Agenda Item No. 5

METROPOLITAN
TRANSPORTATION
COMMISSION

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Memorandum

TO: Policy Advisory Council

DATE: December 7, 2011

FR: Dave Vautin and Lisa Klein

W.I. 1114

RE: Plan Bay Area: Draft Scenario Assessment Results

Over the past several months, MTC and ABAG staffs have undertaken an assessment of five land use and transportation scenarios in order to help inform the preferred scenario for Plan Bay Area. Staff will release the draft results at the December 9 joint meeting of the MTC Planning Committee and ABAG Administrative Committee, and MTC staff will distribute them to the Policy Advisory Council via email on that date. MTC and ABAG staff will jointly present the scenario results at your December 14 meeting.

In the meantime, please refer to the attached memorandum for the December 9 joint meeting of the MTC Planning and ABAG Administrative committees. The memo describes the land use patterns and transportation network assumptions in the five scenarios analyzed. It also provides a refresher on the purpose of the scenario assessment, adopted performance targets and equity analysis measures.

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To: MTC Planning Committee, ABAG Administrative Committee

Date: December 2, 2011

Fr: ABAG and MTC Executive Directors

Re: Plan Bay Area: Draft Scenarios Assessment Results

In June 2011, the MTC Planning and ABAG Administrative committees approved moving forward to evaluate five alternative scenarios to demonstrate how the region might achieve the Plan Bay Area performance targets. This memorandum summarizes the underlying land use and transportation assumptions for the scenarios (Table 1). Detailed descriptions of the land use and transportation assumptions are included in **Attachments C and D**. At your December 9 meeting, staff will present preliminary results of the performance targets analysis and equity analysis for the scenarios. This will mark the beginning of a public process to review and comment on the alternative scenarios and will help the Commission and ABAG define a draft preferred scenario slated for approval in Spring 2012.

Table 1: Overview of Land Use and Transportation Assumptions in Five Scenarios

	LAND USE PATTERN	TRANSPORTATION NETWORK
1.	**Initial Vision Scenario** – *As defined in Spring 2011*	**Transportation 2035 Network** – *Investment strategy in Transportation 2035*
2.	**Core Concentration** – *Concentrates housing and job growth at selected Priority Development Areas (PDAs) along the core transit network in the Inner Bay Area.*	**Core Capacity Transit Network** – *Increases transit service frequency along the core transit network.*
3.	**Focused Growth** – *Recognizes the potential of PDAs throughout the region with an emphasis on major transit corridors.*	**Core Capacity Transit Network** See description above.
4.	**Constrained Core Concentration** – *Concentrates housing and job growth at selected PDAs along the core transit network in the Inner Bay Area.*	**Core Capacity Transit Network** See description above.
5.	**Outward Growth** – *Higher levels of growth in inland areas of the Bay Area; closer to past trends.*	**Transportation 2035 Network** See description above.

Scenario Definitions

The primary purpose of the scenario assessments is to compare and contrast the interaction between land use policy and transportation investment strategies as measured by a set of ten specific performance targets related to the economy, the environment and equity. These targets are described in **Attachment A**. In October 2011, the MTC Planning Committee approved a set of five additional measures for the Equity Analysis, as shown in **Attachment B**. In addition, the SCS Ad Hoc Committee on Performance Measures recommended a set of indicators that describe how growth can be compatible with complete communities. Analysis will be available for all scenarios on the Plan Bay Area website (http://www.onebayarea.org/plan_bay_area/).

The specific land use and transportation definitions for the scenarios were developed based on considerable input from the Regional Advisory Working Group, Regional Planning Committee, Partnership Technical Committee, and MTC Policy Advisory Council. In particular, MTC and ABAG staff held two detailed workshops on this topic in August. Results of MTC's transportation project performance assessment also informed the investments included in the two transportation networks.

Relationship between Alternative Scenarios and the Preferred Alternative
The primary purpose of the scenario assessments is to compare and contrast the interaction between land use policy and transportation investment strategies as measured by the performance targets. The preferred SCS scenario alternative will be developed based on a mix of alternative scenario components that best achieve the targets and can demonstrate financial feasibility.

Next Steps
Staff will release the scenario assessment at your December 9 meeting. This release marks the beginning of a public process to review and comment on the alternative scenarios. MTC and ABAG will hold a series of public workshops throughout January 2012 to discuss tradeoffs and gauge support among the land use scenarios and supportive transportation programs and projects. Input received will help us define a draft preferred land use forecast and investment strategy for release in March 2012 followed by approval by MTC and ABAG in May 2012. The draft preferred scenario will be subject to environmental review and other analyses throughout the remainder of 2012. Plan Bay Area is slated for final adoption in April 2013.

Ezra Rapport

Steve Heminger

Attachments
Attachment A: Plan Bay Area Performance Targets
Attachment B: Equity Measures for Alternative Scenarios
Attachment C: Land Use Scenario Definitions
Attachment D: Transportation Network Definitions

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Attachment A: Plan Bay Area Performance Targets
(Adopted by MTC/ABAG in January 2011)

GOAL: CLIMATE PROTECTION	
Target #1:	Reduce per-capita CO_2 emissions from cars and light-duty trucks by 15%
GOAL: ADEQUATE HOUSING	
Target #2:	House 100% of the region's projected 25-year growth by income level (very-low, low, moderate, above-moderate) without displacing current low-income residents
GOAL: HEALTHY AND SAFE COMMUNITIES	
Target #3:	Reduce premature deaths from exposure to particulate 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 *MTC, ABAG and the BAAQMD will monitor the indicators by collecting data on actual conditions over time. These are distinguished from the targets, which will be forecast for the scenarios in 2011 using regional land use, travel and air quality models.
Target #4:	Reduce by 50% the number of injuries and fatalities from all collisions (including bike and pedestrian)
Target #5:	Increase the average daily time walking or biking per person for transportation by 60% (for an average of 15 minutes per person per day)
GOAL: OPEN SPACE AND AGRICULTURAL PRESERVATION	
Target #6:	Direct all non-agricultural development within the urban footprint (existing urban development and urban growth boundaries)
GOAL: EQUITABLE ACCESS	
Target #7:	Decrease by 10% the share of low-income and lower-middle income residents' household income consumed by transportation and housing
GOAL: ECONOMIC VITALITY	
Target #8:	Increase gross regional product (GRP) by 90% – an average annual growth rate of approximately 2% (in current dollars)
GOAL: TRANSPORTATION SYSTEM EFFECTIVENESS	
Target #9:	• Decrease average per-trip travel time by 10% for non-auto modes • Decrease automobile vehicle miles traveled per capita by 10%
Target #10:	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

Attachment B: Equity Measures for Alternative Scenarios
(approved by MTC in October 2011)

Measure/Theme	Key Questions Addressed	Target Population Breakout
Theme: Affordable Housing and Transportation Choices		
1. Housing + Transportation Affordability	• *What is the extent of any current and future-year disparity between target and non-target populations?* • *Which scenario(s) reduce the share of income spent on housing and transportation by the greatest amount for the target population?* • *Which scenario(s) provide similar or better results for the target population compared to the rest of the population?*	• Low-income households (all) vs. all other households
Theme: Growing Equitably		
2. Displacement Risk	• *Which scenario(s) result in the least displacement risk for low-income households?* • *Which scenario(s) accommodate the greatest number of low-income households?*	• Communities of concern vs. all other communities • Low-income households (all)
Theme: Making the Jobs/Housing Connection		
3. Commute Travel Time	• *What is the extent of any current and future-year disparity between target and non-target populations?* • *Which scenario(s) reduce commute travel time by the greatest amount for the target populations?* • *Which scenario(s) provide similar or better results for the target population compared to the rest of the population?*	• Communities of concern vs. all other communities • Low-income households (all)
Theme: Healthy Communities		
4.VMT Density	• *What is the extent of any current and future-year disparity between target and non-target populations?* • *Which scenario(s) reduce VMT Density by the greatest amount for the target population?* • *Which scenario(s) provide similar or better results for the target population compared to the rest of the population?*	• Communities of concern vs. all other communities
Theme: Equitable Mobility		
5. Non-commute Travel Time	• *What is the extent of any current and future-year disparity between target and non-target populations?* • *Which scenario(s) reduce average trip time for non-mandatory travel by the greatest amount for the target populations?* • *Which scenario(s) provide similar or better results for the target populations compared to the rest of the population?*	• Communities of concern vs. all other communities • Low-income households (all)

Attachment C: Land Use Scenario Definitions
(adopted by MTC/ABAG in July 2011)

In July, ABAG's Executive Board and the Metropolitan Transportation Commission approved a framework for Five Alternative Scenarios, which will be used to inform the development of the Preferred Scenario of the Sustainable Communities Strategy (SCS). Scenarios 1 and 2 are based on unconstrained growth, assume very strong employment growth (approx. 1.5 million jobs), and unprecedented funding to support affordable housing and neighborhood development (approx. 1 million households). Scenario 1, the Initial Vision Scenario was released in March 2011. Scenario 2, the Core Concentration Scenario provides for a more concentrated development pattern along transit corridors. The Core Concentration Scenario addresses the distribution of more than one million households and nearly 1.5 million jobs by 2040. This scenario aims to channel new growth into the traditional urban and inner suburban core of the region to 1) revitalize older neighborhoods, 2) preserve natural and agricultural lands, 3) fully utilize the region's major fixed transit investments, and 4) build dynamic moderate density concentrations of employment and housing in key clusters ringing the Bay. These two scenarios are essential to identify the challenges and policies required to achieve an ideal sustainable development path.

The land use patterns for Scenarios 3, 4, and 5 are based on an assessment of economic growth, financial feasibility, and reasonable planning assumptions (approx. 770,000 households and 1 million jobs). They provide a range of housing and employment distribution patterns across places and cities that support equitable and sustainable development. These three scenarios assume a strong economy that can support adequate affordable housing production. They also assume targeted local and regional strategies and additional funding to support sustainable and equitable growth.

- ***Scenario 3****: Focused Growth Scenario:* Recognizes the potential of Priority Development Areas and Growth Opportunity Areas across the region with an emphasis on housing and job growth along major regional transit corridors.
- ***Scenario 4****: Constrained Core Concentration Scenario:* Concentrates housing and job growth at selected Priority Development Areas in the Inner Bay Area along the region's core transit network.
- ***Scenario 5****: Outward Growth Scenario:* Addresses higher levels of growth in inland parts of the Bay Area and is closer to previous development trends than the other two scenarios. (*This scenario was previously named "Outer Bay Area" Growth Scenario)*

Transportation 2035 Network

- Starts with 2010 transit and roadway network as the base network
- Keeps investment levels for maintenance, transit and roadway expansion, and bike/pedestrian at roughly same levels as in T2035
- Tests T2035 projects proposed to be carried over into Plan Bay Area
- Considers project performance assessment results

Examples of Significant Projects Tested

Roads

- Regional Express Lanes Network
- Freeway Performance Initiative
- San Mateo and Santa Clara ITS
- Fremont-Union City East-West Connector
- I-680/Rt 4 Interchange Impvts. + SR-4 Widening
- Marin-Sonoma Narrows Stage 2
- Jameson Canyon Impvts. Phase 2
- SR-29 HOV Lanes + BRT
- New SR-152 Alignment
- I-80 Auxiliary Lanes (Airbase to I-680)

Transit

- AC Transit Grand Mac-Arthur BRT
- Irvington BART Infill Station
- Alameda-Oakland BRT + Transit Access Impvts.
- AC Transit East Bay BRT
- I-680 Express Bus Frequency Impvts.
- Caltrain 6-Train Service + Electrification (SF to Tamien)
- Van Ness Ave. BRT
- SMART (San Rafael-Larkspur)
- BART Extension from Berryessa to San Jose/Santa Clara
- Fairfield/Vacaville Capitol Corridor Station

Core Capacity Transit Network

- **Starts with 2010 transit and roadway network as the base network**
- **Keeps T2035 investment levels for maintenance and bike/pedestrian, but reduces roadway expansion and boosts core capacity transit service**
- **Tests most T2035 Network projects and includes a 46 percent increase in transit frequency impvts. from 2010 network (at a total 28-year operating and capital cost of $53 billion)**
- **Not financially constrained due to cost of transit frequency impvts. exceeding available revenue**
  - Only $15 billion of the needed $53 billion is available ($10 billion in operating efficiencies per TSP and $5 billion in new revenue)
- **Considers project performance assessment results**

Examples of Significant Projects Tested (includes most T2035 Network projects)

Roads

- **SR-84/I-680 Interchange Impvts + SR-84 Widening**
- **Bay Bridge Contraflow Lane**
- **US-101 HOV Lanes (Whipple Ave to Cesar Chavez St)**

Transit

- **BART Metro Program**
- **Dumbarton Corridor Express Bus**
- **BART Bay Fair Connection**
- **BART to Livermore Phase 1**
- **Golden Gate Ferry Service Frequency Impvts.**
- **SFMTA Transit Effectiveness**
- **Better Market Street**
- **Geneva Ave BRT and Southern Intermodal Terminal**
- **Parkmerced Light Rail Corridor**
- **Oakdale Caltrain Station**
- **SamTrans El Camino BRT**
- **VTA El Camino BRT**
- **Service Frequency Impvts. on AC Transit, Muni, ferries, BART, and Caltrain**

Pricing

- **Congestion Pricing Pilot**
- **Treasure Island Congestion Pricing**