APPENDIX B

TRANSPORTATION PERFORMANCE STANDARDS MONITORING

This appendix addresses the monitoring system for determining the Bay Area's progress toward meeting the transportation performance standards of the California Clean Air Act (CCAA). In particular, this appendix specifically states the CCAA performance standards, provides estimates of vehicle miles traveled (VMT) and vehicle trips in the Bay Area, describes the proposed monitoring approach for the Bay Area, and indicates the data collection schedule for monitoring compliance with the CCAA transportation performance standards.

CCAA Transportation Performance Standards

The CCAA requires that areas with a "serious" classification meet the following transportation performance standard: substantially reduce the rate of increase in passenger vehicle trips and vehicle miles traveled.

Estimates of Vehicle Miles Traveled and Vehicle Trips

Vehicle Miles Traveled. MTC estimates that the Bay Area VMT growth rate averaged 3.5% per year between 1980 and 1990. During this period, the Bay Area population growth rate averaged 1.6% per year. Based on these estimates, VMT grew at 2.2 times the rate of population growth. MTC travel projections used in the preparation of the 1997 CAP show that VMT will grow 21% between 1995 and 2010, an average of 1.4% per year. The Bay Area population growth rate during this period is projected to be 1.1% per year. Based on these projections, VMT will grow at 1.3 times the rate of population growth--a significant decrease compared to the previous decade. The reduction in the rate of VMT growth from the 1980's may be due, in part, to the suburbanization of jobs (e.g., relocation of office space from San Francisco to suburban areas, increasing the suburbs' jobs/housing balance and reducing commuters' distance traveled to work), and the saturation of women in the workforce.

Vehicle Trips. Between 1980 and 1990 vehicle trips grew by approximately 2.7% per year. ARB travel data used in the preparation of the *1997 CAP* show a 1.8% average annual growth in vehicle trips between 1995 and 2010. As indicated above, the Bay Area population growth rate during this period is projected to be 1.1% per year. Based on these projections, vehicle trips will grow at 1.6 times the population growth rate, compared to 1.7 times the population growth rate during the 1980 to 1990 period.

It should be noted that these VMT and vehicle trip projections are baseline data, and do not represent the effects of the TCMs proposed in the *1997 CAP*. As the TCMs are implemented, VMT and vehicle trips would be expected to decrease. Thus, the long term trend in VMT and

vehicle trip growth rates, with implementation of the *1997 CAP*, would be even further reductions of historical rates of growth.

Monitoring Approach

The monitoring approach includes three elements:

- Administrative record tracking
- Traffic system tracking
- Household behavior tracking

A multifaceted approach for cross-checking and verification is required to establish accurate baselines and to provide independent methods of confirming estimates of VMT and vehicle trips. The central component of this approach is the household behavior survey. The household survey will provide statistically valid measures of vehicle trips.

Administrative Record Tracking

Administrative record tracking includes compiling data on population, auto ownership, gasoline prices, parking prices, transit fares, transit patronage, consumer price indices, fuel consumption, and household income. These data are compiled by ABAG and MTC using census data or other sources. Trends for selected Bay Area data are shown below:

	1980	**1990**
Population	5,180,000	6,024,000
Vehicles per household	1.68	1.76
Transit Fares ('90 $) [(1)]	$0.82	$0.825
Modal Share (% transit)	11.6%	9.9%
Gasoline Prices-'90 (U.S. Avg.)	$1.87	$1.22
Avg. Household Inc.('89 $)	$44,200	$52,100

Administrative data provide confirmation and context for modeling results and results derived from survey data.

Traffic System Tracking

Traffic system tracking includes the continuation and expansion of the traffic counting programs of Caltrans and local public works departments. It should also include special surveys such as license plate origin-destination surveys and vehicle occupancy counts. FHWA and Caltrans are now embarking upon a program to expand the Highway Performance Monitoring System (HPMS) to provide better statistically valid regional-level information.

MTC will be working with these agencies to see how an expanded HPMS can be used by MTC.

Household Behavior Tracking

Household behavior tracking involves panel surveys or repeated cross-sectional surveys of households in the Bay Area. This effort will be an extension of MTC's 1990 household travel survey. The household travel survey is generally conducted every ten years to coincide with the census and covers over 10,000 households. However, in conjunction with the Bay Area Congestion Pricing Demonstration Project, MTC conducted a smaller household panel travel survey in 1995 of up to 4,000 households. This survey provided statistically valid estimates of vehicle trips (per household, per capita, and per vehicle) and average vehicle ridership (by trip purpose and by time of day); and time of day travel by trip purpose.

The following chart summarizes data collection for monitoring compliance with the CCAA:

CCAA Performance Standard	Data Variables	Frequency Calculated	Who will Calculate	When Reported
Reduce the rate of increase in passenger vehicle trips and miles traveled	• Vehicle Miles Traveled (VMT) • Vehicle Trips	Every two years	MTC and Air District	In conjunction with updates of the RTP. The last calculation was Spring of 1996.