that everybody travels by transit but that all forms of transportation are integrated to obtain optimum efficiency within the public right-of-way provided. The demand to use and subsequently accommodate the private vehicle (no matter what form it may take) will continue. Participants felt that, if given the choice, everyone prefers to travel in a private vehicle rather than in a mass transportation vehicle.

3. Transportation system management should not become overly complicated and cannot be tied up in red tape. Much of the funding for improving existing transportation facilities and developing new ones comes from federal sources, and the tendency to require such extensive administrative procedures in both acquiring and accounting for those funds may render TSM inefficient and even impossible to accomplish. Federal representatives in attendance indicated that procedures and methodologies are constantly being developed to simplify the paperwork associated with federal funding.

4. The authority, capability, usefulness, and procedures of MPOs vary throughout the country. MPOs that are not properly structured should not approve federally funded programs. Although it is necessary to establish and administer transportation programs on a metropolitan and area-wide basis, the state department of transportation may provide more efficient transportation system programming, planning, and implementation in those states that are primarily nonurbanized.

5. Metropolitan planning organizations should not be given responsibility for implementing transportation programs. In the development of transportation plans and programs, they should solicit and incorporate the recommendations of those who are responsible for transportation system operation.

**PREFERENTIAL TREATMENT FOR TRANSIT AND OTHER HIGH-OCCUPANCY VEHICLES**

Leon Goodman
Transportation Planning Division, Port Authority of New York and New Jersey
Workshop moderator

Transportation system management programs can consist entirely of low-capital projects or can be effectively integrated in programs that have low-capital and high-capital elements.

No single type of bus or car-pool preferential treatment has to be used at all locations. There is a tremendous variety of treatments that can be effective under different circumstances. Most exclusive bus lanes (an exception is the one on Interstate 495 in New Jersey) have eventually been converted to bus and car-pool lanes. The tendency to remain a bus-only lane is not confined to I-495 in New Jersey but is common to all freeway contraflow bus lanes. The presumption is that the drivers of car-pool vehicles would be less experienced and less competent than professional bus drivers and, further, that the privately maintained automobiles would be subject to a higher breakdown rate than professionally maintained buses. No data are offered relating to the potential greater accident hazard, but there are some data on breakdown rates for buses. During its first year of operation, the New Jersey I-495 bus lane experienced three "reportable" breakdowns per month, which were handled by an on-station tow truck. Participants thought that car pools could be admitted to contraflow lanes on a permit basis, thus allowing some type of screening and education for potential operators in the lane. This program might include a brief training course for authorized car-pool drivers. These courses could also be attended by the bus driver. However, if there was no shoulder or buffer lane available for use as a breakdown area, then car pools, even with permit, should not be admitted to contraflow lanes.

Successful implementation of high-occupancy vehicle lanes or other similar programs is dependent on a carefully planned public information and education program. If there are to be serious initial relocations and delays, the press, and through it the public, must be fully informed. There should be a minimum of "surprises" during the implementation. Public reaction is often based not on what the conditions are but on how the conditions are perceived. In addition, adverse public reaction can be minimized if programs are initiated in stages or
on a partial basis.

Attempts should be made to implement preferential programs that might have adverse initial impacts. Under current political and economic conditions, it may be impossible to successfully implement preferential schemes that radically (and relatively permanently) worsen conditions for regular motorists.

Preferential treatments should be used to develop new transit ridership in predominantly automobile-dominant territories as well as to maintain existing ridership in areas where transit services are already established. Some evidence indicates that preferential schemes have helped existing transit services retain ridership despite adverse factors such as fare increases. High-occupancy vehicle lanes should be considered if they serve more people as priority lanes than they do as nonpriority lanes.

Priority treatments should not be used only for buses and other rubber-tired vehicles. The advantage of priority or preferential treatment is not related to any particular transit technology. It is the separate right-of-way and not the rubber tire or the steel wheel or the air cushion that produces quick and reliable transportation service. Therefore, old trolley rights-of-way may be converted to busways, trolley cars (now called light rail vehicles) may operate on an exclusive right-of-way within a freeway median, or an exclusive right-of-way may be provided for electric, rubber-tired vehicles such as trolley coaches.

Financing of preferential treatments could come from a variety of sources. Federal-aid primary and urban system funds for car-pool demonstration projects might be used to finance the signing, enforcement, and operating costs of an exclusive lane for car pools on any street or highway at a 90-10 federal-local rate. Any of the classes of federal-aid highway system funds are eligible for the construction of exclusive or preferential bus or car-pool lanes as federal highways.

Preferential treatment for high-occupancy vehicles helps to promote transit usage. Advertisements for new real estate developments frequently cite available preferential facilities as a benefit.

A preferential treatment that can be readily seen by motorists has a greater potential for automobile-to-transit diversion than a treatment that improves transit travel but is not too visible. Thus, an exclusive bus roadway within a freeway right-of-way would divert more motorists than an equivalent bus roadway on a separate alignment away from the freeway.

A study in New Jersey is considering high-occupancy vehicle lanes on the I-80 and I-95 approach to the George Washington Bridge and on sections of the Garden State Parkway. The bridge approach studies are keyed primarily to commuter travel, and the Garden State Parkway analysis is focused on recreational travel. A proposed potential transit improvement on the Palisades Interstate Parkway in New Jersey and New York is to allow buses to use the parkway (they are currently banned). This then would be an institutional rearrangement rather than a technical proposal. The notion was advanced in the workshop that in urban areas some close-in freeway sections (entire directional roadways) could be devoted exclusively to high-occupancy vehicles, and regular traffic could be diverted to available parallel routes.

As long as highway capacity is continually increased, vehicle travel will also increase. The question was asked, Should it be required that all new urban freeway construction have some provisions for preferential use by high-occupancy vehicles? The New York State study for the Long Island Expressway in Queens is specifically considering a widening, and the additional lanes would be exclusively for high-occupancy vehicles. The consensus of the workshop was that special facilities for high-occupancy vehicles should be considered for all highway-widening projects, particularly those that are radially oriented.

Management and Control of Parking

Edward J. Twomey
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Workshop moderator

Workshop discussion centered on an example of some problems that are encountered when attempts to manage parking are undertaken. Possible solutions to these problems were explored.

In the example, a surplus of both municipally owned and private parking exists in the central business district of a city. These two parking sources are in direct competition with each other and, since supply exceeds demand, the rate structure is quite low, about $1.75 for all-day parking. The city does not feel that it can raise the rates at municipal facilities because it would then lose business to the private operators. The city also feels that it cannot effectively institute a general parking tax because ample free or low-cost parking is available in the fringe areas surrounding the CBD. And even if it were possible for taxing to induce modal switches, there is not enough transit capacity to handle additional peak-period ridership. Finally, car-pooling and vanpooling programs have yet to catch on in that community.

This example illustrates the pragmatic problems that urban areas face in seeking to gain some control over previously unchecked and unplanned parking construction. Dramatic changes in parking pricing and availability simply are not feasible in the majority of urban areas where sufficient alternatives to single-occupancy vehicle travel are missing. However, the difficulties should not serve as an excuse for inaction, at least in the view of some of the persons in attendance. Several U.S. cities as well as many foreign cities are in various stages of managing parking, and there are enough successful examples to conclude that it can be done.

For the example discussed at the workshop, several possible solutions were explored as a means of achieving some controls over parking. The solutions focused on measures that affect the most regular and easily controlled parkers: the work commuters. Incentives such as reserving some of the excess supply of convenient CBD parking to car poolers at little or no cost could act as an effective incentive, especially if attempts were made to implement a comprehensive areawide car-pool program that focused on major employers. Appeals to major CBD (as well as urban-wide) employers to provide