

2010 Congestion Management Process Update

Metropolitan Transportation Commission
101 Eighth Street
Oakland, CA 94607

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I) Background

SAFETEA-LU Requirements for a CMP

The requirements for development of a Congestion Management Process (CMP) were originally established by the federal Intermodal Surface Transportation Efficiency Act of 1991 (the CMP was referred to as the Congestion Management System (CMS)). In 2005 the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) continued the requirement that the Metropolitan Planning Organization (MPO) complete a CMP. The CMP requirements challenge regions to develop performance based planning processes that are based on collaboration among transportation interests, specifically focused on congestion management.

The National Highway System (NHS) Bill of 1995 placed the implementation of CMS and the other ISTEA management systems at the discretion of the states. However, subsequent amendments to the metropolitan planning rules and management and monitoring system regulations clearly specify that the planning process in transportation management areas (TMAs), metropolitan areas with population greater than 200,000, is still required to include a CMS. This remains true under SAFETEA-LU (Sections 23 CFR 450.320 and 23 CFR 500.105 as amended December 19, 1997 and April 1, 1997 respectively) Thus, the CMS requirement still applies to the Bay Area. In addition, the NHS revisions did not affect the original provisions that Federal funds may not be programmed in a carbon monoxide and/or ozone non-attainment TMA for any highway project that will result in a significant increase in single-occupant-vehicle capacity unless the project is based on an approved CMS. (Section 23 CFR 450.320 (b) and 23 USC 134 (l)) The deadline for compliance under the revised regulations was October 1, 1997.

The Partnership Approach

Though the NHS Bill generated a brief period of uncertainty about the nature of the CMP requirement in the Bay Area, the region's approach and commitment have remained consistent since MTC first developed an approach in cooperation with the Bay Area Partnership in 1994. Our strategy is to begin by recognizing the diverse efforts already in place to address congestion management and mobility in the regional, county-wide, and local transportation planning processes in the Bay Area. Rather than create a new system, we build on this existing foundation and focused on improving MTC's and the region's tool kit to manage the Bay Area's transportation system.

County Congestion Management Programs

The Bay Area workplan for the CMP is based on a review of federal and state CMP requirements in relation to existing and developing regional, county-wide, and local transportation planning processes. The Regional Transportation Plan, using the congestion management programs and the short range transit plans as major building blocks, is the unifying process and document for transportation planning in the region. The State Implementation Plan, airport and seaport plans, corridor studies, and the major investment study process supplement the RTP to form the foundation of activities supporting the Bay Area's CMP.

County congestion management plans developed under California law comprise some of the main building blocks for the region's federally required CMP and establish specific requirements for the content and development process for county Congestion Management process, for the relationship between the metropolitan planning process, for county monitoring and other responsibilities, and for the responsibilities of MTC as the regional transportation planning agency.

State statutes also specify particular responsibilities involving county Congestion Management Programs for the regional transportation agency, in the Bay Area, MTC. These responsibilities include review of the consistency of the county Congestion Management Program with the RTP, evaluation of the consistency and compatibility of in the Bay Area, and inclusion of the county Congestion Management Program projects in the Regional Transportation Improvement Program (RTIP).

In 1996, the California legislature allowed counties to opt out of the state CMP requirement (AB 2419 (Bowler) Chapter 293, Statutes of 1996). All but two (Sonoma and Napa counties) Bay Area counties have chosen to continue to prepare state congestion management plans under California law.

The other main building blocks of the federally required CMP support the county congestion management plans and fill gaps for the two counties, Sonoma and Napa. These planning efforts include: (1) freeway congestion monitoring conducted annually by MTC and Caltrans on all congested freeways; (2) development of countywide transportation plans in all nine counties, which include performance measures, needs assessments, and identification and evaluation of potential improvements; and (3) other regional planning initiatives including the Freeway Performance Initiative corridor studies and Corridor System Management Plans, which document congestion, include performance measures, identify and evaluate potential improvements.

Under Federal law, a Transportation Management Area (TMA) that is a non-attainment area for ozone may program funds to projects that significantly increase capacity for single-occupancy vehicles only if those improvements are identified in a CMP. Historically, the Bay Area's long-range regional transportation plans (RTPs) and hence the region's transportation improvement programs (TIPs) have included very few projects that significantly increase capacity for single-occupancy vehicles. Of \$218 billion in the current plan, *Transportation 203*, 81% is for maintenance and operations, 14% for transit expansion, and 3% for roadway expansion. MTC takes care to track how projects in the RTP and TIP have emerged through the planning process. Projects listed in the RTP are required to provide project level details including purpose, scope, goals, and the planning processes in which they were identified and evaluated, including county congestion management plans and/or corridor studies. Once in the RTP, projects are further evaluated through the scenario evaluation and cost/benefit analysis for project performance against quantitative evaluation criteria based on performance objectives as well as a qualitative policy assessment criteria based on RTP goals.

Focus Tasks

The CMP also identifies focus tasks so as to direct our efforts to achievable results and address areas where our work can be strengthened. CMP focus tasks are projects and studies arising from diverse, established activities addressing congestion management and mobility in the regional framework illustrated in Appendix A. Several of the focus tasks rely on the efforts of multiple Partner agencies. This report reviews the focus tasks from previous years and identifies new focus tasks for 2010.

Restriction on Programming Federal Funds to Highway Projects

The CMP requirements specify that federal funds may not be programmed for any project that expands capacity for single occupancy vehicles in an ozone, carbon monoxide, or PM_{2.5} non-attainment area unless the project is based on an approved CMP.

The Bay Area pollutant designations are as follows:

- **Ozone:** In June 2004, EPA designated the Bay Area as nonattainment for the national 8-hour ozone standard set in 1997. In March 2008, EPA lowered the ozone standard to 0.75 parts per million. In March 2009, the California Air Resources Board recommended to EPA that the Bay Area be designated as nonattainment for this revised 2008 ozone standard. However, EPA has not taken action on this designation because EPA is in the process of reconsidering the 2008 ozone standard and intends to complete this reconsideration by August 31, 2010. EPA expects to set area designations to the revised 2010 8-hour ozone standard in March 2011.
- **Carbon Monoxide:** In April 1998, EPA designated the Bay Area as a maintenance area for the national 8-hour carbon monoxide standard.
- **PM_{2.5}:** In December 2009, EPA designated the Bay Area as nonattainment for the national 24-hour PM_{2.5} standard.

Regardless of the region's attainment status, it is MTC practice to document the planning context of all projects included in the financially constrained regional transportation plan in the Project Notebook produced with each long range plan update. Specifically, the Project Notebook documents the plans and studies from which the project evolved and the other alternatives considered. Thus the planning context of any project programmed by MTC can be reviewed by tracing that project back to the long range plan. Appendix A of this document illustrates how various plans and studies fit into the regional CMP.

Periodic Update

In order to learn from our experience and apply lessons learned, MTC prepares an update is prepared periodically, approximately every two years, to provide an overview of the CMP efforts, evaluate the previous focus tasks, and define new focus tasks for the year to come. This report represents the sixth update since the establishment of the Bay Area CMP. Section 1 summarizes accomplishments from focus tasks identified in CMP updates since 1994. Section 2 identifies focus tasks for 2010.

Section 1 1994-95 Focus Tasks

<u>Focus Task (1994-95)</u>	<u>Accomplishments</u>
1) <u>Develop MIS implementation procedures</u>	<p>“Regional criteria for screening pipeline projects for MIS requirements.” (Dec. 1994)</p> <p>“Regional MIS Process and Procedures.” (May 1996)</p>
2) <u>Performance Measures:</u> Explore user oriented performance indicators for evaluating projects and investment alternatives	<p>David Jones study of regional performance Indicators. (June 1995)</p> <p>Summary of Bay Area Performance Measures. (Nov. 1995)</p> <p>Ongoing</p>
3) <u>Improve coordination of data documentation, integration, and travel demand models</u>	<p>“Data Integration Project Catalog.” (Mar. 1996)</p> <p>“Data Integration Project Issues.” (Aug. 1996)</p> <p>“Regional Model Coordination Study.” (Dec. 1995)</p> <p>Ongoing meetings of the Bay Area Travel Model User Community (BATMUC) and associated WWW site: http://tech.groups.yahoo.com/group/batmuc/ (2005 to Present)</p>
4) <u>Metropolitan Transportation System (MTS) Management Strategy:</u> Develop a Partnership approach toward corridor and operational strategies	<p>Phase 1 of Management Strategy, including 8 corridor management workshops. (May 1995)</p> <p>Specific efforts addressed in later focus tasks.</p>
5) <u>Traveler Information:</u> Improve transportation information services to users	<p>Initiated efforts to get TOS freeway sensors working reliably to provide information to TravInfo®. TOS functionality continues to be limited. See items related to 511 and TOS in future focus tasks.</p> <p>Began with TRANSTAR data bases in 1994-1995. Transitioned to web-based Take Transit Trip Planner. (2001-2002)</p> <p>Take Transit Trip Planner will include all Bay Area operators by summer 2003.</p> <p>Continued in later years</p>
6) <u>Evaluate the effectiveness of the Freeway Service Patrol</u>	<p>Final report issued (summer 1995)</p>

Section 1 1996-97 Focus Tasks

<u>Focus Task (1996-97)</u>	<u>Accomplishments</u>
1) <u>Transportation System Performance Measures:</u> Identify customer-oriented performance measures and appropriate uses for them at the regional level.	Developed performance measures. (Spring 1997) Developed a pilot project to field-test methods for collecting travel time. (Dec. 1997) Continued in later years.
2) <u>Regional Arterial Program:</u> Promote implementation of programs that improve operation of the region's arterial street network: 1) Regional Traffic Signalization and Operations Program (RTSOP) program provides funding to jurisdictions to implement capital programs, especially multi-jurisdictional & new technology projects; 2) Traffic Engineering Technical Assistance Program (TETAP) program provides technical assistance to local jurisdictions lacking expertise in operations improvements.	Launched Regional Signal Timing Program (RSTP) to provide technical assistance to local jurisdictions for retiming traffic signals, including transit signal priority (2004). Retimed over 3,400 signals in the Bay Area under RSTP (2004-2009). Funded over 235 projects under TETAP (1993-2007). Continued development and expansion of smart corridors in Silicon Valley, East Bay, and San Francisco (2006). Over 92 RTSOP projects funded (1993-1997) and over 170 TETAP projects funded. (2003) RTSOP rolled into TETAP (1998). Identified 14 arterial management strategies. (fall 1997) Developed prototype Arterial Inventory Database to track inventory of signal equipment. (spring 2000 – summer 2002) Implemented Concept of Operations Requirement for multi-jurisdictional signal projects. (fall 1999) Launched Program for Arterial System Synchronization (PASS) with a regional emphasis replacing the RSTP (2010). PASS 2010/11 cycle with 13 projects with over 350 signals selected for signal coordination including services like Incident Management flush plans, Traffic Responsive timing plans and Transit Signal Priority.
3) <u>Carquinez Bridge Reconstruction/Operations:</u> Ensure that plans to reconstruct the westbound span and the subsequent operations plans are consistent with the region's commitment to transit and HOV operations as well as the larger framework for management of the I-80 corridor.	Final Environmental Impact Statement issued. (Jan. 1998) Construction of the new bridge, which will accommodate one HOV lane and three mixed-flow lanes westbound on I-80, began in January 2000. The new bridge opened to traffic in November 2003.

Focus Task (1996-97)

Accomplishments

- 4) **Electronic Toll Collection (ETC):** Balance the ETC efficiency objectives with gateway functions of toll plazas and with the region's commitment to an HOV program.
- ETC operational on all lanes on Carquinez Bridge. (1998)
 - HOV bypass included to preserve travel time advantage over SOV. (Aug. 1997)
 - ETC operational in at least one lane of every toll bridge. (Dec. 2000)
 - Installation completed in all toll lanes. (Oct. 2001)
 - Increased number of ETC only lanes from 7 in 2001 to 14 in 2006 and ETC marketshare increased from 20% in 2001 to 42% in 2006.
 - 7 more ETC only lanes added in 2007 and plaza lane configuration and signing modified to improve traffic flow to the ETC lanes.
 - Opened first high-speed ETC Open Road Tolling (ORT) lanes at new Benicia-Martinez Bridge (Aug. 2007)
 - Replaced mini-toll plaza at Bay Bridge with an ORT lane to improve traffic operations for ETC vehicles (Sept. 2009)
 - Upgraded violation enforcement system to increase the quality and quantity of readable license plate images on violations (Oct. 2009)
 - 1 more ETC only lane added in 2010 at the Richmond-San Rafael Bridge in improve traffic operations in ETC lanes.
- 5) **HOV Plan and Support Programs:** Meet MTC requirements to define a strategy for assessing, operating, improving, and expanding the regional HOV system.
- HOV Master Plan Update adopted (Nov. 1997)
 - I-580 HOV lanes converted to mixed flow per HOV Plan recommendation. (1999)
 - 350 HOV lane miles in operation (Jan. 2003) up from 270 HOV lane miles in 1997.
 - 2003 HOV Master Plan Update complete in 2003.
 - MTC initiated the Regional High-Occupancy/Toll (HOT) Lane Network Feasibility Study in 2005. The HOT lane network is based on the existing and planned HOV system. See 2007 Focus Tasks.

Focus Task (1996-97)

Accomplishments

- 6) Regional Strategy for Transportation Demand Management Programs (Regional Rideshare Program): Coordinate TDM/ridesharing activities and focus on the most effective programs.

MTC assumed responsibility for Regional Rideshare Program. (FY 1995-96)
Entered into a 6-year contract for Regional Rideshare Program Services (FY 05/06-10/11) and increased advisory role of county congestion management agencies (CMAs) and the BAAQMD (2000)
Launched new online ridematching, trip tracker and incentives system (May, 2009)
Formed Technical Advisory Committee (CMAs, BAAQMD, and TDM practitioners), which provides ongoing strategic direction for the program. (Early 2003 - present)
Delegated employer transportation services to county agencies that are willing and able to provide these services in their respective jurisdictions. (July, 2005 - present)
Committed \$16 million in CMAQ and BAAQMD funds for a contractor to operate the program plus an additional \$2.2 million in CMAQ for three counties to provide rideshare services from FY 05-06 through FY 10-11

- 7) Emergency Response Program: Develop a formal plan for coordinated regional response among transportation agencies following a major earthquake.

Developed the Trans Response Plan (Fall 1997) that defines the roles, responsibilities and procedures for implementing a comprehensive transportation response.
Assisted Caltrans and transit operators in developing agency Emergency Operating Plans (1998).
Developed the Regional Transportation Emergency Management Plan (Spring 2008).
Led the development of the Regional Transportation Public Information Interagency Joint Information System-Center Procedures (Winter 2008).
Updated the San Francisco Bay Area Transit Operators Mutual Aid Agreement (Winter 2008).
Continued to conduct annual regionwide emergency preparedness exercises with Caltrans, transit operators, and county operational areas in response to a natural or man-made terrorist event (2010).

Section 1 1998 Focus Tasks

<u>Focus Task (1998)</u>	<u>Accomplishments</u>
1) <u>Transportation System Performance Measures</u> : explore methods for collecting travel time data	Conducted study of data collection methods. (March 1999) Continued in later focus tasks.
2) <u>Support I-80 corridor operational analysis</u> in relation to the opening of the HOV/express bus lane (MTS Management Strategy ¹)	Completed 6-month report on HOV lane performance. (July 1998) Completed I-80 HOV Lane and Transit and Ridesharing Service and Monitoring Plan. (August 1998) Ongoing work on the I-80 Integrated Corridor Management Project in conjunction with Caltrans and the Alameda County CMA (2010)
3) <u>Support Alameda County I-880 corridor operational analysis</u> (MTS Management Strategy ¹)	Analysis completed. (1999) Ramp meters along I- 880 in Alameda County turned on between 1996 and 1999. Refer to 2005 Focus Tasks
4) <u>Support San Mateo 101 corridor operational analysis</u> (MTS Management Strategy ¹)	Analysis completed. (March 1999) Additional analysis completed under the Freeway Performance Initiative Corridor Studies. Refer to 2007 Focus Tasks.
5) <u>Facilitate corridor management teams</u> (MTS Management Strategy ¹)	Partners completed 17 sketch level corridor management plans to identify potential projects for STP/CMAQ funding targeted toward system management. (Nov. 1998)
6) <u>Evaluate effectiveness of operational investments</u> (MTS Management Strategy ¹)	Before-and-after study completed for El Camino signal interconnect. (July 1998) Completed evaluation plan for Silicon Valley Smart Corridor project. (April 1998) Continued in later focus tasks.
7) <u>I-680 (Sunol Grade) Phase 2 MIS</u>	Final report completed. (May 2001) Follow-up Value Pricing Study completed (2003) The I-680 High-Occupancy/Toll (HOT) Lane is scheduled to open in 2010, consistent with AB 2032.

¹ See 1994-95 Focus Tasks.

Focus Task (1998)

Accomplishments

8) Field integration work on traffic operations system (TOS) loop detector monitoring stations

TravInfo® installed non-intrusive surveillance units to demonstrate feasibility as alternative to loop detectors. (1999)

Caltrans' Detector Fitness Program increased number of monitoring stations on-line to 600 in late 2000.

Caltrans detector data integrated into statewide PeMS and 511 Drive Times in 2004.

Deployment of detectors to increase PeMS coverage

Section 1 1999 Focus Tasks

<u>Focus Task (1999)</u>	<u>Accomplishments</u>
1) <u>Transportation System Performance Measures</u>	Implementation on hold in 1999. See 2001-2002 focus tasks.
2) <u>Traveler Information</u> : design, operate and maintain TravInfo® system	See 511 Traveler information in 2001-02 focus tasks.
3) <u>Develop Regional ITS Architecture</u> : The architecture will help identify needs, ensure compatibility of ITS systems, and guide regional ITS investments	See 2001-2002 focus tasks.
4) <u>Conduct Route 24/Caldecott Tunnel Corridor Study</u> : Major investment study exploring alternatives to increase capacity for the reverse peak commute	Completed study. (2001) Caltrans began work on the EIR/EIS for fourth bore. (Nov. 2002) Caltrans to begin construction of fourth bore (2009) Hwy 24 Freeway Corridor Study (2011)
5) <u>Facilitate corridor management teams</u> (MTS Management Strategy ²)	Supported efforts of 5 freeway-arterial Smart Corridor teams to secure funds, retain consultant assistance. Refer to Freeway Performance Initiative in 2007 Focus Tasks.

² See 1994-95 Focus Tasks.

6) Support development of Concept of Operations Reports for arterial signal projects (MTS Management Strategy²)

Continued development of interim center-to-center communications system, including a Concept of Operations, to allow data and video exchange between smart corridors and the Caltrans traffic management center (2007). Using TETAP funds, prepared Concepts of Operations for 8 corridor management projects. (1999)

7) Evaluate effectiveness of operational investments (MTS Management Strategy²)

Completed before and after evaluations of signal coordination conducted under Regional Signal Timing Program (2004 - 2009) – see also 1996-1997, item 2, Regional Arterial Program.

Completed before and after evaluations of transit signal priority and bus rapid transit projects for San Pablo Avenue in East Bay (2005) and El Camino Real in Peninsula and South Bay (2006).

Completed before and after evaluations of I-880 ramp metering. (Fall 2000) and Ala-580 ramp metering (2004)

Silicon Valley SMART corridor Evaluation performed by FHWA. (2000)

El Camino Interconnect final ‘after study’ schedule. (Spring 2001)

Completed before and after evaluations of SM 101 ramp metering

Section 1 2001-2002 Focus Tasks

<u>Focus Task (2001-2002)</u>	<u>Accomplishments</u>
1) <u>Transportation System Performance Measures: Develop performance monitoring program and use performance measurement in the RTP</u>	Conducted system-level performance analysis for the 2001 RTP. (Aug. 2001) Develop first regional state of the system report with information on performance of the existing transportation system. (Dec. 2002) This report will be updated annually. See 2003 Focus Tasks.
2) <u>Develop Regional ITS Architecture and Strategic Deployment/Integration Plan</u>	Completed the Phase 1 "State of ITS in the Bay Area" (April 2003). Completed Phase 2 "Bay Area Regional ITS Architecture & Strategic Plan" (October 2004). Completed first update of Bay Area ITS Regional Architecture (December 2007).
3) <u>Address near term staffing needs for the TOS/TMC (MTS Management Strategy³)</u>	Identified need for 20 additional positions in 2000. Attempts to secure funds through budget change order and state budget earmark unsuccessful in 2001 and 2002. Caltrans attempting to sustain past staffing levels for TOS/TMC despite budget crisis.
4) <u>Freeway Management Concept of Operations (MTS Management Strategy³)</u>	MTC, CHP and Caltrans developed Concept of Operations. (October 2000 - July 2002) These agencies are implementing the Action Plan, and as of 2007, have completed 8 of the 17 near-term items in the action plan, and are currently working on 5 others.
5) <u>Regional Express Bus Program</u>	\$40 Million allocated by CTC (completed in 2007). All vehicles are in service. Performance is monitored through the Regional Measure 2 process (ongoing).
6) <u>San Francisco Bay Crossings Study</u>	Final Report complete. (July 2002) Feasibility Study of reversible lane of San Mateo-Hayward Bridge (2003). Several near-term recommendations were funded in Regional Measure 2. <hr/> See 2003 focus tasks.

³ See 1994-95 Focus Tasks.

Focus Task (2001-2002)

Accomplishments

7) 511 Traveler Information

Launched 511 traveler information telephone system. (Fall 2002)
Launched companion 511.org website. (Fall 2002)
511 Driving Times feature in operation March 2004.
Coverage expanded in July 2004, with plans for further expansion in 2005 and 2006.
See 2005 Focus Tasks.

Section 1 2003 Focus Tasks

<u>Focus Task (2003)</u>	<u>Accomplishments</u>
1) <u>System Management and Operations Blueprint</u> (Builds on efforts featured as past focus tasks related to MTS Management Strategy ⁴)	“Regional Operations Strategy” (ROS), which provides a comprehensive summary of the region’s current policies, programs and investments related to managing the transportation system, and outlines opportunities for future strategies was adopted with <u>Transportation 2030 Plan</u> .
2) <u>Transportation Corridor Concept Reports (TCCRs) and Traffic Operations Strategies (TOPs)</u> (Builds on efforts featured as past focus tasks related to Facilitate Corridor Management Teams – 1998 and 1998)	Caltrans developed 4-panel maps sets for 24 corridors and “Ideal Sequencing Schematics” for 5 corridors, which were shared with MTC and CMAs. (2003) Caltrans and CMAs used information developed to coordinate Transportation 2030 project submittals. (Fall 2003 and Spring 2004) In conjunction with this effort, Caltrans has participated in ABAG’s Smart Growth Working Group and Corridor Planning Program, the East 14 th Street/International Boulevard corridor team, and numerous regional studies. In 2004, Caltrans began a demo project for I-880 corridor to advance the partnership between planning and operations in comprehensive corridor planning. See 2005 and 2007 Focus Tasks (Freeway Performance Initiative 2010) (CSMP).
3) <u>San Mateo Bridge Reversible Lanes Feasibility Study</u>	Study found that reductions in westbound AM delay on the bridge would be offset by increased delay at the SR 92/US 101 interchange. (Fall 2003)

⁴ See 1994-95 Focus Tasks.

Focus Task (2003)

Accomplishments

4) Regional Goods Movement Study

Phase I included identification of Federal reauthorization issues for goods movement; data on commodity flows and future trends; goods movement cluster and economic impact analysis; and land use and community impact analysis. (Fall 2003)

Phase II completed in 2004 identified projects for Transportation 2030 Plan with goods movement benefits and identified legislative approaches to address goods movement issues.

A study to evaluate the impact of land use decisions on goods movement is underway. This was one of the recommendations of the Regional Goods Movement Study.

See 2007 Focus Tasks.

5) Air Quality Management Initiatives

Episodic reduced transit fares: LAVTA offered free rides on Spare the Air days in summer 2003. Free morning commutes were offered on BART and LAVTA in 2004. In 2005, the free morning commute program expanded to add about 20 Bay Area transit systems. In summer 2006, the program was modified to offer free transit, all-day, on 26 Bay Area transit systems. In 2007, the program was further modified to offer free transit all day on Bay Area buses and light-rail but on BART, Caltrain, the ACE trains and the Golden Gate, Vallejo and Alameda ferries, transit was free until 1:00 p.m. In 2008, 30 Bay Area transit operators offered one free transit day on Thursday, June 19. The free transit program is no longer implemented.

Transit station cars: Program on-hold due to uncertain status of state funding (2010)

Focus Task (2003)

Accomplishments

- 6) System Performance Monitoring - State of the System Report
- MTC and Caltrans released the first State of the System report in 2002. Since then, reports have been released annually through 2009. Starting in 2008, the report is becoming more web-oriented. MTC Staff have begun uploading current data as it becomes available. This up-to-date web resource is expected to replace the published report. Count program completed in 2003 and 2004 (traffic counts and bicycle and pedestrian counts). This program was discontinued in 2005 due to the cost of compiling comprehensive data.
- 7) RTP Performance Measures
- Commission adopted performance measures for Transportation 2030 project evaluation (June 2003). Staff evaluated more than 400 projects prior to adoption of the Transportation 2030 Plan.
- MTC staff conducted a scenario performance assessment and project-level assessment during development of the Transportation 2035 Plan. The Plan includes specific, quantitative performance objectives for each Goal. Key findings are that pricing, land use, technology and cultural shifts will be required to meet the aggressive performance objectives. A benefit-cost assessment was performed for approximately 60 of the largest projects. All projects were evaluated qualitatively. The results were used to help define investment priorities. Staff will conduct a similar evaluation for the Regional Transportation Plan/Sustainable Communities Strategy to be adopted in 2013.
- 8) I-80/I-680/I-780 Major Investment and Corridor Study
- Developed a long-range, multi-modal transportation plan for the I-80/I-680 and I-780 corridors in Solano County. The plan identifies highway, transit and park and ride improvements recommended for mid- and long- term implementation. Study completed in July 2004.
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Section 1 2005 Focus Tasks

<u>Focus Task (2005)</u>	<u>Accomplishments</u>
1. I-880 Corridor System Management Study	Document Review/Data Collection I-880 Simulation Model Draft Base Performance Assessment Draft Investment Scenarios/ Strategies Draft Corridor Management Plan Finalize Corridor Management Plan Demonstration in June 2010
2. Interim Center-to-Center Program	The MOU was fully executed in January 2005. Contractor given Notice to Proceed with Initial Build of C2C software in February 2005, and implemented initial build for November 2005 ITS World Congress. Contractor about to begin the system acceptance phase, scheduled to be completed late 2010.
3. I-580 FAIR Lanes Study	Study completed. Findings indicate a High-Occupancy/Toll (HOT) lane may be feasible and beneficial in the I-580 corridor. A modest program offering credits to low-income travelers would not adversely affect the HOT lane. A program offering credit to all travelers would jeopardize HOT lane operations. (August 2005).
4. Santa Clara County High Occupancy Toll (HOT) Lanes Feasibility Study	The initial feasibility assessment was completed in November 2004. In 2005, a more detailed operational assessment and financial assessment recommended development of HOT lanes on US 101 and SR 85. Santa Clara Valley Transportation Authority (VTA) continues with project development and environmental studies on these two corridors, consistent with AB 2032 (Winter 2006). VTA has an expected open date of 2013 for the SR-85 HOT lane if capital funding can be identified.

Focus Task (2005)

Accomplishments

5. Transit Oriented Development Study

The Study assesses the opportunities, benefits and barriers for increased levels of TOD in the San Francisco Bay Area, and helped define MTC's policies in support of Bay Area TODs, specifically, policies for conditioning regional discretionary funds for Resolution 3434 transit expansion projects on the demonstration of supportive land use policies by local governments. The final report and briefing book are available on line at http://www.mtc.ca.gov/planning/smart_growth/tod/TOD_Book.pdf

The original report was updated in 2007 with no changes made to the policy. The policy is next expected to be updated in 2011.

In 2009/10 staff completed a study of housing choice and the implications for TOD, *Choosing Where We Live*

http://www.mtc.ca.gov/planning/smart_growth/tod/5-10/Briefing_Book-Choosing_Where_We_Live.pdf

6. Bay Area Regional Rail Plan

MTC, BART, Caltrain, and California High-Speed Rail Authority are the study partners. The study identified alternative networks for improving and expanding the regional rail system and for including a high-speed train entry from the Bay Area to the Central Valley. In addition, the study will look at benefits and risks for changing institutional governance structures. The final study was adopted by MTC in September 2007.

Analysis and preliminary implementation plan for leveraging system assets

7. 511 Traveler Information System Enhancements

Install 53 additional readers at sites throughout the region to collect traffic data and improve the quality of data provided to 511 users.

Enhance 511 phone and web dissemination systems in response to user feedback (ongoing).

Implement and evaluate design changes to the 511 telephone system to support delivery of real-time transit information for five MUNI light rail routes (2008).

8. 580/680/84 Triangle Analysis Study

Analysis narrowed down to two alternatives with phasing and implementation plan (2007).

Planning level traffic analysis

Benefit cost analysis to prioritize recommended improvements

Phasing and implementation strategy for the I-580, I-680 and Rte 84

Focus Task (2005)

Accomplishments

9. Peninsula Gateway 2020 Study

Public outreach strategy
Operational Analysis
Conceptual Definition of Alternatives
Refer to 2007 Focus Tasks.

Section 1 2007 Focus Tasks

Focus Task (2007)	Accomplishments
1. Peninsula Gateway 2020 Study	<p>Public outreach strategy Operational Analysis Conceptual Definition of Alternatives</p> <p>Further analysis of selected project alternatives conducted through the Willow/University Traffic Study (2010)</p>
2. Regional High-Occupancy/Toll (HOT) Lanes Network Feasibility Study	<p>MTC, in cooperation with partner agencies, has completed a series of feasibility and implementation studies including: capital cost estimate, O&M cost estimate, draft phasing concept, Concept of Operations.</p> <p>The Commission approved inclusion of the Regional Express Lanes Network in the Transportation 2035 Plan and MTC and BATA sponsored authorization legislation in 2009. This legislation has not been enacted.</p> <p>MTC, Caltrans, CHP and the county CMAs meet regularly to discuss issues related to planning and operation of the first HOT lanes (authorized under AB 2032). This forum may serve as a model for future coordination for the larger network (2010).</p>
3. Regional Goods Movement	<p>MTC, in cooperation with partner agencies including the Ports of Oakland, Sacramento and Stockton, and MPOs and CMAs from the Bay Area and Central Valley developed a Northern California Trade Corridors Improvement Fund program of projects to the CTC for funding. The Northern California coalition was able to secure \$825 million towards key goods movement projects in Northern California. The projects are now being developed and implemented by project sponsors (2004).</p> <p>Completed study that analyzed the impacts projected land use changes might have on the goods movement system, focused primarily on truck traffic along major corridors (completed 2007 with 2009 update).</p>
4. Open Road Tolling	<p>Removed 8 of 17 cash toll booths at the Benicia-Martinez toll bridge and replaced with 3 free flow toll lanes, plus shoulders, and installed Open Road Toll system equipment in these lanes (2007).</p>

Focus Task (2007)

Accomplishments

5. I-80 Interregional Smart Growth Study
Final report prepared demonstrating various development scenarios for Interstate 80 communities in cooperation with the Sacramento Area Council of Governments (SACOG) (2007)
http://www.mtc.ca.gov/planning/smart_growth/I-80_corridor.htm

6. VII Test Bed
Operated the California VII Test Bed with partner Caltrans and the following stakeholders: Automotive Research Laboratories, UC Berkeley PATH Program and the Collision Avoidance Metrics Partnership (CAMP). (2007 – 2008)
Deployed 12 roadside VII units on US-101 and SR 82 in San Mateo and Santa Clara counties and developed VII applications that showcased the value of VII including: Traveler Information, In-vehicle signage, Curve Overspeed Warning and Intersection Signal Violation Warning (Cooperative Collision Avoidance Systems). (2007 - 2008)
Completed National VII Proof of Concept testing for urban canyon, hilly terrain, and tolling. (2008)
Integrated California VII Test Bed with the National VII network. (2008)

7. Freeway Performance Initiative Corridor Studies
Completed first set of corridor-level studies to serve as the building blocks of a freeway strategic plan for the Bay Area.
Identified existing and future congestion problems with their causes for each corridor, and developed and prioritized appropriate congestion mitigation strategies to address those problems.

8. Real Time Transit Information
Established a regional real-time transit data clearinghouse to collect real-time information in a standard regional format from participating transit agencies (2008)
Disseminate real-time transit information for three Bay Area transit agencies to the public via the region's 511 phone system, 511.org, a personalized 511 service at my511.org, SMS texting, on regional signs at the Embarcadero BART/MUNI station, and via a public data feed. We will continue to expand the system as new agencies share their data with MTC (2008 Muni, 2009 BART and 2010 WestCAT)

Focus Task (2007)

Accomplishments

9. SFCTA Mobility, Access and Pricing Study

Identified technically feasible congestion pricing scenarios for San Francisco.

Made a recommendation to pursue a pilot program within the next three years which would provide a proof-of-concept of system technologies and institutional capacities and opportunity to measure and monitor benefits and impacts in a real-world setting.

Will launch a final round of outreach summer 2010 to share findings and gather feedback on the idea of a demonstration program.

Should there be public and Board support, the next step would include system engineering and design for a pilot demonstration; legislative action to establish pricing authority and institutional arrangements; and environmental clearance (2010).

Section 2 2010 Focus Tasks

Focus Task	Committee/Agency	Project Goals	Near Term Products (in 2010)
1. Regional Transportation Plan/Sustainable Communities Strategy (2013 Adoption)	MTC, ABAG, and Joint Policy Committee	<ul style="list-style-type: none"> • Prepare the Regional Transportation Plan, which includes the Sustainable Communities Strategies (as mandated by Senate Bill 375) to tie transportation and land use planning as a way to reduce Greenhouse gases • Identify key transportation, housing and land use policy considerations as part of the RTP/SCS • Identify transportation investments that will address regional transportation network needs and supports development patterns in the SCS 	<ul style="list-style-type: none"> • Identification of performance targets, including: <ul style="list-style-type: none"> • Greenhouse Emission Reduction Target (as defined by the California Air Resources Board) • Housing Target • Economic/Environment/Equity Performance Targets • Identification of Draft Scenarios for Evaluation
2. Freeway Performance Initiative Studies	Caltrans, CMAs and MTC	<ul style="list-style-type: none"> • Complete corridor-level studies to serve as the building blocks of a freeway strategic plan for the Bay Area. • Identify existing and future congestion problems with their causes for each corridor, and develop and prioritize appropriate congestion mitigation strategies to address those problems. 	<ul style="list-style-type: none"> • Complete second set of corridor-level studies • Commence additional analysis of interchanges (SM 92/101 I/C & SCL 101/880 I/C) and HOV & Express Conversion (SM 101)

Focus Task	Committee/Agency	Project Goals	Near Term Products (in 2010)
3. Corridor System Management Plan and Corridor Plans	Caltrans, CMAAs and MTC	<ul style="list-style-type: none"> The CSMP is a requirement by CTC for all corridors that receive CMIA funding to implement capital improvement projects, with the intent to ensure there is a plan in place to preserve the mobility gains of the CMIA-funded projects Development of CP's and/or CSMP's for all 56 State Routes in the Bay Area 	<ul style="list-style-type: none"> Nine CSMPs for the Bay Area being developed and submitted to the CTC in 2010 Completion of CP's for States Routes 29, 37, 84, 152, 238, 505, and 780
4. Regional Express Lanes Network	Caltrans, CHP, CMAAs and MTC	<ul style="list-style-type: none"> Develop a regional network of express lanes by converting existing HOV lanes to express lanes and closing gaps and extending the system. The Express Lane Network is included in the Transportation 2035 Plan as core strategy to improve mobility and reduce delay and motor vehicle emissions. 	<ul style="list-style-type: none"> Develop consensus on a strategy to seek authority to implement the Regional Express Lane Network under current law Execute a cooperative agreement between MTC and Caltrans for development of a project initiation document for the Regional Network Initiate work on a program delivery strategy that will explore innovative delivery and finance approaches
5. Urban Partnership Program (UPP) IntelliDrive Technologies for HOT Lane Operations	MTC Operations Committee	<ul style="list-style-type: none"> Design/build/operate a testbed on the I-680 HOT lane corridor in order to demonstrate the technical feasibility of using IntelliDriveSM technologies for the primary use case of toll collection, and if feasible, for the use case of traveler information. 	<ul style="list-style-type: none"> Selection of contractor Project Management Plan Demonstration Test Plan
6. Automated Freeway Congestion Data	MTC, Caltrans	<ul style="list-style-type: none"> Transition from vehicle probe runs to an automated data collection system utilizing the PeMS system. 	<ul style="list-style-type: none"> Report congestion for the Bay Area using automated data Reduce the amount of vehicle probe runs

Focus Task	Committee/Agency	Project Goals	Near Term Products (in 2010)
7. Tolling and Pricing Evaluation	BATA Oversight Committee	<ul style="list-style-type: none"> • Assess the success of a congestion pricing strategy on the Bay Bridge by charging a higher toll during the weekday peak commute periods and a lower toll during non-peak periods. • Assess the impacts of a new carpool toll on carpool usage, occupancy, and violations on all Bay Area state-owned bridges. • Assess impacts of changes in travel on energy use and CO2 emissions, accounting for changes in vehicle miles traveled (VMT), mode share, vehicle occupancy, vehicle type and fuel used. 	<ul style="list-style-type: none"> • Data collection of “before implementation” conditions, including toll plaza volumes, travel time, vehicle occupancy, casual carpool volumes, transbay transit ridership, etc. • Working paper on traffic impacts and toll plaza operations.

Focus Task	Committee/Agency	Project Goals	Near Term Products (in 2010)
8. Transit Sustainability Project	Commission Select Committee on Transit Sustainability; Project Steering Committee	<ul style="list-style-type: none"> To establish a framework and implementation plan for a more robust, financially viable transit system that is both cost-effective and customer-focused. The TSP will include a comprehensive, fact-based analysis of the existing system focused on service design and delivery, financial viability, and decision-making structures. The analysis will also acknowledge the role external factors play in the long-term viability of the transit system, such as land use and transportation pricing, which are critically important as the region grapples with preparing the Sustainable Communities Strategy required by SB 375 (Calif. Statutes 2008, Chapter 728). 	<ul style="list-style-type: none"> Initial findings from financial analysis. Regional service analysis will be underway in 2010, with some preliminary findings in 2010.

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Appendix A: Framework for Bay Area CMP Activities

Partner Plans & Programs CMP Components	Unifying Approach	Regional Transportation Plan (RTP) and the EIR - MTC -	Transportation System Monitoring Program - Partnership -	Short Range Transit Plan (SRTP) -Transit Operators-	SIP/ Bay Area Clean Air Plan - MTC/ BAAQMD -	Congestion Management Programs (CMPs) and Countywide Transportation Plans - CMAs-	Corridor Studies/ Major Investment Studies - Affected Partners -	Regional Airport System Plan - Bay Area Airports, MTC & ABAG -	San Francisco Bay Area Seaport Plan -Bay Area Seaports MTC & BCDC -
System Definition	Regional transportation system (includes intermodal transfer points and non-motorized network)	Regional transportation system	Regional transportation system	Transit Systems	Air basin of regulation	CMP systems (State Highways and major arterials)	Freeway, highway, and transit facilities and services in the corridor	All public use general aviation, air carrier and military aviation in the region	Public use and military seaports
Performance Measures	Continue to explore and evaluate alternative performance measures through the Partnership	System level analysis (RTP EIR): average travel times, access to jobs, vehicle trips, VMT, vehicle emissions Project level analysis (Transportation 2030): measures to be determined	Indicators of mobility and accessibility, safety and state of repair. Emphasis is on presenting information in one place in an easy-to-understand format	Ridership, service miles, service hours, cost per hour, on time performance, dependability, load factors, safety, accessibility, customer service/ information	Bay Area Air Quality Plan Standards: based on Federal and State Clear Air Acts including VMT, AVR, & emissions budgets	LOS as trigger to deficiencies for CMPs, multimodal measures must be used, proposing & evaluating projects. Performance measures in Countywide Plans	Developed based on regional and local transportation policies and needs	Peak hour, demand supply ratio, ground access	Tonnage and numbers of containers, berth requirements, measures of ground access (e.g. levels/ extent of congestion on major access routes)
Data Collection & System Monitoring	Use of all sources as available and as documented by the Data Integration Project	Caltrans and CMA observed traffic counts and speeds, transit ridership, ridesharing, census data, RIDES Commuter Profile, and MTC Bay Area Travel Survey	Use existing data collected by Caltrans, CHP, CMAs, transit operators, and MTC. Supplemental data collection to fill gaps.	National Transit Database (NTDB), State Controller's Report, MTC Reporting System, & performance audits	Air quality monitoring, VMT, vehicle trips, speeds, occupancy rates, TCM status	CMP monitoring process, Caltrans Congestion Monitoring, CMA models, performance monitoring (optional)	Use of all available sources, including Caltrans, MCA, transit operators, and MTC data and modeling as available and applicable	MTC Air Passenger Survey, Caltrans Acoustic Counter, 5010 Inspections, Airport Manager's Report	Pacific Maritime Assoc. Annual Report, Port of Oakland statistics, Maritime Administration
Identification of Proposed Strategies	Major Investment Studies, CMPs, SRTPs, GPs, Management Strategy	RTP goals and policies, local general planning processes, CMP CIPs, SRTPs	Occurs through other planning activities	RTP goals and policies, capital replacement plan, transit operator goals/ interpretation coordination program	Clean Air Plan	CIPs of each CMP and the Countywide Plans	Cooperative analysis of transportation conditions, problems and opportunities, roles and responsibilities for capital and operating improvements	Airport System Plan, Capital Improvement Program	Seaport Plan, Port Priority Use Areas and Marine Terminals Designation
Evaluation of Proposed Strategies	RTP financial element, EIRs for RTP, CMPS, Public Review Processes	RTP EIR, Partnership and public review processes; Transportation 2030 project-evaluation Individual project dvpt.	Occurs through other planning activities	RTP EIR, Partnership and Public Review Processes Planning assessments of	RTP EIR, RTP conformity analysis, Clean Air Plan EIR	Countywide Plan modeling and evaluation, CMP-CIP & environ review processes, then through the RTP, and its EIR	Cooperative evaluation of proposed strategies Individual project dvpt. & review	Airport Systems Plan Alternatives Evaluation	Military Base Evaluation process.

Partner Plans & Programs CMP Components	Unifying Approach	Regional Transportation Plan (RTP) and the EIR - MTC -	Transportation System Monitoring Program - Partnership -	Short Range Transit Plan (SRTP) -Transit Operators-	SIP/ Bay Area Clean Air Plan - MTC/ BAAQMD -	Congestion Management Programs (CMPs) and Countywide Transportation Plans - CMAs-	Corridor Studies/ Major Investment Studies - Affected Partners -	Regional Airport System Plan - Bay Area Airports, MTC & ABAG -	San Francisco Bay Area Seaport Plan -Bay Area Seaports MTC & BCDC -
		& review		transit operators, multimodal fund programming process, project dvpt. & review, performance audits		process Multimodal fund priority setting process, project dvpt. & review	MIS guidelines		
Implementation of Proposed Strategies * Programming * Project delivery	RTIP/TIP Tip Monitoring Program	RTIP/TIP Tip Monitoring Program	Occurs through other planning activities	Transit operator capital & operating program, RTIP/TIP Monitoring, Productivity Improvement Program	RTIP/TIP Transportation Control Measures	RTP/RTIP/TIP County sales tax programs	RTP/RTIP/TIP TIP Monitoring Program	Funding is through the FAA. ABAG monitors implementation through the Regional Clearinghouse	Seaport Plan, BCDC acts on permit applications. MTC monitors through CEQA documents
Evaluation of the Effectiveness of Implemented Strategies	Analysis of expected impacts in RTP/CMP/SRTP forecasting. Process to evaluate observed impacts to be developed	RTP EIR - travel time and volume measures, transit use, hwy. delay, ridesharing	Effectiveness of some improvements will be evident in future State of the System Reports	RTP EIR, Productivity Improvement Program, Transit Planning Assessment, NTDB, performance audits	RTP/TIP conformity process for regional & corridor analysis, RTP EIR, & specific EIR & res. 2270 process for individual, major projects	Countywide and CMP modeling assesses impact of strategies on performance measures	RTP EIR - travel time and volume measures, transit use, hwy. delay,	RASP environmental study - includes aviation and ground access measures	SFBA Seaport Plan Environmental Assessment
Sustainable Communities Strategy	Analysis of how the pattern of development and transportation can reduce Greenhouse Gases	Regional Transportation Plan	Occurs through other planning activities	RTP goals and polices, TLC program					