities to jobs and essential destinations?**
- **Does the project improve access for elderly and disabled residents?**
- **Does the project reduce transportation costs?**
- **Does the project reduce housing costs?** (e.g. promotes development of affordable housing)

Benefit-Cost Assessment - Staff proposes to review the distribution of benefits for those projects subject to this assessment. This approach is similar to that for the Equity Analysis of the Initial Vision Scenario with respect to the Plan Bay Area Targets. This analysis would estimate project benefits in travel time savings and direct user costs for low-income households compared to the rest of the population. By examining how project benefits are distributed across the population, we can determine which of the most significant transportation projects have the greatest benefits for low-income households.

While this offers a meaningful quantification of some benefits, it has some limitations that we will address through the qualitative Goals Assessment.

- First, the quantitative assessment is able to consider only income equity. This is due to how MTC's travel model characterizes travelers; while it recognizes travel patterns by income level, it does not forecast characteristics of race, ethnicity, or disability. The Goals Assessment will consider a broader range of equity concerns.
- Second, the quantitative assessment cannot consider all of the benefits included in the overall benefit-cost analysis. This is due to the fact that the travel model cannot capture the benefits from each individual project by income level; we can capture benefits of travel time cost reduction and travel time reduction, which comprise the largest component of benefits for most projects. Health-related goals, for example, have important impacts which are not captured by this analysis.

Schedule for Transportation Project Performance Assessment

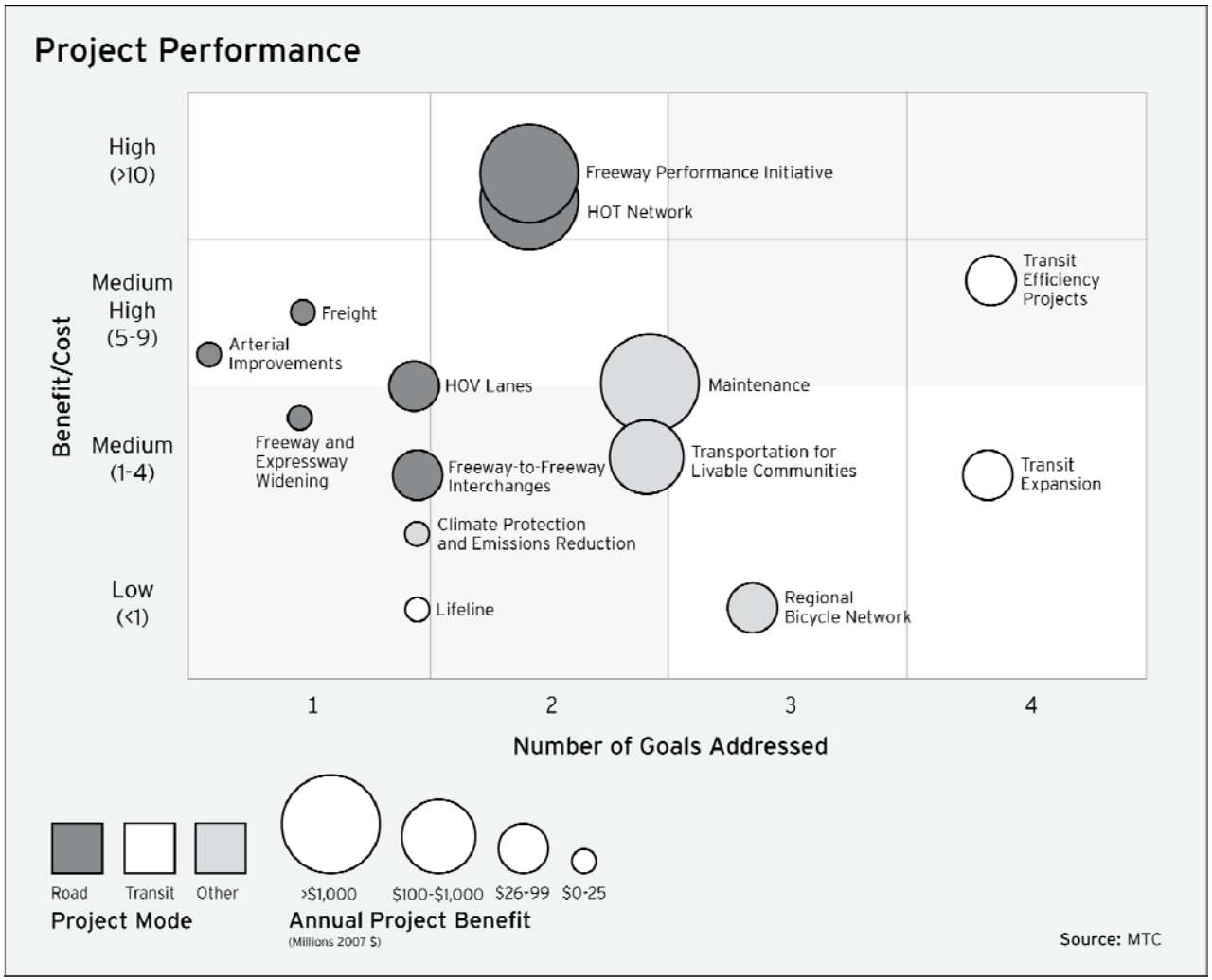
- March 2011 – Develop methodology for project performance assessment
- April 8, 2011 – MTC Planning Committee reviews methodology
- May to July 2011 – Conduct performance assessment and release results
- July 2011 – Define detailed scenarios
- October – December 2011 – Detailed scenario results and discussion of trade-offs to define draft SCS/RTP investments and land use

Attachment 1: Plan Bay Area Goals and Targets

Goal	Performance Target
Climate Protection Dealing effectively with the challenge of climate change involves communities far beyond the shores of San Francisco Bay. Indeed, Senate Bill 375 requires metropolitan areas throughout California to reduce greenhouse gas emissions from cars and trucks. Furthermore, our region must safeguard the shoreline due to sea-level rise through adaption strategies. By combining aggressive policies with innovative technologies, the Bay Area can act as a model for other regions around the state and nationwide.	Reduce per-capita CO_2 emissions from cars and light-duty trucks by 15%
Adequate Housing A diverse and sufficient housing supply is essential to maximize livability for all Bay Area residents. The region aspires not only to ensure affordability and supply of housing for peoples of all income levels and in all nine counties, but also to reduce the concentration of poverty in low-income communities of concern.	House 100% of the region's projected 25-year growth by income level (very-low, low, moderate, above-moderate) without displacing current low-income resident
Healthy & Safe Communities Promoting healthy and safe communities includes improving air quality, reducing collisions and encouraging more bicycle and pedestrian travel. While policy choices by regional agencies can help influence land-use decisions and the operation and design of transportation infrastructure, local governments have the biggest role to play. Cities' and counties' land-use authority directly shapes the development patterns that guide individuals' travel choices.	o Reduce premature deaths from exposure to particular emissions: • Reduce premature deaths from exposure to fine particulates (PM2.5) by 10% • Reduce coarse particulate emissions (PM10) by 30% • Achieve greater reductions in highly impacted areas Associated Indicators • Incidence of asthma attributable to particulate emissions • Diesel particulate emissions o Reduce by 50% the number of injuries and fatalities from all collisions (including bike and pedestrian) o Increase the average time walking or biking per person per day for transportation by 60% (for an average of 15 minutes per person per day)
Open Space & Agricultural Preservation Limiting urban sprawl will help preserve productive agricultural lands and prime natural habitat, in addition to maintaining public access to shorelines, mountains, lakes and rivers. As open space and farmlands are essential to the Bay Area's quality of life, the region should focus growth in existing urban areas rather than pursue additional development in outlying areas.	Direct all non-agricultural development within the urban footprint (existing urban development and urban growth boundaries) • Scenarios will be compared to 2010 urban footprint for analytical purposes only

Goal	Performance Target
Equitable Access A high quality of life is not a privilege reserved only for the wealthy. Regional agencies must work to ensure that high-quality housing is available for people of all incomes; that essential destinations may be reached at a minimal cost of time or money; that mobility options are available not only to those who can transport themselves but also to our growing populations of senior and disabled residents; that the benefits and burdens alike of transportation investment are evenly distributed; and that air pollution, water pollution or noise pollution are not disproportionately concentrated in low-income neighborhoods.	Decrease by 10% the share of low-income and lower-middle income residents' household income consumed by transportation and housing
Economic Vitality A strong economy is imperative to ensure continued quality of life for all Bay Area residents. This includes a healthy climate for business and growth, and plentiful employment opportunities for individuals of all skill levels and industries. Savvy transportation and land-use policies in pursuit of this goal will not only reduce travel times but also expand choices, cut total costs, improve accessibility, and boost reliability.	Increase gross regional product (GRP) by 87% – an average of 2.1% per year (in current dollars)
Transportation System Effectiveness Maximizing the efficiency of the transportation system requires preserving existing assets in a state of good repair as well as leveraging assets that are not fully utilized and making targeted, cost-effective improvements. Continued maintenance is necessary to protect safety, minimize vehicle damage, support infill development in existing urban areas and promote economic growth regionwide.	o Decrease average per-trip travel time by 10% for non-auto modes o Decrease automobile vehicle miles traveled per capita by 10% o Maintain the transportation system in a state of good repair: • Increase local road pavement condition index (PCI) to 75 or better • Decrease distressed lane-miles of state highways to less than 10% of total lane-miles • Reduce average transit asset age to 50% of useful life
Infrastructure Security The potential for damage from natural or manmade disasters is a threat to the security of Bay Area infrastructure. To preserve the region's economic vitality and quality of life, Bay Area government officials — in cooperation with federal and state agencies — must work to prevent damage to infrastructure systems and to minimize the potential impacts of any future disasters. Funding priorities must reflect the need to ensure infrastructure security and to avoid any preventable loss of life.	

Attachment 2: Transportation 2035 Project Performance Analysis Results



Attachment 3: Equity within the Transportation Project Performance Assessment Framework

Transportation Project Performance Assessment

Goals Assessment *(qualitative; for all projects)*

1. **Climate Protection**
2. **Adequate Housing**
3. **Healthy and Safe Communities**
4. **Open Space and Agricultural Preservation**

5. Equitable Access

Rate project's level of support for goal using these criteria:

- **Does the project improve access from low-income and minority communities to jobs and essential destinations?**
- **Does the project improve access for elderly and disabled residents?**
- **Does the project reduce transportation costs?**
- **Does the project reduce housing costs?**

6. **Economic Vitality**
7. **Transportation System Effectiveness**

Benefit-Cost Assessment *(quantitative; for major projects)*

1. Overall Benefit-Cost Analysis
Compare project benefits and costs

Benefits include: reductions in travel time, CO_2, PM_{10}, $PM_{2.5}$, health costs associated with changes in active transportation, costs of injuries/fatalities/property damage from collisions, direct user costs, and VMT impacts (e.g. noise), as well as cost savings for on-time maintenance

Costs include: capital, operating, and maintenance expenses for transportation projects

2. Equity Evaluation of Benefits

Determine how low-income residents benefit the project compared to the rest of the population, by looking at both travel time savings and out-of-pocket cost savings

For example – consider out-of-pocket cost savings per day:

- *Project A saves $2 for the average low-income resident, but it saves $4 per person for the rest of the population*
- *Project B saves $3 for the average low-income resident, but it saves $2 per person for the rest of the population*
- ***Therefore, Project B has greater equity benefits (in terms of travel cost) than Project A.***