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Mr. Chairman, I am Thomas M. Downs, Associate Administrator for Planning, Federal Highway Administration, Department of Transportation. I am pleased to appear here today with Administrator Lutz to discuss our joint efforts on assuring mobility in this era of increasing constraints.

As requested, I will keep my remarks brief so that we may respond to your questions. I have submitted more complete testimony for the record.

INTRODUCTION

In this era of increasing energy costs and energy supply uncertainties, air pollution and other environmental consequences associated with automobile use, and fiscal constraints being felt by Federal, State and other local governmental levels, the Federal-aid highway program is shifting emphasis away from added capital facility construction to provide more system capacity for highway vehicular movement. The emphasis is now being directed toward the means that will enable the existing system to be used more efficiently. The existing investment in this Nation's highway plant and the private investment in the vehicles that use

it are enormous. We must direct our efforts at how to better use it rather than to adding to its size.

Mobility can be assured despite energy, environmental, and financial constraints. The reason is that we have so much "fat" in the main component of the system, the private investment in the individually owned auto. This "fat" is the empty seats that are not being used. On the average, during the peak commuting periods, 90 percent of the autos have only the driver in them, which means there are three empty seats available to provide mobility at little or no increased use of fuel, environmental impact, public or private investment.

Some figures to show the scale of this system capacity that can be used are:

1. Currently, about 15.6 million persons use some form of carpooling/vanpooling to commute to work every day.
2. There are about 150 million empty seats in private autos during the peak commuting period.
3. If the number of persons/auto were to increase by only 0.8 of a person (from 1.2 to 2.0) approximately 350,000 barrels of gasoline/day would be saved.

The FHWA is attempting to discourage the inefficient use of the auto, when it is used by only the driver, and to get more of these one person per auto trips into carpools, vanpools, and transit.

To accomplish this switch to higher occupancy vehicles (HOV) a wide range of transportation system management (TSM) actions are needed. HOV incentives include actions such as fringe parking facilities, high occupancy vehicle lanes, priority entry to freeways, parking priority for carpools and vanpools, parking pricing actions, and alternative work schedules. In addition, traffic control system improvements such as signal timing optimization improve operations and provide for energy conservation.

To better manage the auto in the city and contribute to urban mobility and revitalization, a number of auto management actions such as parking management, enhanced opportunities for pedestrians and bicycles, transit malls, and auto restrictions can be developed and planned in conjunction with the private sector. Improved efficiency of goods movement operations in downtown areas and improved access to major terminals such as ports can save energy and reduce our costs of goods.

The GAO report titled "Stronger Federal Direction Needed to Promote Better Use of Present Urban Transportation Systems" pointed to the need for better coordinated Federal administration of the planning process and stronger Federal directions on TSM. Although we agree that some further clarification would be useful, we believe that the key is enhanced recognition of the need for TSM at the State and local level. We believe further Federal regulations, directives, or TSM planning documentation are not the answer.

Local areas must be able to tailor solutions to their metropolitan areas based on goals and problems that have been identified and evaluation of the most cost effective and energy efficient strategies to address these problems.

In the FHWA Program Emphasis Areas for FY 80, ridesharing, high occupancy vehicle lanes, fringe parking, traffic signal timing optimization, and energy contingency planning are being particularly emphasized. Each regional office has been asked to set energy conservation project targets tailored to each State and metropolitan area. Progress toward achievement of these goals is being monitored quarterly.

EFFECTIVENESS OF TSM STRATEGIES

Under the Emergency Highway Energy Conservation Act of 1974, Federal-aid highway funds were authorized to be used for carpool demonstration projects. Between 1974 and 1977, 106 carpool projects in 34 States and 96 urbanized areas comprising a total budget of \$16.1 million were implemented.

The costs of implementing ridesharing projects average only 2.5¢ per vehicle mile of travel saved. The annual savings in vehicle operating costs alone resulting from comprehensive ridesharing projects are 5-to-8 times greater than annual project costs.

The results are especially impressive in view of the fact that the demonstration projects had made only limited use of a wide range of ridesharing incentives. Far more effective combinations of incentives are now being implemented in newer, more comprehensive ridesharing projects.

During calendar year 1979, \$41,530,752 in Federal-aid highway funds have been obligated by 45 States for a variety of ridesharing projects. This represents a 155 percent increase over the preceding year.

Some specific examples of current successful ridesharing projects are:

"RIDES" in the San Francisco area is a regional nonprofit organization offering comprehensive computerized ride-matching service since 1978 throughout the Bay Area. They have a particularly impressive vanpooling program and have recently initiated an on-line real-time ridesharing matching service which gives persons calling in the information on potential matches similar to the way people can get airplane reservations by phone.

The CarShare program in Houston is one of the best examples of a successful continuing project. CarShare staff work directly with employers as well as individuals in promoting carpools, vanpools, and public transit.

New Jersey is an excellent example of a State that advocates the total concept of ridesharing. During FY 79, \$484,792 were authorized to purchase 68 vans. New Jersey already has approximately 647 vanpools in operation and has spent \$6 million in Federal-aid for ridesharing activities since 1974.

Tennessee Valley Authority estimates a savings of over \$20 million by reducing the need for additional parking and highway facilities through its vanpool/buspool program. TVA serves 7,000 employers at 20 work locations in four States with its comprehensive ridesharing program including 450 vans and 60 buses. In addition, 180 vans are on order and 40 more buspools will be operating by spring.

Improved traffic control measures such as signal interconnection and optimization offer energy savings through smoother traffic flow and less delay at intersections. Optimizing the operation of the Nation's 240,000 traffic signals is one of the most cost-effective measures which can be taken, with an estimated savings nationwide of 50,000 barrels of gasoline daily.

To promote awareness of this potential energy savings, the FHWA is developing a Pilot Cities program to optimize the timing at approximately 1,000 signalized intersections in 10-to-20 jurisdictions.

Signalizing freeway ramps affects energy savings by smoothing vehicular flow on the freeway thus decreasing total traveltime.

In Los Angeles, a program of ramp metering involving 851 ramps in the region is estimated to save 24 million gallons of fuel annually. *

Areawide impacts of a comprehensive traffic control system improvement project have also been estimated. Results of one study have shown a 3.2 percent reduction in total fuel consumption, even though total vehicle miles of travel increased 1.1 percent. Thus, improved traffic control can improve "mobility" when defined as the actual amount of travel, while reducing energy consumption at the same time.

We are moving ahead with traffic control signalization projects at the 100 percent Federal share, as provided by the 1978 Surface Transportation Assistance Act. To summarize, over \$14 million was obligated in FY 1979 at the 100 percent level. We expect FY 1980 to continue as a start-up period for the 100 percent funding program but with much greater obligations as the program matures and there is more recognition of the considerable impact that traffic control signalization can have on energy conservation and safety.

Use of ridesharing and transit can be greatly facilitated through provision of HOV lanes which allow the pool vehicles and buses to bypass peak period traffic delays.

There are currently 74 exclusive-lane HOV projects in operation in 23 States and over 30 metropolitan areas. Another 54 projects are in various stages of planning, design, and construction.

The most successful HOV lane is the Shirley Highway (I-395) in Northern Virginia, where two HOV lanes carry over 65 percent of the people in only 24 percent of the vehicles during the peak hour on this facility.

The FHWA/UMTA urban policy guidelines require that priority treatments be specifically considered in all major project development.

Fringe park-and-ride lots are a relatively easily implemented action which are receiving a good deal of interest.

The cost of such projects can be very small, as many areas have instituted fringe lots in shopping centers and other existing parking areas.

Studies conducted by the Council of Governments in Dallas/Ft. Worth have estimated that almost 2,000 gallons of gas per day would be saved with a system of 23 lots with bus service throughout the area.

As another example, the Missouri State Highway Department has 38 lots in use, and estimates that a savings of 1.5 million gallons of gasoline annually has been achieved.

The Connecticut DOT has been particularly active in the use of fringe lots, with 123 in use as of September 1979. They have also executed federally funded leasing arrangements with shopping centers which have proven to be mutually beneficial, as merchants feel that the commuter parkers shop before driving home.

Nationally, over 5 percent of all commuters walk or use a bicycle to get to work, about the same percentage that use transit.

Over 60 percent of all vehicle trips are less than 5½ miles in length, with over 24 percent being less than 1.5 miles. Potentially, many of these trips could be shifted to nonmotorized modes with significant energy and air pollution reductions if an improved system were provided to accommodate them.

An FHWA Notice of Proposed Rulemaking published in the January 3, 1980, Federal Register sets up a Bicycle Grant Program and outlines procedures for use of the \$4 million appropriated to carry out Section 141 of Title 23.

Realizing the importance of parking management in encouraging high occupancy vehicle use, energy conservation, and urban revitalization, FHWA undertook a major study to review parking management strategies that have been tried and to develop a guide for local officials, planners, and operators for implementing parking programs.

Effective management of the supply, location, pricing, and operational policies of parking supply has great potential as a TSM action. Nationally over 90 percent of automobile work trip commuters park free. Control of convenient, inexpensive parking for the one-person-per car commuter could be successfully used to encourage model shift.

An example of the potential impact of such efforts is found in Ottawa, Canada, where a 23 percent decrease in auto-work trips occurred when Federal employee parking rates increased from zero to \$20 per month. Transit ridership of the Federal

employees also increased by 16 percent.

The FHWA and UMTA are strongly encouraging inclusion of goods movement in the planning process. Recent joint guidance to field offices emphasizes the importance of efficient goods movement to improved productivity and energy efficiency and directs attention through local work programs and transportation improvement programs. The FHWA, in cooperation with State and local agencies and the American Trucking Association, recently completed a guide on urban goods movement planning to assist local planners and engineers in identifying problems.

USE OF FEDERAL-AID HIGHWAY FUNDS FOR TSM

Over the past year in particular, there has been an encouraging shift in the receptiveness of State and local officials to using more of their apportioned Federal-aid highway construction funds for these "nonconventional" TSM projects. There are many reasons for this. The most important are (1) changes in the Federal legislation which permit many of the actions to be eligible such as that pertaining to carpooling/vanpooling, (2) the active encouragement of our FHWA field offices, and (3) growing awareness of State and local officials of the cost and energy effectiveness of these actions. On the other hand, there are many reasons for there not being considerably more use of these Federal-aid highway construction funds. These include (1) historical organizational bias toward "normal" highway construction activities, (2) existing constraints in 23 U.S.C. which do not permit the Federal-aid funds to participate in certain nonconstruction and/or recurring activities,

(3) State and local priority needs for additional highway construction, (4) desire to use other Federal funds for TSM and save the apportioned highway funds, and (5) a belief that TSM means "Too Small to Matter."

To convince State and local officials to use more of their Federal-aid highway funds for TSM actions, the Administration has proposed transportation energy legislation that was submitted to the House and Senate on September 14. This approach would amend 23 U.S.C. to provide for an increased Federal share (90 percent) of the cost of projects which would conserve energy through improved use of automobiles. This would use additional discretionary Federal funds to finance only the increase in the Federal share of such projects which also use regular Federal-aid highway funds at the normal (75 percent) Federal share. This funding arrangement provides a strong incentive for State and local officials to redefine their priorities away from normal physical highway construction projects toward these "nonconventional" TSM projects. It accomplishes this goal by using the additional Federal funds as "leverage" for State and local officials to direct their use of apportioned Federal-aid highway funds to TSM.

There is an urgent need to remove the existing constraints in 23 U.S.C. which preclude Federal fund participation in many of the nonconstruction type activities that are required for TSM improvements.

OTHER NEEDED ACTIONS

Last April, President Carter took a bold and correct step to eliminate free parking for most employees who work in metropolitan areas. The parking fees were introduced on November 1, 1979. Paying fair market value for parking encourages employees to carpool or vanpool in order to share the costs. Previously, even though the majority of Federal employee parking spaces was ostensibly reserved for carpools, the phenomenon of the "phantom carpooler" was widespread.

The President emphatically underlined our commitment as an employer to ridesharing by recently issuing Executive Order 12191 on the Federal Facility Ridesharing Program. This Executive Order requires Executive agencies, among other things, to establish annual employee ridesharing goals, to implement programs and incentives necessary to meet these goals, and periodically to report progress. /

As of this date, the Executive branch is alone in setting this example although legislation such as S. 930 has been introduced that would extend parking charges to other branches of Federal Government and thereby provide an incentive for ridesharing. /

One issue that is frequently raised regarding the Federal Government acting "like a private employer" is that in one very critical respect, our ridesharing efforts are constrained by the provisions of Federal law, Title 31, U.S.C., Section 638(a)(c)(2). This law prohibits Federal agencies from using vehicles purchased or leased with appropriated funds to transport employees between their homes and employment sites. Therefore, we cannot emulate the 300 or so private employers around the country that sponsor employee vanpool programs. Just as in private programs, the ridesharing Federal employees would pay all costs, including operating expenses and pro-rated vehicle depreciation. We are examining whether 31 U.S.C. 638(a)(c)(2) should be amended to provide a specific exemption for vehicles used as part of an employee ridesharing program in which employees pay all costs associated with the commute trip.

Another area that needs Congressional attention is the question of the Federal income tax status of employer-provided or subsidized parking and a related issue, the tax status of employer-subsidized transit passes. The current situation is that parking usually is treated as non-taxable whereas discounted transit passes are taxable. The IRS and Treasury are

prohibited from resolving this inconsistency because P.L. 95-427 forbade the Commissioner from issuing any rules or regulations dealing with a wide spectrum of employer provided benefits. The Congressional moratorium has been extended until June 1981. We believe this issue needs to be addressed very soon as an increasing number of employers, seriously looking for transportation options to offer their employees, receive conflicting or incomplete messages that discourage them from doing something positive.

One other activity I would like to briefly highlight is the President's action last October that established a National Task Force on Ridesharing composed of outstanding leaders in both the private and public sectors. The objectives of the Task Force are action-oriented: to expand ridesharing programs through direct encouragement and assistance and to create a continuing dialogue among all parties involved in managing ridesharing programs and providing incentives.

The Task Force has met with Secretary Goldschmidt and has formed five committees to tackle the problems of marketing and information, insurance, financing, institutional issues, and incentives.

PUBLIC TRANSPORTATION FOR RURAL AND SMALL URBAN AREAS

The Section 18 program for public transportation assistance to rural and small urban areas jointly administered by FHWA and UMTA is progressing very well. The use of Section 18 funds has begun to accelerate since October 1, 1979. Prior to that date, only \$8 million had been requested by 40 States and

territories, and 70 percent of that was for technical assistance activities by the States for the establishment of staff and programs. That was also the period of extensive communication, coordination, translations, and clarifications (mostly dealing with the "13c" labor protection issue) that are always required in implementing new programs. However, since October 1, 1979, over 80 new projects involving capital and operating expenses have been approved in 15 States, and valued at over \$8 million. Furthermore, looking ahead, another 90 projects for capital and operating assistance are now being processed by the States and should be approved during the second quarter.

Our major progress during the past 12 months has been the development of an effective yet flexible framework for this new program. I have attached a thorough Section 18 status report for inclusion in the record.

CLOSURE

We are pleased to be here today jointly testifying on TSM issues today. The FHWA and UMTA are jointly administering many aspects of the transit and highway program including TSM, urban initiatives, ridesharing, Section 18, energy conservation, and contingency planning efforts. Regulations, program guidance, and technical assistance are jointly developed and provided in order to fully integrate the transit, ridesharing, and highway system elements of the programs and insure consistent program direction to State and local governments.