

# Metro Board Approved Policy

## High Occupancy Vehicle Guidelines

Adopted: September 26, 2002

### Historical Perspective

At its March 23, 2000 meeting, the MTA Board authorized staff to award a consultant contract to perform project effectiveness evaluations of Freeway HOV Lanes. Key findings in the Report were presented in three Receive and File reports in the past two years, and represent the culmination of an extensive effort to collect data on the effectiveness of the carpool lane system in Los Angeles County. The Report is a result of cooperation and coordination with other state, regional, and local agencies and organizations.

This HOV Performance Program Evaluation Report is the product of an extensive and rigorous compilation of data on the HOV system. It included extensive vehicle counts, tachometer runs using fleets of specially equipped cars, survey of 3,273 residents countywide, and interviews with elected officials and operators. The traffic counts and surveys are designed to meet stringent statistical requirements to ensure reliability and accuracy.

The guiding principles in Attachment B build on the performance findings presented in the Executive Summary and take into account that HOV facilities represent just one element of the region's overall multi-modal transportation system. Only by integrating HOV facilities with other transportation system components and designing each mode and system element to operate complementarily and efficiently can the long-term success of the HOV lanes be ensured.

To ensure that the guiding principles for the HOV program make sense, the consultant reviewed current State of California HOV policies and standards & practice. The results of the performance assessment and measures of effectiveness used by agencies in Florida, Texas, Minnesota, and Washington were also reviewed. The consultant then developed an initial list of guiding principles which were then consolidated into four general areas:

1. Capital Investments;
2. HOV Operations;
3. Public Education and Awareness; and
4. HOV Performance Monitoring.

With respect to Capital Investments, the Guiding Principles call for continued implementation of gap closures, freeway to freeway HOV connectors, and increased implementation of transit facilities for HOV lanes. The Guiding Principles for HOV Operations address vehicle occupancy requirements, hours of HOV operation and other freeway operation issues. The Guiding Principles recommend and describe a focused marketing program. Most importantly, the Guiding Principles establish an agreed upon Caltrans/MTA program for continued and automated HOV performance monitoring and reporting.

Specific actions that are needed to improve the performance of HOV lanes will be carried out in consultation and coordination with Caltrans and other transportation agencies and the public. The Program recognized that "partnership" is key to the success of the operation and design of HOV lanes because:

1. by statute, the MTA is the planning and programming agency for all State highway capacity enhancement improvements;
2. Caltrans is the owner and operator of the freeways and is responsible for their operations and maintenance; and
3. the California Highway Patrol (CHP) is responsible for the enforcement of traffic laws on the freeways.



**Metro**

## ATTACHMENT B

### HOV Guiding Principles

#### Capital Investments

Based on results from the performance program, three areas were identified where future capital investments in the HOV system plan are needed:

- HOV Gap Closures. The MTA will pursue completion of gaps in the currently defined countywide HOV system plan and its connections with adjacent counties. The MTA will generally utilize the methodology that was developed and tested on select freeway-to-freeway connectors as part of the performance program. This methodology utilized future traffic volume and travel time forecasts generated using the MTA Travel Simulation Model, existing average vehicle occupancy rates and accident locations derived from performance program data, and conceptual design impacts and cost estimates specifically developed for each location to score and rank the potential facilities. For the purpose of future gap closure evaluation, this methodology will be further enhanced by incorporating a benefit-cost element that will follow the modified California Benefit Cost (Cal BC) Model that was applied as part of the performance program evaluation of existing HOV facilities. The MTA will work with Caltrans to perform these evaluations and to secure and program funding for needed gap closures. The MTA will discuss parameters and needed modification to this methodology with Caltrans such as life-cycle periods, transit service, etc. This approach will ensure a planning process that advances the most logical evolution of a more continuous system of HOV lanes, promotes increased transit and ridesharing, and optimizes operational efficiency where lane discontinuities currently constrain freeway and HOV operations.
- Freeway-to-Freeway HOV Connectors. The MTA will pursue freeway-to-freeway HOV connectors at strategic locations between intersecting HOV freeway corridors. The MTA will generally utilize the methodology that was developed and tested on select freeway-to-freeway connectors as part of the performance program. This methodology utilized future traffic volume and travel time forecasts generated using the MTA Travel Simulation Model, existing average vehicle occupancy rates and accident locations derived from performance program data, and conceptual design impacts and cost estimates specifically developed for each location to score and rank the potential facilities. For the purpose of future potential HOV Direct Connectors evaluation, this methodology will be further enhanced by incorporating a benefit-cost element that will follow the modified California Benefit Cost (Cal BC) Model that was applied as part of the performance program evaluation of existing HOV facilities. The MTA will work with Caltrans to perform evaluations to prioritize candidate locations and to secure and program the funding needed for these capital investments. Implementing HOV connectors will provide even greater travel time saving and trip reliability to bus riders and carpoolers, and will enhance both HOV and freeway operations by minimizing HOV weaving and merging at freeway interchange locations.

- Transit Facilities. The MTA will actively plan and implement transit services, transit stations, park-and-ride lots, and direct access ramp connections with existing HOV lanes to gain greater efficiency and use of the current HOV lane investment. Transit facility investments are particularly critical on routes where HOV lane operational capacity has been reached and increasing occupancy requirements to three or more persons per vehicle are required. In order to achieve the same success as evidenced on the El Monte Busway, the MTA will work with Caltrans and affected transit service providers and jurisdictions to develop an evaluation methodology to identify transit markets that could be better served using HOV facilities, and to define, evaluate and rank specific transit investments that will be needed.

## **HOV Operations**

- The MTA supports the operation of HOV facilities on a 24-hours/7 days a week basis. Only when the measured HOV lane volumes are less than federal and state standards (e.g., 800 vehicles per hour) and other remedial actions have not been successful in increasing use of the facility, part time HOV operation would be considered. Part time HOV operations should not be considered during the first 3 years of operation to allow adequate time for ridesharing and transit use to develop. Any part time HOV operations must be coordinated with and approved by appropriate state and federal agencies, and may require repayment of any federal funds used for HOV capital investments.
- The MTA will work with Caltrans and other agencies to examine HOV facilities currently reaching capacity at the 2+ vehicle-occupancy level for possible operating alternatives to sustain travel time savings and trip time reliability. These alternatives may include restriping or otherwise modifying lane design to address isolated capacity conditions, raising the vehicle-occupancy requirement to 3+ during congested periods, and adding or increasing transit services as a means of regulating demand. Evaluations will be needed to address the best combination of strategies which will preserve current benefits and generate the potential to serve additional person movement.
- The MTA supports a 2+ vehicle-occupancy requirement. When maximum design limits for HOV traffic volumes (1,600 vehicles per hour) are being approached, 3+ vehicle-occupancy level would be considered during peak commute hours. Before the 3+ vehicle-occupancy restriction is put in effect, a comprehensive analysis based on the Caltrans methodology for evaluating the benefit-cost of capacity enhancing projects will be conducted to assess the best combination of strategies to transition a project from 2+ to 3+. After the 3+ vehicle-occupancy restriction is in effect, the effectiveness of the restriction would be assessed.
- The MTA will periodically assess the need for new bus services and expanding existing services on HOV lanes. The assessments will evaluate existing routes, common origin/destination pairs in unserved travel markets, and major employment locations. The assessment will be undertaken in coordination with Caltrans and transit operators.

- The MTA endorses the California Highway Patrol (CHP) role in providing ongoing enforcement of the HOV lanes, and will work with CHP and Caltrans to pursue innovative strategies and facility modifications to improve enforcement and to reduce the costs associated with enforcement.

### **Public Education and Awareness**

- MTA shall prepare and annually update/revise an HOV Education and Promotion Plan. Elements of the HOV Education and Promotion Plan shall include:
  1. Assessment of existing HOV market conditions (actual usage, users and non/user attitude and opinion data, etc.) as needed;
  2. Goals and objectives of the HOV Education and Promotion activities and determination of target markets for the calendar year;
  3. Descriptions of specific activities to be undertaken;
  4. Schedule of implementation, desired measurable outcomes and required budget; and
  5. The annual budget for HOV Education and Promotion activities which might vary based on the introduction of new HOV facilities, market research efforts, and ongoing education needs.
- Information outlining HOV goals, objectives and performance and future visions should be included as part of the annual program for elected officials (cities, County, State officials representing LA County) and key County stakeholder outreach undertaken by MTA. It is desirable that the HOV education outreach be implemented as soon as possible following the election of a newly elected official and of a re-elected official.
- The MTA will target specific HOV corridors, implement a more focused HOV corridor promotion program and periodically assess the common origin/destination pairs in underutilized HOV corridors. The assessment will be undertaken in coordination with Caltrans.
- MTA shall ensure that an education and promotion specialist is an active member of the HOV Planning and Design Team(s). The role of this specialist will be to identify and coordinate opportunities for education and promotion at the earliest stages of HOV project development.
- HOV education and promotion elements shall be incorporated into the outreach activities of rideshare organizations receiving funding from MTA (including the MTA managed programs that benefit rideshare) and other incentive programs, as well as transportation management and transit operator associations and/or organizations.
- Funding for project specific HOV education and promotion shall come from HOV project funds. Agencies applying for HOV project funding will include an estimate for HOV education and promotion in the overall project cost estimate, after a thorough research of available promotional materials that currently exist at the MTA.

- Funding for project specific HOV education and promotion shall come from HOV project funds. Agencies applying for HOV project funding will include an estimate for HOV education and promotion in the overall project cost estimate, after a thorough research of available promotional materials that currently exist at the MTA.

### **HOV Performance Monitoring**

The MTA will coordinate with Caltrans, CHP, and other agencies in conducting periodical assessment of the performance of the Los Angeles County HOV lanes. The performance assessment will focus on “key” measures of effectiveness (MOEs) outlined in Section 4 contained in the HOV Performance Program Evaluation Report. Some of these MOEs include vehicle volumes, persons per lane per hour, travel time savings, improvements in speed, vehicle occupancy levels, violation rates, and others. Caltrans will provide data support (i.e., tach runs and vehicle-occupancy counts) by implementing the UC Berkeley computerized freeway monitoring program and by incorporating the HOV data collected in this performance improvement program; transit operators will provide ridership counts and operating cost data; and CHP will provide violation data. The MTA will assist and coordinate with Caltrans in summarizing data and publishing status report.

## ATTACHMENT C

### **Existing Agency Roles, Responsibilities and Coordination and Cooperation Efforts in the Development of a Countywide HOV System**

- MTA has long-standing partnership of jointly working with Caltrans to deliver all elements of the highway/freeway system as an integrated transportation system including general-purpose lanes, HOV lanes, HOV connectors, ramp metering and by-pass lanes, park-ride lots, soundwalls, transit centers, intelligent transportation systems, traffic management strategies, rideshare and transportation demand management programs, and other operational strategies. MTA will lead local (county-level) planning efforts and support Caltrans in statewide efforts. MTA will support Caltrans in all other aspects of delivering an integrated transportation system.
- Through the State Transportation Improvement Program (STIP) process, SCAG's Regional Transportation Plan (RTP), and MTA's Long Range Transportation Plan, MTA takes a proactive role in promoting and coordinating the development of a system of continuous HOV facilities throughout the County as well as connections to planned and existing HOV facilities in adjacent counties and throughout the region. Examples of this role include the active solicitation of HOV projects that provide a continuous HOV system and corresponding connections from proposing agencies, and the development of project selection scoring to favor projects that provide a continuous HOV system and the corresponding connections.
- MTA pursues interagency coordination in planning, designing, implementing, marketing, operating, enforcing, and monitoring and evaluating HOV facilities, including the use of multi-agency teams and other appropriate mechanisms. Example forums that have been established include the MTA Streets and Freeways Subcommittee, the MTA/Caltrans Planning Coordination Task Force, and the SB 45 Coordination Committee.
- In support of federal and state guiding principles on the coordination of transportation planning and project development processes, the MTA reviews the Master Cooperative Agreement between MTA and Caltrans annually to determine if modifications are needed. If the Agreement is deemed to be in need of modification, MTA will lead the effort to update and amend the Agreement to ensure responsiveness to revisions to transportation legislation and new agency roles and responsibilities pertaining to HOV facilities.
- MTA will advocate for and participate on a regional HOV Systems Committee or similar body to coordinate regional policy-making and to resolve issues that cut across county borders. SCAG, which is the federally designated Metropolitan Planning Organization

(MPO) that encompasses the six Southern California county region, is the designated agency to take the lead role in this activity.

- Intermodal considerations and coordination shall take place throughout the HOV planning and development phases. These principles are outlined in the MTA 1996 HOV Systems Integration Plan.
- When significant changes are to occur to the HOV system or its components, MTA shall request that Caltrans coordinate such changes through a regional process, as designated by MTA, SCAG or other regional forum. Significant changes may include addition HOV mainline lanes not currently envisioned in the HOV element of the MTA Long Range Plan, deletion of HOV lanes that are currently in the plan, and changes to the hours of operation or vehicle-occupancy designation on any of the freeway HOV facilities in the county.