

290

TRANSPORTATION RESEARCH

Number 290, March 1985
ISSN 0097-8515

CIRCULAR

Transportation Research Board, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418

CONFERENCE ON TRANSPORTATION PARTNERSHIPS: IMPROVING URBAN MOBILITY THROUGH PUBLIC-PRIVATE PARTNERSHIPS Dallas, Texas, March 14-15, 1984

- modes
 1 highway transportation
 2 public transit
- subject areas
 12 planning
 14 finance
 16 user needs



CONTENTS

| | | | |
|--|----|--|----|
| FOREWORD | 2 | B. Transportation Management in Large Scale Suburban Developments William Eager | 21 |
| REMARKS BY RALPH STANLEY | 2 | II. MAKING MORE EFFECTIVE USE OF PRIVATE PROVIDERS | |
| A DEVELOPER LOOKS AT PUBLIC-PRIVATE COOPERATION IN TRANSPORTATION AND REAL ESTATE DEVELOPMENT Raymond D. Nasher | 4 | A. Service Contracting Wendell Cox | 22 |
| CORPORATE RESPONSIBILITY AND PUBLIC TRANSPORTATION Rodney W. Rood | 7 | B. Private Bus Operations Wendell Cox | 22 |
| PRIVATIZING TRANSPORTATION INFRASTRUCTURE Robert W. Poole, Jr. | 10 | III. ADMINISTRATIVE IMPACTS OF PRIVATE FINANCING | |
| COMMENTS ON POOLE'S PAPER Franklin D. Raines | 13 | Gary L. Brosch | |
| CITY PRESENTATIONS: | | A. Non-Federal Funding Alternatives | 23 |
| HARTFORD | | B. Administrative Impacts of Private Financing | 24 |
| Paul A. Ehrhardt | 14 | C. Benefit Assessment District | 25 |
| CHARLOTTE | | D. Innovative Loan Instruments | 25 |
| Minette Trosch | 16 | Participants | 26 |
| Cliff Cameron | 16 | SPONSORSHIP OF THIS CIRCULAR | |
| HOUSTON | | <u>Steering Committee to Develop the Conference on Opportunities for Private Involvement in Urban Transportation</u> | |
| Robert Eury | 17 | C. Kenneth Orski, Washington, D.C., chairman | |
| John B. Turner | 18 | J. Thomas Black, Jonathan C. Coleman, Wendell Cox, Mortimer L. Downey, John A. Dyer, Norman H. Emerson, E. Larry Fonts, Elliott Holland, Thomas L. Holmes, Christine M. Johnson, George F. Knox, Jr., Albert R. Ratner, Donald L. Williams, A. J. Zissler Liaison Representatives, Kenneth Bolton and Jimmy Yu TRB Staff, James A. Scott Consultant, Joseph R. Stowers | |
| SUMMARY OF SESSION ON OVERCOMING BARRIERS TO COMPETITION Joseph R. Stowers | 19 | | |
| WORKSHOP SUMMARIES | | | |
| I. PUBLIC-PRIVATE COOPERATION IN TRANSPORTATION AND REAL ESTATE DEVELOPMENT | | | |
| A. Transit Related Development: The Private Sector Role J. Thomas Black | 20 | | |

FOREWORD

Many communities have already formed effective transportation partnerships. Other cities still are searching to define the appropriate private sector role and effective mechanisms for public-private collaboration. To assess the extent of ongoing activity and to help chart a future course for these cities, the Urban Mass Transportation Administration asked the Transportation Research Board to convene a national Conference on Transportation Partnerships.

The conference, held in Dallas, Texas, March 15-16, 1984, provided the participants with an opportunity to exchange ideas and share experiences, to report on, and learn about the status of cooperative efforts around the country, and to discuss a broad array of transportation actions in which the private sector can play a potentially useful role. The conference was structured with a combination of plenary sessions which included presentations by key government and private sector officials, general discussions of current activities in various U.S. cities, roundtable discussions, and workshops on various aspects of public-private cooperation. The intent of the sessions was to allow for a maximum of open discussion as well as to attempt to come up with definitive recommendations to assist policy makers in developing appropriate strategies for greater public-private sector cooperation in urban transportation. The structure of the conference as finally developed by the steering committee, however, prohibited the latter to be accomplished in any formal sense. Partly, this can also be attributed to large attendance (over 200 participants) and the rather diverse mix of participants which included federal, state, local governments, public transit agencies, private transportation providers, elected officials, business, financial, and the real estate community.

At best what follows in the papers, presentations, and workshop reports can be viewed as another building block in the growing tendency to view the provision of public transportation as a shared responsibility of the public and private sectors. Behind this trend lies a realization that government alone can no longer shoulder the full financial burden of all public needs and that we must enlist the initiative and resources of the private sector to attack urban transportation problems successfully. This belief is shared by both sides. The private sector has come to understand that it must, in its own self interest, assume a more active role in dealing with local transportation problems least traffic congestion, decaying infrastructure, inadequate access to jobs, and overtaxed transit services overwhelm the ability of business to function effectively. The business community also realizes that a transportation system that functions well can be a positive force for economic growth: it can help employers gain access to an expanded labor pool, stimulate downtown retail activity, and enhance real estate development.

Local government has an equally strong motivation to seek expanded private sector involvement. By giving the business community a greater voice in transportation decision making, public officials increase the likelihood of private sector support and thus gain an influential ally in their efforts to mobilize public opinion behind transportation improvements. In short, transportation offers the public and private sectors a logical rallying point for mutually beneficial collaboration.

It is, therefore, the purpose of this circular to highlight the presentations and workshops that resulted from the Transportation Partnership

Conference. This circular in no way even attempts to answer all the problems and issues that surround the question of greater private sector involvement in urban transportation. Cooperating in development of the conference were the International Downtown Executive Association, the Urban Land Institute, and the Rice Center.

REMARKS

Ralph Stanley, Urban Mass Transportation Administration

I am very pleased to have the opportunity to speak with you today at this very important and timely conference. The Transportation Research Board, and Ken Orski, in particular, must be commended for bringing this impressive group of leaders together to discuss so significant a topic as public-private partnerships in transportation. While I serve as UMTA Administrator, I would hope to make this event an annual affair.

In the short time I have been Administrator of UMTA, I have had the opportunity to meet and discuss urban mobility needs with many public and private sector leaders, especially in sun belt cities like Dallas. I know that you are aware of this Administration's desire to return decision making to state and local officials. The Federal government, in reassessing its role in the affairs of this country, believes it should not be so closely involved with what a community feels is best for its citizens. Business leaders and elected officials are much better equipped to make those decisions effectively and with a sensitivity born of community involvement.

This Administration's belief in urban transportation is based upon the ability of the government to work with the private sector. Increasingly, we see private sector participation in areas of planning and financing transit services that benefit their communities. One reason is that we are at a time in our history when government spending is an issue of great concern. Competition is keen for available federal funds. Cities and states, therefore, must have greater responsibilities for funding local services.

This Administration is keenly aware of the value of private sector financial participation in major transit capital projects. This kind of involvement provides additional revenue, reduces the need for transit subsidies, enhances ridership, and generally improves the quality of service.

The private sector has come to understand that it must, in its own self-interest, assume a more active role in dealing with local transportation problems.

Local government also has a strong motivation to seek expanded private sector involvement. By allowing the business community a greater voice public officials increase the likelihood of private sector support and gain an influential ally in their efforts to mobilize public opinion behind new public works projects.

Commuter ridesharing problems have been organized and, in some cases financed by employers and developers. Employers have subsidized transit passes for their employees. Taxi companies and other private firms have become providers of subsidized services to targeted groups of citizens such as the elderly and handicapped. Indeed, the actual and potential roles of the private sector have grown to the point where I believe seriously the emerging "public/private partnerships" will become the powerful force in meeting future mobility needs.

Soon after it took office, this Administration set several goals for the Federal Urban Mass Transit Program: 1) to return more responsibility to local decision makers; 2) to foster greater reliance on the private sector; 3) to establish a more appropriate balance between federal, state and local funding; and 4) reduce federal intrusion into state and local affairs. We want to capture the private sector's entrepreneurial experience and talent, its financial "know-how", its innovative abilities, and its sensitivity to efficiency.

Many of you may know that UMTA sponsored a "blue ribbon panel" to draw out the critical issues that make it difficult for the private sector to participate in transit industry activities.

I want to thank Mr. Ken Orski, President of the Corporation for Urban Mobility; Mr. Sigmund Zilber, President of the International Taxicab Association; Ms. Susan Perry from the American Bus Association; Mr. Paul Nagel of the United Bus Owners of America; Mr. Ray Mundy, Executive Director of the Airport Ground Transportation Association; Mr. Wendell Cox of the Los Angeles County Transportation Commission; Ms. Karen Finkle of the National School Bus Transportation Association; and all the other participants of the panel who contributed to an excellent report which is presently under review by my staff.

I have read the study and am very impressed. I am pleased to say that UMTA already has developed and implemented programs in three of the five areas recommended by the panel.

I have paid particular attention to the recommendation that we implement steps to increase the active involvement of private carriers in the local transportation planning and decision making process.

I cannot over-stress the significance that this Administration places on the private sector's capability not only to help improve urban mobility, but also to help accomplish this goal in a more cost-effective manner.

I want to thank the members of that panel for their fine work. I intend to continue to work closely with the blue ribbon panel while we explore ways to implement all the recommendations of the report.

Those of you who have, for several years, closely followed the preparation of an UMTA policy on private enterprise participation in the Urban Mass Transportation Program will be pleased to know that such a policy will be approved by the Department this week, and I will take it, personally, over to OMB. We can make an announcement next week. This policy will commit UMTA to ensure that private operators be given every opportunity to provide an increasing share of the transportation services which receive federal assistance. It streamlines the entire planning process. It stresses early and meaningful and assured private sector participation. It encourages provision of unsubsidized private transportation services in the free market. Rule making which will follow the publication of this policy will focus on private sector resources and capabilities in both the provision of service and the financing of major capital investments.

The Rice Joint Center for Urban Mobility Research will help us to accomplish these goals. We are most fortunate to have the services of the Rice Center, which is closely involved with private sector concerns and is providing technical assistance throughout the United States to help transit industries utilize innovative financing and new ways to involve the private sector in transit financing. And we are also fortunate to have Gary Brosch, a former UMTA economic advisor and now Director of the Joint Center, to head this project.

Transit operators can benefit from joint development in several ways:

- Development near transit facilities, increase ridership and farebox revenues.
- Air rights over stations and parking facilities can be leased to private developers producing substantial income.
- Agreements can be reached for the private financing of facilities such as transit stations.
- Opportunities are created for the establishment of tax increment or benefit districts.

Private developers and businesses benefit from locating near transit facilities in several ways:

- They get access to customers and the labor force.
- They reduce the need for costly parking facilities.

Benefits therefore flow both ways between the public and private sectors through joint development.

When we talk about participation of private business leaders in financing and planning transportation improvements, we must consider joint development -- projects which actually bring the transit agency and the business community together in a mutually beneficial relationship.

I am also aware that many of you are anxious to have UMTA statements clarifying the reuse of excess property, as well as more specific guidance on air rights leasing. UMTA has prepared those statements which presently are under review in the Office of the Secretary, and by the President's Property Review Board. It is a major priority of mine to issue them in the near future.

I am now in the midst of a process which I started the first day I arrived at UMTA. I am doing two things: 1) setting up a firm process by which cities will compete for this discretionary source, and 2) developing a set of criteria by which we judge those cities -- one against another. Concerning that process, we have asked cities to do exhaustive planning and come up with an alternatives analysis. By that I mean that we ask a city to take a look at its transportation needs and then find the most cost-effective way to meet those needs. Until that process is complete, a city is not ready for federal funding. Since the competition is keen for available funds this year and for projected available funds for next year, we are talking about some very basic simple criteria.

I would like to review them with you today. I am going to be testifying next week in the House Appropriations Subcommittee and next month before the Senate Appropriations Subcommittee. Secretary Dole has already testified before the Senate about her commitment to criteria in sorting out the competing demands that we have.

The first is local financial commitment. I do not think that there is any greater measure of a community's desire and need for a mass transit system than their willingness to pay for a major part of that system. I am asking cities to adopt a dedicated, stable local financial source.

The second criterion is the stability of that local funding source. I think the biggest mistake we can make at the federal level is to start using

that \$1 billion and the \$400 million for new starts in such a way that we give a little bit to each city just to satisfy political desires -- either in Congress or in cities and states across the country. By doing so, we are making down payments on major systems, which we cannot complete.

The third measure, at which we are looking very closely, is cost-effectiveness. How many riders will we get for the federal dollar that is invested?

Fourth, we are looking very hard at a city's ability to support the operating expenses of their system, once it is built. There is a great fear in this Administration and, I think, in Congress as well, that if we begin funding a series of major new systems, we will be breeding a whole group that can not meet their operating expenses -- maybe not next year, but three years from now, five years from now. So the ability of cities to pay for their operating expenses is the fourth very important criterion.

Our decisions are being made, not on the basis of politics, but on the basis of arithmetic. \$400 million for new rail starts is a limited resource. We project a nationwide demand by cities interested in building new systems to exceed \$12 billion.

Finally, I applaud you, who represent the best new ideas in transit. The Federal government is firm in its commitment to support the growth of this vital industry, but we must rely on you to provide the key elements needed to maintain the progress of this essential service.

I urge you to continue the development of transit-related activities, innovative methods of financing, marketing, and building to enhance the functioning of our transportation systems.

Because I believe those activities are transit's future.

A DEVELOPER LOOKS AT PUBLIC-PRIVATE
COOPERATION IN TRANSPORTATION AND
REAL ESTATE DEVELOPMENT
Raymond D. Nasher, Nasher Company

I am going to take you on an odyssey that relates to the past fifty years or so and then get to the projects that we are involved in today and how we are trying in the private sector to improve our mobility systems.

I think back to the twenties as George Gershwin sat down at the piano and Paul Whiteman took his baton, and it was 1925, and Rhapsody in Blue was played for the first time. That changed American music a great deal because it brought in new tones and new forms and new chords and new messages to the whole question of musicology and the nature of the times. Gershwin made a change in 1925, at that stage of the game, and then that was followed by Picasso and Brancusi and Giacometti and Matisse and all of those other greats, Henry Moore, etc., who were futurists and were telling us something about the future of our times through the arts. It was during that period of time in the twenties and thirties that I lived in Boston and New York. I recall the transit system going from Dorchester, which was a community where the Jewish immigrants lived when they came to Boston from abroad, into the city. I went to Boston Latin School, which is having its 350th anniversary next year and we are very proud of it. It is really an important kind of activity to be with an institution that began just fifteen years after the Pilgrims came across.

In order to get to Boston Latin School then we had one of those vouchers that some of you were talking about today. I had a voucher, and I got on a streetcar, and then I went to an elevated railway, a light rail system, and then from that elevated railway I went to a subway. From the subway I transferred to a bus which took me about one mile from Boston Latin School, and I walked to the school and back. Now, that was in the thirties, and in essence that was a great transportation system. It cost us one penny. It cost the normal passenger a nickle to go through this whole system, but there was great mobility at that time. We could not afford an automobile, and there were not many of them around anyway, so public transportation in Boston was very important.

During the Depression in New York, we had the option when we lived in Kew Gardens, of going into New York City by either taking the trolley down Queen's Boulevard to Macy's for a nickle or going across the 59th Street Bridge and taking the Long Island Railroad, which was a heavy rail system and cost 39 cents. But the mobility of the people was very substantial. There were major transit systems moving and functioning, and when you got off of the trolley, you got onto the subway. New York moved. Boston moved. Those were cities that made great impressions upon me as I was growing up, and it became a part of my thought process as I went into development. Then, of course, in the forties we all went through the period of being involved in the Army, Navy or Marines or whatever it might be, and we say things starting to happen with highway systems, buses, planes, and the other means of transportation which were making their mark on communities. There is a quotation that I am very interested in that I think relates to change. It relates to transportation. It relates to almost anything that we do. The quote is that it should be borne in mind that " . . . There is nothing more difficult to arrange, more doubtful to success, or more dangerous to carry through than the initiation of change. . . . The innovator makes enemies of all those who prospered under the old order, and only lukewarm support is forthcoming from those who would prosper under the new. Their support is lukewarm partly from fear of their adversaries who have the existing laws on their side, and partly because men are generally incredulous, never really trusting new things unless they have tested them by experience. In consequence, whenever those who oppose the changes can do so, they attack vigorously, and the defense made by others is only lukewarm." So keep in mind both the innovator and his friends are in danger together.

Now, those of us who deal in transportation really feel that change is something we are deeply involved in, and that statement is one that is so current today. I enjoy it tremendously because it was during the Renaissance in 1513 that Machievelli actually made that statement. It is the same today as we talk about transportation and we talk about all the other things -- the whole question of fear, the question of concern, of really not being involved in change because it might not work. But I think it mandatory, being in the private sector, being a developer that risk-taking and innovation and new ideas and new thoughts have to be a part of what it is we think about when we talk about urban mobility.

Carrying this odyssey forward into the fifties, I moved from Boston to Dallas and got involved in the housing business, and we then used the highways, and we used the cheap land, and the cheap energy, etc., and we built thousands of houses, and we used the FHA and the VA mortgages. It was not basically a question then of marketing these things. It was

a question of production. It was selling 100, 200, 300 houses a month and just trying to figure out how to get the land, at 500 or 1000 dollars an acre, near the highway systems and use the automobile. It was the car, the highway system, the federal policy that set up this system and its new form of urban mobility and housing.

We then involved ourselves in industrial parks and warehousing. Once again, the low cost of funds from the institutions, the highways, and the land that were available at very low cost, gave us the ability to build these industrial parks, bring industry, and improve the job supply within the city. And so we had housing and jobs and warehousing going forward. All of this is predicated on the philosophy and the system.

When we got into the sixties, suddenly I was thinking about different things such as regional shopping centers, and once again, the highway system was a major factor involved in marketing to the particular area involved. So, we decided that we would plan regional shopping centers, and that we would attempt to bring mobility within them to the people. We tried to design them so that from the point of view of ingress and egress in relationship to other areas that the mobility systems would work. We were the first ones, I guess, that used internal buses within these systems themselves, so that the employees could be separated from the regional shopping area, and we would bus the employees into the centers so that the consumer and services could be utilized better and try to make the system more meaningful for the customer himself.

We also started working with agencies in Washington about what one could do from the federal level as our cities were going through the desperate times in the late sixties. In 1965, in a major conference, I recommended that we have an urban laboratory in the United States and that this laboratory be one in which we actually test these systems, the transportation systems, the financing systems, road patterns, new forms of innovation, new approaches to the whole urban system, urban mobility itself, etc.

Unfortunately, we had other things in mind at that time, Vietnam came in that period. There were other factors involved, and we determined that urban mobility, transportation, people were not our highest priorities at that time, so that opportunity passed by.

At that time, we were thinking about new towns. We were thinking about how one solved the question of human settlements, both in the United Nations and the Federal government, and we created the idea that there should be new towns that would be developed, and we would make this a part of a national growth policy. We have really never had a major growth policy in this country similar to those of many foreign countries. However, we determined that we would try to do certain things through our growth policy program; I suggested in Washington that the new towns be those laboratories that could be used to assist in thinking through the question of mobility itself. I have a personal view that if one makes a suggestion, that lip service is not enough. One must be involved with all of the human resources, financial resources, and physical resources, if one is going to be really a part of the nature of affairs of our times.

So, we went through a period of failure, and we have to talk about those periods, too. I felt strongly that the new town program was important and that we should be deeply involved in it. So, we won the competition to build Fort Lincoln in Washington, that 342 acre piece of land which is probably the greatest piece of remaining land in Washington. It

would be the exhibition for our Bicentennial Program where we would show the world how people would live and move and this would be that urban laboratory. In that program -- as I was looking at our work on it in relationship to this conference -- what we attempted to do was to increase and improve the Metro system, which would come out into the project itself. We would go from the Metro system and in order to avoid huge amounts of parking within the development itself and all the road infrastructure that we would have to have to provide needed service in this new town, we would have to have to provide needed service in this new town, we would substitute for that people movers and major stations that would connect the infrastructure, the schools, the town center, and the job sites, and, going across to Federal City College across New York Avenue, make this internal people mover connection one which would then relate to all of the points of activity and magnets within Fort Lincoln. We would build that in concert with the Federal government, and we would then have a new form within a town which should be able to make some progress in our whole planning process in regard to the movement of people within inner cities.

As you can imagine this was a dream, an idea, and one of financial loss from our point of view because in essence the government really did not have the commitment to a new town program, as they do in the Soviet Union or as they did in Poland or in Germany or in Scandinavia or in Finland or in England or in France, etc. We never did commit ourselves to really being a part of this program. It was supposed to be a public-private partnership, but it ended up really as a one-sided private partnership without the support systems that are necessary to make urban laboratories work. So, Fort Lincoln did not work, and the planning that was done in trying to improve urban mobility unfortunately was laid to rest.

The second endeavor of this type, in 1971, related to our planning for our new town which is in the Golden Triangle between Dallas, Fort Worth, and Denton, 6,000 acres of land, once again a part of a new town program, but the idea of that program was that it is vitally important to have job centers and urban mobility that relates to jobcenters. The airport was being built at that time and Flower Mound was some four miles from the airport, one segment of that 6,000 acres. Our idea was to take those movement systems that were being put into the airport and connect them to the new town so it would be the first time in the history of this country where the job center of the airport could be connected through a mobile system directly into the community itself. Once in the community, there would be flexible movement systems where one would take shuttle buses. One would be able to take flexible car systems that would move directly on the guideways into the middle of the airport with all of the tens of thousands of people who were part of that job center and then once they hit the new town, have the flexibility of going on to a road pattern so they could move within the community and be a part of the infrastructure, the social fabric of that new town community.

As you all know, the new town program once again was not thought kindly of by our government and others, and so an area which is a superb area of land and the whole question of open space grants, job centers and systems, and development financing approaches that would be a part of it were not forthcoming. So, once again the new town was put back into a private sector type of development so that it is just an ordinary part of suburbia.

What has happened at Fort Lincoln and Flower Mound where we tried to experiment and innovate and create urban mobility systems connecting to job centers was that, in essence, these were noble efforts -- efforts, I think, that were very important for someone to do. I felt strongly that we had to do it, because we had been involved in thinking about it, and you have to put your money where your thoughts are. We learned a great deal from those lessons -- that it is vitally important that public-private partnerships be true partnerships. One of the things that we want to think about in relation to transportation and mobility is that it can only be done through public-private partnerships. There has to be total commitment on each side so that the private sector performs; the public sector performs; and the institutions perform. It really goes beyond just a two-party system. There are so many other elements that should be partners in this whole marketing effort of creating mobility that I think the partnership aspect of it is mandatory. That should be sealed and understood and agreed upon so that the economics and the legalities and all of the other things that are a part of it will be forthcoming, because it is a question of economics, a question of money. It is a question of ideas. It is a question of the social fabric of the community. It relates to the political system of the community. It relates to long range planning as opposed to our instant hula hoop approach that is normally a part of the American scene, and it relates to a fundamental understanding that we are really here to try to bring services to the people of our community. Our only mission basically is to create a better human and physical environment so that people can function better and that this nation really can continue the democratic system, the private enterprise system, the profit-motivated system, one where the partnerships assist each other. I think we learned in our personal involvements in the urban laboratories of Fort Lincoln and Flower Mound that there is a long way to go in creating the proper partnerships between the institutions themselves.

We then decided that we would really look at things as closely as we could in other areas and in the developments that we are involved with in the private sector. Let me just tell you about a few of those now, so that we can save some time. I want to give you a few thoughts that I have in relationship to the history of mobility as I see it and some of the things we are trying to do today in Houston, Dallas, and Miami where we happen to have major investments at this time. All of those investments are dependent upon and related to urban mobility. We have put money into these projects - sizable amounts in each of these projects, and they have to function and work. We, as the private sector, as the developers, have a responsibility to be a catalyst in assisting the city, in assisting DART, in assisting here in Dallas, in assisting John Turner in Houston, in assisting in Miami in making all these function because it is to our personal self-interest to do that, but it also relates to a mandate and a challenge that we have in making the system work and bringing a quality of life to our community that is important.

In Miami, we are building a downtown office complex that Jim Reid knows a little bit about, and our next section, Jim, is the 750,000 square foot building that adjoins the Flagship -- the Sun Bank Building. We are creating a connection directly to the transit system which Jim was able to get moving while he was heading planning in Miami. What we are doing is during a period of time, we are running a

bus system connection, a private system or our own. We are relating car pools, van pools, and other things for our major tenants, making the connection prior to the time the people mover comes into Miami itself so that we can tie our project into the transit system which is some blocks away, and we can treat that transit stop as if it is a part of our downtown operation.

We are looking forward to the time, and we are working to get the people mover connection within the inner city linking with the transit system, but until the time that that occurs, we are using our funds and our money, our thoughts, etc., to make this thing work because it just makes sense from the point of view of parking in relationship to the number of cars and the number of people we have to support. There are certain things that have to be done until the system comes on line, and this is a partnership that we hope will work well with the City of Miami.

John and I are working together in Houston in an area which he has developed so brilliantly in the Green's Point, Green's Crossing area. Our development is a mixed use project of some million and one-half to two million square feet of retail facilities, office buildings, hotel facilities, etc., surrounded by superb planning that Friendswood and John has done in relationship to that whole North Belt, I-45 area.

We are directly across the street there from the largest retail market in Houston, the Green's Point market, and we are taking that market of a million and a half square feet, and we are adding a million and a half square feet on the other side, but we have Nieman-Marcus, Macy's, Sak's Fifth Avenue, Sakowitz, Marshall Fields, Frost Brothers, etc., as part of our units, and across the street are Lord and Taylor, Joske's, Foley's, Montgomery Ward, Sears, etc. We are going to make an urban node out of this, and the big question we have is how does one really connect these things? We are not in competition with Green's Point, even though it is different ownership, and we cannot be in competition with Prudential who owns it in anyway. I mean they have more money than we do at this stage. So, there is no competition. It is purely a partnership from our point of view because it is our funds, and Prudential funds. What we are attempting to do is think through the process of linkage across I-45 and the North Belt so that this whole area can become an urban node, integrated into a central city system through the points of development of ingress and egress, our relationship to our bus systems, our shuttle systems, our pool systems, and the whole Houston program that you talked about this morning.

In Dallas, we are working today on a 200-acre project which is six miles from this point at the intersection of the North Central Expressway. You may have heard this morning about the problems of the North Central and Northwest Highways. We have development in place on two segments of the 200 acres that we own there. We have in place one major regional shopping center, banking facilities, and institutions; and in the other segment of it we have theaters, office buildings, recreational facilities, all of the mixed use things that are important; and then there is a third segment, a 55 acre piece which is in the planning process now. This is at the intersection of one of the major areas within the Southwest, in essence, and it is on three different segments of the highway. We are planning on Dallas Area Rapid Transit (DART) coming down the Southern Pacific tracks which go right through one segment of this property. So, we

have the DART Potential with the station that would be involved in it.

We have in place millions of square feet, both retail, office facilities, and others, and we have new development area. So, the point we are trying to make in the research that we are doing is how does one connect all of this? How does one make the DART station, whenever it comes to pass, that meaningful in relationship to a connection system for the whole community? What does that mean to the amount of parking that we have? What incentives can be used in making this thing work? What do we do before DART is in place? We currently have our own bus system which connects two segments of the system. We have created a van pool system, bus system, and car pool system which is serving about 60 percent of the office space of that development.

We are thinking about such things as ground traffic control. It seems to me, both in Houston and Dallas, where we have these major developments that we should think of the mobility of traffic on the ground as one does with air traffic control as one goes through the air. There is really no reason why we cannot through helicopters and other devices that relate to our computers and other systems, develop a means of routing our transportation in ways so that the congestion and the other things that relate to the needs of our people and their mobility movement systems can be changed. We are trying to in some way figure out the way one can make a flexible mobility system work through different means. One has to use all the things that you know about, including those which are in place, and we have to think about innovative approaches which have to be tried, and there have to be true partnerships with the city and the state, which is deeply involved in these exercises. The Federal government should be. Whether they will be or not is another question. And, of course DART must be part of the partnership. There should be total cooperation and an attempt to innovate. We are willing to put our bucks and our resources and our minds together with those of the community to try what is necessary to make these things work.

What I am saying is, from a private sector point of view, we have learned a great deal during this experience of being involved in failures and problems that relate to trying to create a growth pattern for our country. We have been involved in conventional developments. We have created a part of suburbia. We have been involved in profiting from the totality of the system that has been developed within the country. We feel we have to work now toward improving the quality of life, improving urban mobility by innovation, by cooperative funding, by attempting and researching and actually using our developments as laboratories in order to try to improve our systems and to make them more meaningful. If we can be a catalyst in regard to this type of thing, then others will be involved in it.

A very good friend of mine is Norman Cousins. He, of course, for years edited the Saturday Review of Literature, and is one of the great men. He has had a severe attack, and has written a new book on the medical system, as you know. He is the guy that said if you have hope, and if you smile, and if you can care for yourself in a very optimistic way, you can overcome most things. When Norman was 65 a couple of years ago, someone said, "What have you learned in the 65 years that you have been involved in this country and this world?" He said, "What have I learned? The most important thing I have learned is human capacity is infinite, that no challenge is beyond comprehension and useful

response. I have learned that the uniqueness of human beings is represented by the absence of any ceiling over intellectual or moral development." I really think that is the hope that all of us should relate to because there is no challenge too great, it seems to me, for the experts who are in this room and who are dedicated and mandated toward bringing urban mobility to our people.

CORPORATE RESPONSIBILITY AND PUBLIC TRANSPORTATION

Rodney W. Rood, Atlantic Richfield Company

It is a real pleasure for me to be with you today in Dallas, one of ARCO's headquarters cities. I could say the same about Houston, Denver, Philadelphia and Anchorage -- all of which are major centers for our company, and all of which have transportation problems.

I listened with great interest to the reports from Dallas, Houston, Hartford, and Charlotte, and wish to congratulate these cities on their partnership approach to public transportation. As a representative of Atlantic Richfield, I hope you all achieve your goals.

Today, I will be speaking about another city, our corporate headquarters, Los Angeles. We have been trying to cope in Los Angeles with problems and challenges similar to those we have heard described today. Now, you may be mentally asking yourselves just what is it that a person from Los Angeles could know about public transportation. Does Los Angeles have a public transportation system? Isn't the supreme cultural achievement of Los Angeles, as Woody Allen put it, the ability to turn right on red? If that is your impression of Los Angeles, I welcome this chance to set the record straight on a few points.

The first is that we do not live life exclusively in the fast lane, or the slow lane, or the one in the middle. In fact, a lot of Angelenos never get into cars at all -- at least not to commute to and from work or school or even to shop. Quite a few people, about one and a half million in fact, take public transportation in Los Angeles every day. Only one or two cities in the country -- New York and Chicago probably -- carry more passengers on public conveyances, and we are closing the gap fast. To get really outrageous, I will go further and make point number two, that Los Angeles not only has a major public transportation system but that trends in our city could well offer a pattern to be emulated by other urban centers, particularly in the area of public/private partnership.

Now I will stop being defensive for a minute and admit that Los Angeles is hardly a transportation mecca. Indeed, we have miles to go before we can even lay a claim to controlling our present transportation problems let alone moving smartly into the future. Much of what America reads about Los Angeles is absolutely correct. The traffic is bad and getting worse. The fumes from all those cars are noxious. Commuting by car is exasperating now and could get worse as the downtown influx grows. In fact we could be headed for a bad case of gridlock, a kind of civic lockjaw, unless we do something about it now.

Fortunately, we are doing something about it, for both short- and longer-range. Despite what Bob Hope says, the Olympic sprints this summer will not be run on the roofs of cars. We are expecting a lot of traffic during the games, but we have got

a good plan to work things out. I will describe it later in my talk.

But what about the future? After the games have come and gone? People in Los Angeles have always talked about putting together a good rail transportation system. Right now, for example, we are planning for a subway -- the Los Angeles Metro Rail. We were doing the same thing, I am told, as far back as 1911. Is there any reason to hope the talk will finally amount to something? In a word, yes, and the reason for my optimism can be stated in another word -- partnership.

I will describe the partnership approach to the subject, but first let me explain why we need a subway in Los Angeles. The simplest explanation is that we are growing, and there does not seem to be any other solution to the congestion. Within two years downtown commercial office space will grow by 12 million square feet or more. The city's Department of Transportation estimates that to move the extra people in and out, we will need either 25 new street lanes, or eight new freeway lanes -- or improved transit capacity. The Metro Rail is the clear choice.

That is the opinion of the Los Angeles Transportation Task Force, a group created by the Central City Association and the Los Angeles Area Chamber of Commerce to review all possible answers to the problem. The Task Force is a good example of public/private partnership, representing business plus the public agencies involved in transit planning and development. The Task Force set two objectives: first, to develop a transportation strategy that would encourage, not frustrate, economic growth; the second, to examine and recommend on all proposed transit projects for downtown and the greater Los Angeles area, including Metro Rail. Beyond that, the Task Force is an active lobbyist in Sacramento and Washington and also helped to develop the transportation plan I mentioned to ease traffic during the Olympics.

My point is that transportation in Los Angeles is no longer a debate topic only. We do continue to talk. But we are also acting. And, of greatest importance, we -- both public and private -- are talking and acting together. The conversation now includes everyone, from public officials to the business community to the private citizen, because building a subway demands a full consensus of community opinion -- and that, to me, is the best evidence that the partnership concept is alive and well in Los Angeles today. It has been a long time coming.

You can really break Los Angeles' search for mass transit into three periods, from private to public to public/private. The first, or private era, began roughly 75 years ago when Henry E. Huntington, a private entrepreneur, built his famous Red Car Line. At 1,184 miles, the Red Car Line was the most extensive interurban light rail system in the world. In those days the shortest distance between two points in Los Angeles was Henry's trolley. Sadly, it was gone by 1961, shoved into extinction by the burgeoning freeway system. Angelenos have always had a love affair with the automobile, and saw no further need for rail.

The birth and growth of the freeways was Los Angeles' second, or public transportation era, which was publicly sponsored and financed entirely by the gasoline tax. Despite what you hear, the system works and people like it.

Everything considered, it does seem clear that private autos will always be the preferred means of transportation in Los Angeles. Even when we get the Metro Rail, autos will continue to be habitual and

needed. No subway that I can conceive would be extensive enough or popular enough to take care of everyone, even if we could find the megabucks to build it. But if cars will always be with us, we can make them more acceptable by more efficient use of high-occupancy lanes on our streets and highways and by ridersharing, for starters.

Phase three of Los Angeles transportation evolution is just forming. For want of a better name, I will call it the public/private era. I think it is the most promising of all because we have finally agreed that there is no one answer to transportation in Los Angeles. Cars, subways, light rail, buses, helicopters, downtown people movers, even feet -- we need them all, but fitted together into a useful and coherent system. And that is the point I have really come here to make: it is simply that cooperation between the public, private, and nonprofit sectors can make a terrific difference in our cities.

In the past few years the Atlantic Richfield Company (ARCO) has worked very hard at the partnership idea. We have sponsored several meetings across the country that have drawn together mayors, business heads and foundation representatives, on the theory that talking to one another is the first step to rescue of the American city.

So we come to this conference on improving urban mobility through public-private cooperation in a thoroughly convinced frame of mind. We have experienced the partnership idea in action. We have seen the future and we think it works well -- though not without a struggle and certainly not without a glitch here and there. ARCO's encounter with the Los Angeles voter a few years back is a case in point.

By way of background, ARCO was the first oil company to favor use of highway tax funds for public transportation purposes. This, of course, is now policy at both the state and federal levels. ARCO also used the transportation theme in a national ad campaign, inviting the public's ideas on improving mobility. Since moving from New York in 1972, ARCO management has tried to sell the people of Los Angeles on mass transportation. To be convincing, we knew we had to heed our own sermon. So we lured our people out of their cars. We subsidized parking for car pools, offered cutrate subscription buses and organized van pools. Today, better than 65 percent of our downtown employees use one of these systems.

Fresh from the triumph, we joined with Mayor Bradley and Los Angeles business leaders in a 1974 effort to persuade the voters to increase sales tax a penny on the dollar for a rail system and more buses. We failed. Perhaps we were rushing in where Angelenos feared to tread -- or ride. In any case we took our lumps with the transit initiatives that went down to defeat in Los Angeles County in the mid 1970s. But we stuck with it and got some satisfaction from the passage by the voters of Proposition A in 1980, authorizing a half-cent sales tax for transportation purposes. To us, that seemed a clear signal that Los Angeles was coming to appreciate a basic fact of life in the 1980s, that the future, as so many soothsayers never tire of telling us, lies with the efficient.

Well, after twelve years ARCO and the rest of the business leadership in our city are still at it, still pushing for public transit, still urging the people in Los Angeles to opt for reduced smog, reduced energy consumption, greater efficiency, improved mobility and greater speed that mass transportation can mean -- particularly in a metropolitan area that is growing as fast as ours.

Today, 200,000 daily commuters pour into downtown Los Angeles; within ten years it will be 300,000. The Los Angeles metropolitan area contains nearly half of California's population, generates nearly half of its total personal income, provides half of its nonfarm employment, 60 percent of its manufacturing, and 62 percent of its international trade. All of these figures will grow. This amazing complex is exceeded -- numerically at least -- only by the New York metropolitan area. Those of us who live there, and operate businesses there, recognize that transportation is the key to keeping that mushrooming growth under control and channeling it into useful and acceptable patterns.

We know that transit provides accessibility for people -- our workers and our customers. We know that a developed transit system stabilizes and improves the existing downtown area and makes it grow. We know that better transit brings new investments, that new investments increase property values and jobs, and that those things lead directly to a broadened tax base and greater revenues for the community.

Can such convictions produce results? We think so but, as the man said, it isn't easy. You have got to have intestinal fortitude -- guts -- if you are going to accept the short-term disappointments in order finally to achieve the kind of transportation system Los Angeles must have if it is going to fulfill its destiny as the great international city of the Pacific Rim.

What have been the disappointments? The Downtown People Mover, for one. Back in the mid-1970s it seemed a certainty, but Federal funding was essential and it never materialized. The Downtown People Mover is on the shelf.

There there is the elusive Los Angeles subway -- Metro Rail. This project has probably been studied more than any other rail system in the country, over \$90 million worth so far. It has had more ups and downs than a roller coaster, yet we think there is reason for optimism. Why? Because just last year President Reagan signed Federal legislation providing \$117 million to begin construction of Metro Rail.

Metro Rail is very definitely a long-term proposition. It will take at least eight years just to complete the first 18-mile stretch between downtown and the San Fernando Valley. But this is an important start. Eventually, Metro will become an integral part of a 150-mile rail system that will cover much of the Los Angeles Basin.

Despite some temporary setbacks I think we are going to win the transportation battle in Los Angeles. Let me give you a few reasons why. First, and most important, we have developed a reliable way of funding transit development in Los Angeles. The private sector can always contribute financially to the construction and operation of existing or new transit systems, but long-term public funding is critical. Recognizing this, the private sector was a strong advocate of a half-cent sales tax earmarked for transportation purposes. This is the Proposition A I mentioned a moment ago. The money -- approximately \$250 million a year -- will be used to improve local transit projects, reduce operating deficits and support new system development. This is a permanent source of money and it dovetails nicely with the five-cents-a-gallon increase in the Federal gasoline tax. One penny of that is for transit. We lobbied hard for its passage in Congress.

Next, we have launched two private-sector activities aimed at a better commute for downtown workers -- an expanded number of privately operated

commuter buses, and more ridersharing, both van and carpooling. Fourteen private commuter bus companies, operating over 132 routes, have created a distinct "market niche", with 140 vehicles carrying more than 5,000 people a day. Those lines are heavily patronized and cheap -- in some cases operating for half the cost of the public system.

The private sector also has close involvement with Commuter Computer, Inc., the largest ride-sharing organization in the country. Commuter Computer, Inc. matches riders with rides, 45,000 at latest count, and superlatively well. Next, the private sector has helped Los Angeles replace some of its older buses with new ones. We did this by participating in the "safe harbor leasing" program under the Economic Recovery Tax Act of 1981. What it means is that transit properties can "sell" depreciation on their buses to a tax-paying corporation. Using this mechanism, over the past two years the private sector participated in a leasing program with the transit district that allowed for the purchase of over 160 new buses.

Next, business worked with the authorities to reform the city's parking policy. The new parking management program gives downtown developers flexibility in meeting city requirements. Ridesharing, for example, can be used to reduce the amount of space that must be set aside for parking under the existing code. This reduces the developer's cost and the number of cars on the road at the same time. Fifth, business continues to work intimately with local officials on Metro Rail, and continues to put its money where its convictions are. The Metro Rail funding package assumes a 62 percent Federal - 38 percent local split. Five percent of the local share, or \$170 million, has been committed by the private sector -- the largest private sector commitment for any new rail in the history of this country. These funds will be generated from a series of benefit assessment districts around the Metro Rail stations. The districts are designed to capture the economic benefits generated by the construction and operation of this major public works project.

I think the project is also remarkable for the amount of joint development that is taking place. At one projected Metro Rail station, for example, a department store has bought access to the subway from its new store location -- at a cost of more than \$30 million.

Sixth, and finally, creation of the Los Angeles Transportation Task Force was a way to formalize a working partnership between the public and private sectors and enable them to address jointly the wide-ranging transportation challenges facing our community.

Recently we developed a new entity, the Greater Los Angeles Transportation Coalition, to mobilize community support and political action. The Coalition's exclusive priority is the funding and construction of the Metro Rail. To assure permanency, the Coalition has been incorporated in the State of California as a public corporation. I think it will help greatly in making an impact in Congress and with the Administration.

I hope I have made clear my basic point, that the public/private partnership is alive and well in Los Angeles -- and thinking hard about the future. Let me conclude with these thoughts:

First, it seems to me that the Federal government can encourage partnerships by exploring the reduction of regulatory barriers that may hinder broader entry of the private sector into the transportation marketplace. Federal law could also be changed to encourage ridersharing by excluding

transit passes and other incentives from taxable income. Further, I would suggest that Federal transit dollars be spent on new rail systems only if they are matched to some degree by private participants.

I believe that state and local governments are also in a strong position to encourage innovative solutions to transportation problems. One possibility might be to take steps to permit and encourage private sponsorship of new transportation services. Or businesses might be encouraged to support their local transportation by subsidizing passes for employees. ARCO does and it works well.

Next, I would venture to suggest that, at the municipal level, transit agencies might be a little more flexible about competition from private entrepreneurs, such as commuter operators, or be willing to contract with private companies who can offer bargain transportation.

As for our side of the public/private partnership, I think that every business leader should examine possibilities for active involvement in the transportation issue. ARCO looked and then leaped, and I think we can say we have helped.

Before I close, just a brief comment on the Olympics. We know we are going to have a problem. Events will be scattered all over the Los Angeles basin, though congestion will doubtless be greatest downtown as spectators move between the Coliseum and the Sports Arena in Exposition Park, the Swim Stadium on the University of Southern California campus, the Dodger Stadium to the north, with several major hotels and the Convention Center (which is media headquarters for 8,000 accredited new media) in between. At the same time, of course, the banks, office buildings, and stores will be open for business as usual. How bad will it be? Some expect that conditions during those 16 days may be a snapshot of the year 2000 -- with over five million additional trips prior to, and during the Games.

As for myself, I think the Games will be a great success and that we are going to handle the transportation in our stride. My confidence is based on a program that has been developed jointly between the public and private sectors -- perhaps the earliest and best example of the kind of collaborative action this conference is trying to encourage. For example, we have developed and distributed commuter handbooks to help employers with information about expected congestion spots and available options. And the transit district is adding 500 new buses that will carry nearly half the spectators who will be going to the Games. There are no taxpayer dollars involved. We have asked employers to examine a variety of options: review vacation and leave policies; institute carpooling and vanpooling, examine work schedules for flex-time and staggered shifts; consider offering their own park-and-ride lots. Businesses are responding to these suggestions with enthusiasm, and working hard to identify transportation initiatives they can take during the Games. The benefits to the city will last long after the Olympic event has been run.

I think the same will be true of this conference and the ideas generated here, ideas that will endure and bear fruit long after we return to our respective cities. I congratulate those who have put the meeting together as well as all of you who have taken the trouble to come here to share experience and hopes and expectations. Your time will be well spent if the conference sponsors follow up on the ideas generated during the last day and a half.

Thanks again for inviting me. I am delighted to have been part of a wonderful partnership experience.

PRIVATIZING TRANSPORTATION INFRASTRUCTURE
Robert W. Poole, Jr., The Reason
Foundation

The problems of America's transportation infrastructure have been very much in the news this past year. Consider the following news items:

- * A bridge on I-95 in Connecticut collapsed into the Mianus River and three people lost their lives. Subsequent investigations raised serious questions about the adequacy of bridge inspections.
- * During 1983 the New York subway system suffered 20 derailments. An outside investigation traced the cause to the complete absence of inspections that were supposedly being made.
- * A joint Economic Committee study estimated that between now and the year 2000 infrastructure spending needs will total 55 percent more than the funds that seem available, based on present programs. The single most important need -- \$720 billion -- is for roads and bridges, which is \$265 more than is likely to be available.
- * According to a California legislative research body, deferred maintenance of that state's public infrastructure totals over \$20 billion. County roads in California are being resurfaced on a 175-year cycle, rather than every 15 years.
- * Some \$5.4 billion in Interstate highway funds was held in limbo for five months by House Speaker Tip O'Neill, in order to obtain two major projects for Boston.

It is my thesis that there is a common thread linking all of these infrastructure problems. That common aspect is the substitution of political management for economic (businesslike) management. If this thesis is correct, it suggests that privatization of transportation infrastructure may offer significant benefits, not simply in lower costs but in providing incentives for much sounder management practices.

Whence the Problem?

Before examining privatization in detail, it is important to understand why so much of our transportation infrastructure is in bad repair. The short answer is deferred maintenance -- i.e., adequate funds have not been spent on routine, preventive maintenance over the years. But the interesting question is why this is the case. It certainly cannot be because government has difficulty raising money. Over the thirty years, from 1950 to 1980, total government spending in this country increased from being 24.4 percent of gross national product to 36.5 percent. Nor is it due to lack of competence on the part of state and municipal highway and transit agencies; they are generally run by competent, well-educated people.

The basic reason for the deferred-maintenance problem lies in the political process itself. For the most part, the budget of a highway department or a transit agency is determined by the interest group battles that dominate the legislative process. In general, the political appeal of all sorts of interest-group programs -- ranging from day-care to low-

cost housing to space exploration -- is far greater than that of adequate bridge and highway maintenance. And since tax funds ultimately are limited, it is the politically unattractive programs that repeatedly get short-changed.

A second problem is inherent in government management of transportation facilities. As government entities, they are subject to numerous rules and regulations which serve to increase costs substantially above private sector levels. Among these are the government procurement process itself and its various regulations, the Davis-Bacon Act on federally aided projects, civil service personnel regulations and work rules, and public sector fringe benefits and retirement costs. These many rules and regulations serve to increase both the capital costs and the operating costs of transportation projects. Hence, a given budget allocation, hard-won as it may be, will not go as far as it otherwise might if it must be spent inefficiently, in accordance with this plethora of bureaucratic regulations.

Privatization: The Theory

Contrast the above picture with bridges and highways owned and operated as businesses. Such a facility's construction costs would be raised by selling bonds, to be paid off from toll revenues. The level of tolls would be set by the company's management, so as to make the necessary payments to bondholders and to cover all necessary operation and maintenance expenses, as these change over time. In order to maintain the long-term viability of their facility, the owners will presumably make provision in their revenue requirements for eventual rebuilding or rehabilitation as well as routine preventive maintenance.

Such enterprises offer two major attractions to investors: a large, steady pretax cash flow and large depreciation write-offs (even under straight-line depreciation). To the transportation customer, private ownership offers the prospect of refurbishing our decaying roads and bridges more rapidly and at lower cost than would otherwise be possible. It would be more rapid thanks to bypassing the political appropriations process and the government procurement process. And it would cost less thanks both to a shorter construction cycle and to getting around the numerous government rules and regulations cited earlier.

Moreover, toll-based financing would promote more efficient road use. Numerous studies, most recently the Department of Transportation's Federal Highway Cost Allocation Study, demonstrate that heavy trucks impose far more wear and tear on roads than their share of gasoline tax and excise tax contributions. Transportation economists have long urged the implementation of so-called weight-distance taxes to make such trucks pay their own way. Yet it turns out that the tolls imposed by such roads as the Pennsylvania and Ohio Turnpikes are almost perfect analogs of weight-distance taxes. Conversion of most major highways to toll roads using similarly structured tolls would therefore make for more efficient highway usage.

Similarly, in urban areas, if expressways were converted to a toll basis, preferably with automated vehicle identification (AVI) systems, the price charged could be varied with the time of day and level of demand. Numerous studies by the Urban Institute and other analysts have demonstrated that expressway congestion could be significantly reduced by demand-sensitive pricing. This would be yet another benefit of user-paid, privately owned bridges and highways.

Privatization: The Evidence

While the theoretical case may sound plausible, is there any evidence to back it up? Are there any large-scale private bridges and highways? Are they properly maintained? Are AVI systems feasible? Fortunately, the answer to all three questions is yes.

The best known private bridge example comes from Detroit. Linking that city with Windsor, Ontario across the Detroit River are not one but two investor-owned structures. One is the Ambassador Bridge, a 7,500-foot steel suspension bridge built in 1929. Competing with it is the Detroit-Windsor Tunnel, which charges the identical tolls of \$1 per car and 0.125 per 100 pound of truck. Other large private bridges include the Samuel Schuckman Bridge and Causeway -- a two-mile concrete span connecting Boca Grande, Florida to the mainland and owned by the Florida Bridge Company of Venice, Florida; and the quarter-mile long Progreso Bridge, crossing the Rio Grande to connect Progreso, Texas with Nuevo Progreso, Mexico and owned by the B&P Bridge Company.

The Ambassador Bridge was conceived by Detroit financier Joseph A. Bower. His Detroit International Bridge Company demonstrated the virtues of private enterprise from the very start, by offering its construction contractor a bonus of half a day's tolls for each day he finished ahead of schedule. The bridge was completed eight months early and one percent under budget. Today the bridge carries six million vehicles a year, generating a pretax cash flow of about \$6 million a year and depreciation estimated at \$1 million a year. It is owned by the Central Cartage Company of Sterling Heights, Michigan, which beat out three other bidders in 1979, paying about \$30 million for the bridge.

Another large suspension bridge is the Lion's Gate Bridge linking Vancouver and West Vancouver, British Columbia. It was built as a private venture in 1938 and operated profitably by the First Narrows Bridge Company until 1955. At that point, the provincial government turned down the company's request for permission to build a second, parallel span. Instead, it nationalized the bridge, promising to build a second span in due course. Ironically, nearly 30 years later the second span remains un-built.

At last count the United States had only 334 toll bridges, most of them government-operated. But what is readily observable about these bridges is that they are invariably well maintained. In New York City it is not the George Washington or the Triborough Bridges which are in bad repair. Those bridges, funded by tolls and operated by corporate-like independent authorities, are substantially insulated from the political interest-group competition for tax revenues. They can set their own budgets, taking the long-term properly into account. It is the city-owned bridges -- like the Brooklyn, Manhattan, and Queensboro -- that are the victims of deferred maintenance.

The same is true of toll roads. A 1978 study by the National Transportation Policy Study Commission concluded that "by and large toll roads are better maintained than other roads." Furthermore, a 1980 Federal Highway Administration (FHWA) study found that most United States toll roads have achieved self-sufficiency, thereby insulating themselves from the political revenue-allocation process. Extensive studies of the benefits of toll roads are now underway in a number of states, including Arizona, Maine, Pennsylvania, South Carolina, and Wisconsin. Voters in Houston recently

gave overwhelming approval to a bond issue to construct several toll-funded expressways.

Toll funding -- and even private ownership -- is much more common in Europe than it is in this country. A multinational study conducted for the International Bridge, Tunnel, and Turnpike Association in 1977 found that five European countries -- Belgium, France, Italy, Spain, and the U.K. -- had a total of 8,868 miles of toll roads, compared with only 4,416 miles in the United States. In France, Italy, and Spain, 5,296 miles of toll highway have been built by concessionaire firms -- companies under long-term contract to build and operate the roads as business enterprises, such as Italy's Autostrade. Most of the national network of major roads in Western Europe are toll roads, built to standards at least the equal of the U.S. Interstate system. And most of the major bridges and tunnels in England, Portugal, and other European countries have been built by toll financing. France's L'Autroroute de L'Est, currently under construction, is a private operated toll road.

Toll financing is also expanding in the Third World. Indonesia is linking its islands of Java, Bali, and Sumatra with a network of toll roads and bridges. Korea has developed a toll road system to bring farm products to the cities. Yugoslavia has several toll roads and a six mile toll tunnel. And in 1982 a Hong Kong entrepreneur announced plans for a \$500 million, 145 mile toll highway to link Hong Kong and Macao via Canton. Developer Gordon Wu plans to build and operate the superhighway as a business venture, with ownership reverting to the Chinese government after 30 years (similar to the concessionaire arrangements in France and Italy).

Increasingly, transport economists like Michael Beesley of the London School of Economics and Gabriel Roth of the World Bank are enumerating the benefits of private road ownership. In a paper presented at the International Road Federation's 1981 meeting in Stockholm, Beesley pointed out that Road Owners (which he called R.O.s) obtaining their revenues from tolls, would have much stronger incentives for proper pricing, planning, and maintenance than tax-funded road departments. Roth has contributed to several studies of private roads published by London's Adam Smith Institute. He estimates that lack of adequate road-building and maintenance is costing British shippers some \$2.2 billion a year. Yet the political process cannot seem to generate adequate funds even for preventive maintenance. Hence, there is increasing British interest in proposals for private financing and operation of roads.

For example, Gabriel Roth and Jon Semmens have reported on a 1983 proposal for quasi-privatization for a new highway in England's West Midlands. A consortium, consisting of Tarmac Construction Company, National Westminster Bank, and Saturn Management, Ltd. has offered to design and build the new seven-mile "Black Country Route," raising their own capital to do the job. They propose being repaid over a 25-year period in accordance with a formula based on the actual level of traffic using the road. The road would be built to County Council specifications and the County would own and operate it, without tolls. The funds for repayment would come from the County's normal tax-based roadway funds.

Were even this scheme for quasi-privatization put into widespread use, the benefits would be substantial. The risks of roadbuilding would be shifted from the public sector to the private sector. (If the construction consortium guessed wrong about future demand, its investors would bear the loss from lower-than-estimated payments. If it

guessed very well, the investors would benefit from higher payments.) Construction schedules would be reduced (in the West Midlands case from ten years to an estimated five years) and total cost would be reduced due both to shorter construction time and more efficient private management. Moreover, as a system for road building, it would depoliticize decisions about which roads to build where and when, substituting economic criteria (maximizing expected future revenues) for political ones.

Automatic Vehicle Identification - How Feasible?

Instituting tolls on urban roads and bridges could increase already severe traffic congestion if conventional cash-only toll booths were employed. Hence, there is growing interest in various systems for automating toll collection. Optical scanning systems were tried by the railroads but found to be too vulnerable to dirt and weather conditions. Most interest today centers on microwave radio systems for Automatic Vehicle Identification (AVI). The basic concept involves a transponder with a unique identity code on board each car. Roadside detectors would record the passage of each vehicle past specific toll-charging points (identified by electronic signs announcing the fee for that time of day -- e.g., \$5.00 at rush hour, 50¢ at 3 A.M.). A real-time computer system would record the information from all the receiving points, collate it by identification number, and compute monthly bills, similar to long distance telephone bills. For heavy trucks, automatic weighing systems using load cells already exist, capable of weighing trucks moving up to 40 m.p.h.

Preliminary tests of microwave-based AVI systems have been carried out by both the Golden Gate Bridge, Highway, and Transportation District and the Port Authority of New York and New Jersey. Low-cost on-board transponders have been developed by such firms as Siemens and Philips in Europe, by Toshiba in Japan, and by Identronix in this country. The latter firm's custom identification memory chip is being installed on the chassis of all automobiles being produced at three-robot-equipped General Motors plants. By reading a particular chassis' identification number, the robot is told which operations to perform to make the car into, say, an Impala sedan rather than a Caprice station wagon. If every new car were manufactured with its Vehicle Identification Number encoded in such a memory chip, then nationwide AVI could be phased in within a decade. (In volume production, the chips would cost only a few dollars each.)

The first citywide AVI/road pricing system is under development today in Hong Kong. Called Electronic Road Pricing, it is expected to be operational by 1987 at a cost of \$50 million. All public and private vehicles in the colony will be equipped with tamper-proof electronic number plates. Up to 300 sensing loops will be installed at various roadway locations, marked by electronic price signs. In order to make the maximum impact on traffic congestion, substantially higher prices will be charged during rush hours.

Within weeks of the Hong Kong project's announcement, loud protests from private vehicle owners began to be heard. In part, the complaints were the predictable resistance to paying more for something one already uses. But also strongly voiced were fears of government invasion of privacy, due to the record of vehicle movements which will be collected by the system. One counter to such fears of 1984 is private ownership of the AVI-equipped roads.

Few Americans complained of 1984-type surveillance because their (privately owned) telephone company compiles a monthly record of all their toll calls. Were these records being collected by the government, however, the concern would be significant. Yet the benefits of AVI -- eased congestion, revenue generation, and more rational road usage -- are so large that the privacy objection should be overcome. One way to do so is by privatization.

Private Rail Systems

The idea that rail transit systems could be owned and operated as private, profit-making businesses may sound like an anachronism to most Americans. Yet just such systems exist in Japan. Eight of Japan's fifteen major private rail lines serve metropolitan areas -- and all are profitable. They are regulated as public utilities and allowed an eight percent rate of return. Fares are set to cover both operating and capital costs.

In the environment created by this sort of realistic pricing, even government-owned transit comes close to full-cost recovery from the farebox. Tokoyo's city-owned Toei Subway Line recovers 75 percent of its total costs (operating cost plus depreciation and interest charges) from fares. And the Japan National Railways commuter lines in the Tokoyo area operated at a profit in the latest fiscal year. Incidentally, the transit modal split in Tokoyo is 30 percent private rail, 30 percent Japan National Railways, 18 percent city subway, 15 percent bus, and 7 percent taxi.

To be sure, Japanese cities have higher population densities than American cities. But some U.S. cities are dense enough to make private enterprise (i.e., fully user-supported) subways feasible. A 1982 study by Charles River Associates showed that the New York subway system could cover all of its operating costs from fares if all operating subsidies were eliminated. The fare elasticity is so low that ridership loss would be only about 7.5 percent at a cost-recovery fare level of \$1.41. Interestingly, the Charles River Associates study took the present costs of the New York subway system as a given. By contrast, New York University economist James Ramsey took a close look at the numerous inefficiencies plaguing the New York system -- greatly excessive staffing, a number of very low traffic segments, lack of automation, etc. Projecting how unconstrained private operators might manage the New York subway lines, Ramsey made a persuasive case that privatization -- selling off the lines to several independent firms, to be operated without economic regulation -- would lead to markedly lower costs.

The promise of lower costs has led several other groups to look seriously at privately designed, constructed, and operated rail transit systems. Orange County, Florida has asked private firms for proposals to build and operate a rail system linking the airport to downtown Orlando and the Walt Disney World resort area. Fort Lauderdale, Florida is considering private financing for its downtown people-mover project, as is Portland, Oregon for its second light rail line. And in the intercity rail market, American High Speed Rail Corporation is pursuing an ambitious plan to raise \$3.1 billion to adapt the Japanese bullet train technology to a Los Angeles-San Diego operation. The Bank of Tokoyo and the First Boston Corporation are key members of the financial team, and part of the money will come from tax-exempt revenue bonds authorized by the California legislature.

These examples do not show that every proposed urban rail system could be financed privately -- and that is precisely the point. Having to convince investors that a system makes sense -- that there is a market demand for it and that it is being done as cost-effectively as possible -- serves to weed out economically unsound projects. Investors who have their own funds at risk cannot accept ridiculous featherbedding, unnecessary (but politically motivated) station locations, unproved technology, etc. The cost of a transit system is not a given. It is very much a function of entrepreneurial skill, shaped by market demands. Government ownership and heavy taxpayer subsidies short-circuit the vital screening process that distinguishes sound projects from boondoggles.

Outlook

Despite the potential for privatization for rebuilding this country's transportation infrastructure, several barriers remain in the way. To begin with, there is bureaucratic inertia and the not-invented-here syndrome. Second, in the case of all roads and bridges built with Federal aid, there is a legal barrier as well. Section 129, Title 23 of the U.S. Code specifies that if a state imposes a toll on such a facility, it must repay to the Federal government all the Federal money used to build it. Federal Highway Administration official Richard B. Robertson has joined a number of state highway officials in urging that this provision be repealed. Finally, there is also public opposition to the imposition of tolls on formerly "free" roads and bridges and of market pricing for rail transit. This is an obstacle that can be overcome through enlightened leadership by public officials and opinionmakers.

The advantages of privatization are many. It offers a way of raising the vast sums needed to rebuild our decaying infrastructures. More important, it solves the problem that led to the decay, by changing the institutional incentives to promote more responsible outcomes, insulating these essential facilities from the ebb and flow of political pressures and interest groups. And by making users pay directly, in proportion to the load they place on the system, privatization will ensure the most efficient use of our transportation resources.

COMMENTS ON PRESENTATION OF ROBERT W. POOLE, JR.

Franklin D. Raines, Lazard Freres
and Company

Mr. Poole strenuously argues that disinvestment in our national infrastructure is a problem which privatization can cure. He says that reinvestment loses out to operating programs in the competition by removing major capital-hungry infrastructure activities from the government altogether and turn them over to private owners and/or operators. There also runs through his paper an underlying theme that there is a shortage of capital and that privatization will solve this "revenue problem."

Although the benefits cited from privatization are inviting, they have costs which must also be considered. Further, most of these benefits can be obtained with a well run public enterprise. Many of the unfeathering distinctions between privately operated businesses and government operations do

not equally apply to publicly operated enterprises. Is there any evidence that investor-owned utilities are more efficient than those publicly-owned? Finally, there is no shortage of capital for public infrastructure purposes -- there is only the problem of the willingness to pay its cost.

The major benefits of privatization result from the deregulation of costs and prices. On the cost side it permits service standards, service levels, and wages to be removed from direct government determination. On the price side efficiency is encouraged by eliminating cross subsidies and by shedding unprofitable businesses through pricing decisions.

The major problems with cost and price deregulation for public facilities is that the effect is inevitably to provide less service at a higher cost for many users. Indeed, we would expect that for many of these facilities there would be insufficient demand of a market price to provide anything like the level of service that is currently provided. That is why many of these facilities are publicly operated in the first place. If a subsidy is to be provided to pay for the additional service or reduced price, it is unlikely that significant re-regulation could be avoided. It seems less than compelling to suggest that the public endure the trauma of deregulation through privatization, as is currently being experienced in the airline, trucking, and telephone industries, merely to have a private rather than public provider of the same service. It is true that the current tax code favors capital investment by private business more heavily than that by governments. The net effect of accelerated depreciation and tax credits may well reduce private costs of capital below the tax-exempt interest rates available to local governments. But reducing the cost of capital does not necessarily lead to increased investment. Corporate disinvestment in cases where consumers lack the willingness to pay the cost is just as prevalent as public disinvestment.

A well-run publicly owned enterprise can adopt the kinds of efficient means of operation usually associated with private enterprises, except perhaps the sweat equity by an entrepreneur. The technique of attacking unit labor costs through cutting the costs of new employees and expanding operations was pioneered in mass transit in Seattle many years before it was adopted by American Airlines. Subsidies can be made explicit and managerial incentives can be created so as to provide the same incentives for efficiency. Since government regulation is likely to remain for any privatized public facility it is debatable whether the adversary relationship typical of public service commission type proceedings is a more efficient process than the deliberations of a dedicated public enterprise board of commissioners.

In sum, the true measure of whether there is inadequate investment in public infrastructure is whether the public is receiving less than it is prepared to pay for. Privatization does not by itself increase the amount of capital available or invested. Should the public be prepared to support additional capital investment it may well be more efficient to use public enterprises rather than private ones to provide the facilities desired.

CITY PRESENTATIONS: HARTFORD, CHARLOTTE, HOUSTON

HARTFORD

Paul A. Ehrhardt, CIGNA Corporation

Thank you for this opportunity to talk about Hartford and the innovative work that is underway to solve its central business district transportation problems. What we have accomplished in a relatively short time is, I believe, quite significant.

We have learned some lessons along the way, and hope that they might be useful to you who have come from many different cities around the country. What we want to talk to you about can be organized under three themes: philosophy, process, and product.

The philosophy involves management. In this age of fiscal constraints, none of us can afford to focus only on increasing the supply of transportation facilities and structures to try to keep up with increasing usage. We must also learn to manage the existing facilities and structures better, and more importantly, we must learn to manage demand itself.

The process involves collaboration and consensus-building. First, agreement is needed on the nature and scope of the problems; second, all key parties must reach consensus on the importance of dealing with those problems, and third, solutions should be developed by all stakeholders, public and private; i.e., by everyone who has an interest in the outcome. This includes both the people responsible for deciding what is to be done and the people responsible for carrying out what is decided.

The product involves creation of a transportation management organization (TMO), an ongoing mechanism that institutionalizes the collective efforts to manage demand. What makes the TMO unique is the fact that it is a private sector structure that operates in a public sphere and it focuses primarily on the transportation actions of major employers.

To understand how each of these points applies to the Downtown Hartford Transportation Project, I will give you some background on the project, its recommendations and their implementation.

Over the past few years, Hartford has experienced an unprecedented boom in office construction, with more than three million square feet now completed, under construction, or committed. This represents as much office space as was completed in the previous twenty years combined.

With this growth has come great concerns. How will the city handle the thousands of new employees joining the downtown workforce? Will the city begin, literally, to choke on its own success? In the area of transportation, the concern was especially acute, for a variety of reasons.

First, Hartford's central business district is very small, only 50 square blocks and already dense, with 42,000 workers now employed there. Short-term parking is scarce and traffic congestion, while moderate in comparison to other cities, is intense during the morning and afternoon peak periods.

Second, the Interstate highway system was not built as originally designed. Hartford sits at the intersection of I-91 and I-84, but the two highways are not fully connected. You must leave one highway and travel city streets to get to the other. In addition, an Interstate beltway, which was designed to divert traffic from the downtown highways, was never built. The result is a dangerous, confusing, and congested highway system. I should add that

as a result of private and public sector collaboration over a three year period, nearly \$700 million has been allocated to connect and complete the system, a project that will not be finished until the mid-1990s.

The third reason that transportation was a special concern is that the mass transit system is heavily subsidized like transit systems elsewhere, and is run by the State Department of Transportation whose defacto policy severely limits service expansion prospects.

The question that faced corporate and city leaders was how a transportation system plagued by such inadequacies could handle the expected huge influx of new people. One major company came very close to moving a large division out of the city in part because of transportation problems. They, however, joined with other corporate leaders and elected officials and took preventive action, deciding new and innovative approaches were needed.

In the summer of 1981, members of the corporate community and the city decided to conduct a comprehensive study of transportation in the city's central business district. It was truly to be a public-private partnership. The corporation funded it at a cost of \$175,000 and the city administered the project. A steering committee was formed to oversee the project and set policy. It was composed of both public and private sector representatives, including state, regional, and local agencies, city council members, city staff, and representatives of such business-backed organizations as the Greater Hartford Chamber of Commerce, the Downtown Council, and the Greater Hartford Ridesharing Corporation.

The steering committee worked in a systematic way. First, the problems were defined: traffic, parking, transit, pedestrian movement/urban design, and goods movement, and then agreement was reached on a four-pronged approach for solving these problems.

- Reducing the inconvenience of congestion
- Managing the parking supply
- Improving the street environment
- Improving both the public and private sectors' capability to manage the transportation system

The committee then selected policies required to reach each goal and finally endorsed a specific set of actions. A team of five consultant firms was formed to provide data and technical analysis, but most importantly, the team helped the committee clarify its options. The committee's final recommendations are unique in several respects. For one, they are multi-modal. That is, they are aimed at all components of the transportation system. Second, each of the 33 recommendations represents a small manageable action. None requires a big fix, such as a massive change in the street system or the creation of a new transit system. Rather, the actions are small and doable, each coordinated with the other, and the cumulative effect is quite significant. Third, responsibility for carrying out each recommendation was assigned, with a timetable, to either the public sector, the private sector, or both.

There is not time to list all 33 recommendations but let me touch on a few of the recommendations which were made a year and a half ago.

- Setting specific goals and adopting specific actions plans to increase the number of people who use vanpools, carpools, or transit
- Prohibiting parking and deliveries on downtown streets during rush hour
- Changing employee work schedules so the peak afternoon traffic time is spread more evenly
- Eliminating free employee parking in a phased manner
- Improving the streetscape by adding new planters, benches, and bus shelters
- Developing a series of close-in commuter parking lots which include a shuttle bus to downtown employment centers
- Establishing the city's Public Works Department as the lead agency in developing and implementing transportation policies for the city
- Establishing the transportation management organization to act on behalf of the private sector in developing and implementing transportation policies

These last two recommendations are particularly significant because they not only respond to present needs, but they also involve preparation for future needs as well.

These recommendations have been endorsed by both the Hartford City Council and the greater Hartford Chamber Board of Directors. Significant progress has been made in implementing these recommendations.

On the public sector side, the Public Works Department has been designated and is functioning as the transportation responsibility center; plans are nearly completed to carry out the streetscape improvements, and planning has been done for creation of the close-in fringe parking areas and supporting shuttle buses.

The Downtown Hartford Project clearly has involved a collaborative, consensus-building process. The recommendations were not created in an ivory tower and dropped into the laps of those charges with implementing them. Rather, a concerted effort was made to bring together everyone with an interest in the success of the project.

On the private sector side, the TMO has been created through a grant from the Urban Mass Transportation Administration and a working committee of vice president and director level managers of major downtown employers has been at work for a year coordinating the adoption and implementation of private sector actions.

Clearly, the Downtown Hartford Project poses a management solution. It does not seek to create new capacity through massive projects that take years to plan and years more to implement. Instead we turned to relatively simple procedures and techniques that would change the pattern of demand in such a way that present capacity can be better utilized.

To conclude my remarks, let me say that the lessons we have learned from the Hartford Downtown Project can likely be applied to other downtowns and other transportation systems. Those of us involved in the project feel that the process is working for us and it can be a realistic approach for other cities to use as well.

CHARLOTTE

Minette Trosch, Mayor Pro-Tem

This is an exciting opportunity for me to share with you what is happening in Charlotte related to urban mobility. Our city is in the embryonic phase. We are a city that has not yet faced a congestion crisis but we definitely know it is coming.

Charlotte is a progressive city with a long history of public-private cooperation. It is upon this cooperative base that we build our strategies for the future. We, as a community, are determined to maintain a high quality of life as we grow. A cornerstone of our plans for Charlotte is the major commitment that has been made for over a decade by elected officials to build an economically vital urban core. We have made an effort to become a city that maintains a healthy heart, and not just a city of sprawling suburbs. Located in the center of a Standard Metropolitan Statistical Area of approximately one million people, the city itself has a population of 325,000. A financial and banking center, Charlotte enjoys the largest banking resources between Philadelphia and Dallas. We are also a major transportation hub with our excellent trucking, rail, and air services.

Through past studies, we have gained a clearer understanding of the dynamics that are going to play a significant role in our city over the next decade. We have learned that Charlotte's employment base in the central business district will double in size to 100,000 people by the year 2000. This will coincide with expanded commercial development. It has become clearly apparent that there is no way that we can accommodate that kind of growth without massive congestion problems. Given our limited gateway capacity into the center city, the community began to realize that we had to balance our transportation system.

The approach taken several years ago was to increase transit's share of the transportation modal split to 40 percent. The community was very supportive conceptually of the need to increase the transit and its usage. In support of an increased transit role for uptown, the citizens of Charlotte passed a major bond referendum which included several transit components, a bus maintenance facility, new buses, and most significantly, a transit mall for uptown. The public sector was only able to do this by the very active role of our business community who went with us to the voters and explained the need.

However, we found that we were not building ridership in our system; instead, it was beginning to stabilize and taper off. At the same time, study projections were coming true. Our center city development was mushrooming. The business community was supporting our uptown. They were investing dollars to locate offices and to build structures. Therefore, we did a reassessment. Realizing that a 40 percent transit share modal split was unrealistic, the public sector felt that a 25 percent transit share was achievable. In addition, we would have to work on increasing the shared ride concept for uptown. However, this approach made it more incumbent on us to look to the private side. We began to realize that we were narrowly defining the role the private sector had to play and should play in finding solutions for our city.

Before I share with you the success that we have had in getting the private sector's involvement, let me share with you an experience on how not to get the private sector involved. On one occasion, the mayor had a breakfast with the leaders of the business community in the uptown and asked for their support to solve a transportation problem.

He offered the services of the city's Department of Transportation and their programs. A couple of companies did work with our department, but the majority of those present went home not understanding what the next step was. Therefore, in reality nothing changed. The city had failed to develop the proper method to approach the private sector. We failed because we did not tell the story well and because we neglected to structure a program that the business leadership of our city could take the initiative in and pursue the next step. City government was still trying to be the leader in solving the problem.

During the two years that followed, the city tried to develop a new program to solve the problem. The private sector seemed to instinctively know that we needed help and offered their assistance through the Charlotte Uptown Development Corporation. What began as a narrowly defined topic on transit finance grew into a major commitment led by our top business people to solve the bigger issue of transportation management in our uptown. The private sector began to understand that it was in their enlightened self-interest to work with the public sector to avoid the predicted congestion crisis. We, as a community, now understand that our ability to increase the supply side of transportation options for our center city is simply very limited. The major part of the equation to solve this problem rests with those who create our peak hour demand, the large employers of our uptown. It is only with their support and their leadership that we can develop and implement solutions. We are, indeed, fortunate as a city to have chief executive officers like Cliff Cameron, Chairman of the Board of the First Union Corporation and the Charlotte Uptown Development Corporation, who has committed personally many hours and his vast talents to spearhead this effort.

Remarks of Cliff Cameron, Chairman,
Uptown Development Corporation

Before getting into specifics on some of the things we are doing in transportation, let me tell you a little about the Charlotte Uptown Development Corporation. The idea for CUDC arose from the Chamber of Commerce in the 1970s because they felt that uptown needed economic stimulation. The city asked our state legislature to permit them to appoint an uptown authority and at the same time, authorize the establishment of the municipal service district to provide the public financing for this authority. The Charlotte Uptown Development Corporation has been operating now for about five years. It annually contracts a 1.75 cents ad valorem tax on uptown properties. Our board is a most prestigious group of 16 individuals who are very influential and action-oriented.

The objective of the Charlotte Uptown Development Corporation is to provide continuing development of uptown and work in close harmony with both the public and private sectors, of which both are well represented on our board. At times, we play a leadership role; at other times, we play a cooperative role; and sometimes, we actually play only a monitoring role. No matter which role, we are involved in anything and everything that happens uptown.

Our Number One urban priority today is urban mobility, transportation. Because of our aspirations to build a strong, viable, and healthy uptown, we have set off in a new direction as

Minette Trosch has indicated. Knowing that we must have both the public and private sectors working together, CUUC was the logical organization to take the lead in forming the uptown transportation program.

We know that we must have the commitment to the major corporations in the community, the big employers, and preferably a commitment actually from the chief executive officer. We realize that there was no immediate crisis, and we know that it would be very difficult to rev up the community, particularly the business community, and keep the momentum going. The Charlotte Uptown Development Corporation, the Greater Charlotte Chamber of Commerce, and the Central Charlotte Association with assistance from the city of Charlotte and state of North Carolina sponsored a transportation symposium called a "Communication on Getting You to Work Tomorrow." Ken Orski was invited to be our keynote speaker for that occasion. Limiting our attendance, we sent our special invitations to key corporate individuals; and we received exactly what we wanted, 150 good participants. National experts along with Ken spoke at our general session. The general session was followed by excellent workshop discussions. The symposium ended up with a tremendous amount of interest, excitement, enthusiasm, and cooperation on the part of all participants.

Very shortly after that, we went back to the 150 conferees and asked them to select from five different transportation areas one which they would prefer to serve on. Those five areas were staggered hours/flex time, car/van pooling, parking management, transit system and other options, such as streetcars, taxis, rail and the like. I, personally, handpicked the chairmen who are the key people in community. We picked good vice chairmen and then we set up the committees.

With the chairmen, vice chairmen, and Ken Orski assisting, we had an organizational meeting. We gave the committee chairmen a charge to develop an action plan, but did not tell them how to do it. The 150 participants were assigned to the committees of their choice. Each group was well represented by both the public and private sectors. All committees are now up and running. They are currently developing their mission, objectives, and program of work. In fact, they have already made one report. They will make periodic presentations to our Steering Committee which consists of many of the top chief executive officers in the community. Any ideas that are developed along the way will be set into motion, either across the board or as a pilot operation through a large corporate employer.

Our uptown community is looking ahead and planning for the future. The employers want their employees to be able to get to and from uptown in an easy, efficient way. They, also, want shoppers, tourists, and visitors of all kinds to be able to reach our hotels, Spirit Square Theatre, Discovery Plan Science Museum, and the library. We have a big investment uptown in both property and human beings -- people that make the whole thing go. We have a long way to go, but we have a good start toward meeting our future transportation needs. We have a positive political environment about uptown Charlotte; we have enthusiasm; we have a great communication between public and private sectors; we have involvement with the right people; and we have a commitment by all. I think our results will be very exciting.

HOUSTON

Robert Eury, Executive Director,
Central Houston

In Texas, everybody brags a great deal, and I have always figured that the Dallasites usually claim bragging rights for most things, but I guess we in Houston can claim bragging rights for a phenomenal growth over the last ten years, and probably even though we would like to regret that we have to, we, also, claim bragging rights over congestion. By 1981, our congestion, our peak hour traffic periods were some 7-1/2 hours a day. Why was this the case? The community really could not build the supply side anywhere near as fast as demand increased, and I really challenge any city that was going as fast as Houston to really face up to that situation. As it turns out by 1981, Houston ranked nineteenth out of the twenty most populous areas for the miles of freeway per square mile of urbanized area. There were three immediate responses as the situation began to occur which started in the late seventies and moved into the early eighties. The first response was in the real estate market. There were a number of major corporate relocations. Firms decided, and they heard very clearly from their employees, it is important to get to work in a timely manner, and many firms decided to relocate themselves within the region more proximately to their employees. In fact, one consultant in the local market recorded some 116 relocations in the period 1979 to 1983, and that involved over 13 million square feet of office space. Incidentally, quite a few of those relocations were not from downtown but from other places in the region.

Secondly, several corporations that did not relocate decided it was time to get into the transportation provision process, and very quickly stepped in with a van pool program. Houston very proudly claims bragging rights over the largest van pool fleet in the United States. In 1978, we had some 14 corporations sponsoring about 210 vans. By 1983, this grew to a level of 85 corporate programs with over 1800 vans.

During that same period, with Metro helping to coordinate the process, we formed car pools which now enable 300,000 Houstonians to carpool. Today, over fifty corporations are involved in providing and subsidizing transit passes. All of these are very incremental responses, but they formed a very dramatic response to the congestion situation in Houston on the demand side.

We were aware, while all this was going on, that the roads were still very full, which means that there has to be a response on the supply side. It took a little while for the city to respond, but in 1981 the Houston Chamber of Commerce took the lead in the development of the Houston Regional Mobility Plan which went to the public in the early part of 1982. Most significantly it gave a very clear definition of what the problem was, how serious it was, what it was costing us, what it takes to get the problem solved or at least alleviated -- back to a level of recent past, more importantly what it costs, and maybe even more important than that, what it costs beyond the resources we currently have available.

Under that plan we have seen some action and progress. The Harris County Toll Road Authority has been set up for which last fall the voters approved some 900 million dollar bond issue for user funding -- a toll road authority to do certain freeways and highways within the Houston region. The city of Houston faces this summer the largest general obligation bond issue for all improvements.

Streets will be probably by far the largest package in the issue. The State Department of Highways and Public Transportation is severely deficient in its funding of needed road improvements. The mobility plan will help bring together the coalition of support that will be necessary to help pass an increase in the gas tax. Texas failed in 1983 to pass an increase when some 35 other states did, and now we are at 5 cents a gallon tax.

You may be very aware of the Metro referendum which was not supported by the voters in June 1983. What you are probably not aware of it that Houston is building over 41 miles of busways on three major corridors leading into the downtown. It already has made a dramatic improvement in transit service. In fact, the system now runs 94 percent on time. This fact is beginning to give Houston's residents pride in their system.

Parallel to these advances under the mobility plan which brought together the public agencies, there has been a tremendous increase in the interest in local development area organizations, and Central Houston is one of those. Directed by the major business leaders of each area, most of these organizations have set the goal of mobility improvement at the top. Where these organizations become very important is in the planning, coordination, grassroots level understanding on the private business side of what the needs are, and helping to mobilize local areas to move the projects forward. As you look at the future, I think you will be able to see these organizations working in concert with the public agencies, with the regional mobility plan in terms of bringing about very rapid planning for the improvements which have been identified as needed. There is substantial need on the local basis in the private sector for policy coordination. I can give you key examples. I mentioned the van pool programs. I mentioned the sponsored bus passes. Also, in a recent survey we took, we found that 82 cents on a dollar paid for downtown parking is paid for by corporate employers. So, you clearly have a contradiction in the subsidies which corporations are providing, but I think as we begin to evolve under the mobility plan a stronger picture of the types of transportation which will serve various centers, we will then be able to help guide and direct local corporate policy where there in the past has not been any entity to do that.

In sum, I think Houston has grasped its problem. We have a long way to go in solving it, but I think what is most important at this point is that everybody is deeply committed to it, understands the seriousness of it in terms of future economic vitality as well as the quality of life of the city, and I think that progress is going to be brought about.

Remarks of John B. Turner, Chairman,
Houston Regional Mobility Committee

During the early seventies and eighties, Houston experienced economic and population growth unprecedented in its history and probably unprecedented for almost any other city in the United States, and this was because of the shift towards the Sun Belt of quite a bit of our business and industrial activity. In the early part of the seventies we enjoyed excellent mobility because of a very well planned and implemented freeway system, but by 1981, this freeway system, as well as the other transportation facilities, were burdened by traffic levels up to 100 percent above design capacity, and congestion was continuing to build every year no matter what we

tried to do to resolve it. That is not to say that we sat idly by and watched congestion build. We did very much like Hartford and Charlotte told you that they were doing. We worked hard, for example, to get staggered and flexible work hours adopted by some companies. We increased the number of people in each vehicle, through the use of buses and van pools and car pools, and as Bob just told you, we became the van pooling capital of the United States with over 2200 van pools operating each day in our city, and we made better use of traffic management techniques, such as one-way streets, turn lanes, sequential traffic lights, and a very successful contraflow lane on one of our freeways, which was set aside for the exclusive use of buses and van pools. These efforts have been helpful, but in most cases they have been taken to their limit and the traffic problems continue to grow.

The increasing congestion could not be blamed on any one factor or any one transportation agency. It was a result of a combination of circumstances, and one of the prime contributors was the inability of the State Highway Department construction program to keep up with demand. For instance, during the 1970s registered vehicles using these facilities increased by 71 percent. During that same period only 22 percent was added to the lane miles of freeways or major highways. Additionally, construction and maintenance of the arterial system, which was the responsibility of the city and the county, failed to match the growth rate. In an effort to keep up with the exploding growth, more and more of the responsibility for arterials was shifted to the private sector, to the private developer. Developers built portions of needed arterials through the commercial and residential areas that they developed. However, this resulted in inadequate widths and discontinuous thoroughfares, and unfortunately correction of these two conditions by the city or the county usually came about well after congestion was unbearable. Consequently, our arterial system became, and is characterized today, by miles of narrow, overburdened facilities with many links of the overall chain still missing.

Further complicating the dilemma was the fact that Houston has never been a public transit city. The Metropolitan Transit Authority was authorized by referendum in 1978 for the Greater Houston Metropolitan Area, and a one cent sales tax to finance the expanded public transit system was authorized.

Until 1982, our MTA suffered severely from immaturity. It is awfully easy to create something, but it is very difficult to implement the process that you have authorized, and we suffered through those immature days, but I am now proud to say that thanks to Alan Kiepper and a very excellent staff we are now under good management. We are adequately funded, and we have made major improvements to our bus service to where it is probably the best operating service in the United States, both fiscally and with regard to operations. Furthermore, MTA promises to fulfill its role as an important solution to a part of our mobility problem in Houston.

Compounding the congestion problem was the fact that local and state tax rates, of which we had always been so proud and protective, were totally insufficient to provide the funding necessary to keep pace with Houston's growth. So, while all of these factors have contributed to Houston's traffic problems without doubt, one of the most important missing links was the absence of a coordinated planning and implementing process between the five agencies responsible for providing public

transportation facilities in Houston, and without this no real assessment of the physical and financial needs could be made, and no real organized plan for an overall solution could be adopted.

Realizing the immediate and critical need to do something to turn around our declining traffic mobility, the Chamber of Commerce in 1981 decided to promote the development of a comprehensive regional mobility plan, and our role as a Chamber was two-fold. First it was to get the people who could do the job working together instead of separately to set overall goals and quantify the funding needs, and second, to encourage elected officials to adequately fund and build the improvements needed to accomplish the plan's goals.

The Chamber approached each of the agencies responsible for funding and building transportation facilities, including the city of Houston, Harris County, the Texas Department of Highways and Public Transportation, the Texas Turnpike Authority, a toll road authority, and the Metropolitan Transit Authority. Each of these agencies then assigned a high level transportation professional to the task force, and the Chamber acted in the coordinating role in the effort to come up with a plan. Now, the task force was asked to develop the most efficient plan possible to solve our problem, and I think this is an important point, without regard to what it was going to cost for it established the framework for current and future transportation decision making in the Houston Metropolitan Area.

SUMMARY OF SESSION ON OVERCOMING
BARRIERS TO COMPETITION
Joseph R. Stowers, System Design
Concepts, Inc.

Several interrelated trends and problems are occurring which lead to the conclusion that private sector competition in the provision of service can offer substantial benefits. Conventional public transit service is increasingly recognized as offering a poor match with growing travel market needs in the suburbs and low density areas. Peak/off-peak ratios are very high for commuter services, and thus very costly for public transit agencies. The cost of purchasing and maintaining spares and other capital facilities has increased under the incentive of the Urban Mass Transportation Administration capital grant program. In some instances the number of spares has gone from the old industry standard of ten percent of peak period vehicles to as much as 35 percent. Given these conditions, coupled with shrinking federal support for unified areawide public transit systems and growing local demand for special services, many suburban communities have been withdrawing, or at least threatening withdrawal from metropolitan transit authorities.

Public costs of providing much of existing and future transit services can be substantially reduced by competitive contracting under proper controls by transit authorities. Studies of comparative costs indicate that a 35 to 50 percent cost advantage is achievable by contracting with the private sector. Another measure of the potential savings is that an estimated one billion dollars could be saved over a five year period if a ten percent spare factor which is commonly used in the private sector, could be achieved nationally. Several specific examples of cost savings and other benefits of private sector contracting were cited:

- * The consolidation of a publicly operated route and a privately contracted route into a single privately contracted route in the San Diego area led to a direct cost savings of about \$200,000 per year, and was a major factor in substantially reduced labor costs for the public operator over the next couple of years.
- * In Chicago, a private operator was able to provide elderly and handicapped services at an average cost of nine dollars per passenger trip compared with 25 dollars for the Chicago Transit Authority.
- * If Chicago area taxis were allowed to operate as jitneys and could contract for late night and weekend transit service, their average occupancy rate could be increased from 1.4 passengers per trip to an estimated 3.0 passengers per trip and their non-fare-paying mileage could be reduced from about 50 percent to about 30 percent, thus serving about 40 percent of the total Chicago area transit passengers at greatly reduced costs.
- * Most of the estimated 10,000 buses in the Chicago area are sitting idle for substantial parts of the day because they are only being used for school bus service. Much cheaper transportation could be achieved if these could be used in regular transit service when not otherwise needed.

Numerous barriers will have to be overcome, however, to realize the full potential of the private sector. One major barrier is psychological -- the attitudes of public transit agency managers. Many of them fight any efforts to foster private transit services. Some simply do not want anyone else to operate buses. Some may accept private paratransit operators, but will oppose private operation of anything larger than vans. There may be fear that private operators will try to take over the major public transit systems again -- an unrealistic fear because this will not happen -- private operators' role will always be limited to a small portion of the market that is profitable or to providing service on a contractual basis. Part of this problem is also the lack of innovative management in the transit field as a whole.

Transit agency managers often oppose the use of funds for contracting because they feel they need all available resources for their own operations. Transit managers may often view private contracting as being in conflict with their responsibility for managing transit operations. They want to protect existing jobs. The strength of labor in preventing use of funds for private contracting is a dominant factor in most large urban areas of the Midwest and Northeast.

Federal funding is a barrier to private sector involvement because of the bias toward capital programs, which encourages large publicly owned bus fleets, and because the labor protection provisions of Section 13(c) require local labor agreements in most cases. Federal funding is available only for the public sector directly, and no funding is specifically available for private contracting.

Most urban areas have numerous restrictions and requirements for safety and insurance for private operators, although this varies greatly across the country. Typically, these regulations take a pigeon-hole approach, with strict boundaries on each form of service so that certain types of

service such as van pooling or dial-a-ride are not allowed. Taxi regulation is usually oriented toward protecting those that are already in the business and preventing competition.

Partly as a result of these local restrictive regulations, and partly as a result of policy biases toward public operation, many urban areas no longer have sufficient qualified private operators to create a competitive environment -- although this could obviously change rapidly if the basic causes were changed. Many large urban areas with diverse communities and numerous concentrations of high density activity may require a large number of private operators in order to realize the full potential of private involvement. Houston was cited as a prime example.

Part of the reason for the bias against private operations in both law and attitudes of transit agencies is the fact that public transit agencies have been viewed as the saviors of the transit systems as a result of their takeovers of failing private operations. We have been left in a situation where there is very little political support for loosening of overly restrictive regulations and other changes needed to foster private sector competition.

The roles of most transit agencies have to be redefined in order to overcome many of these barriers. They should be made trustees of multi-provider service systems, with responsibility for maximizing overall ridership or some more comprehensive measure of community benefits from transit, and should not simply be responsible for providing a given amount of service. Transit agencies will have to take on different skills in order to carry out responsibilities as contract administrators, but these are not inherently more difficult skills. Transit agencies will have to learn how to write contracts which are attractive to private operators, encourage competition, and investment in the field. On the other hand, contracts must be written and administered in a manner which protects the public interest -- e.g., adequate insurance requirements, cancellation for cause clauses, and incentive and penalty clauses.

Regulatory ordinances should be restructured to deal uniformly with all forms of private services, focusing on necessary safety, insurance, and driver competency requirements, and should avoid restrictions on the types of service which can be provided.

One form of capital investment was identified as being particularly attractive from the perspective of various private interests as well as public interests -- centrally located intermodal ground transportation terminals. Such investments were characterized as making everyone a winner -- the city, downtown business, developers, public transit, intercity bus operators, taxis, rural bus passengers, commuters, and less advantaged intercity travelers. Energy efficient modes and public-private cooperation are fostered as well.

Private operators can do far more to help their cause than they have been doing. Generally, they have been weak, disorganized, and too reactive. In very few instances have they organized to develop common cause -- a notable exception being the formation of the Metropolitan Transportation Association in Chicago. Private bus, taxi, and paratransit operators have much in common and should consider formation of associations in each urban area in order to exercise a more effective voice in the planning and decisionmaking process within metropolitan areas as well as at the state and national levels. Such associations could be effective mechanisms for developing common marketing efforts, for joining with financial institutions in

generating new ideas on creative financing from the private sector, and for convincing public agencies to reform regulatory ordinances and develop effective programs for competitive contracting with private operators.

Congressman Moody discussed an amendment which he was planning to introduce in the current legislative session which would specifically allow the use of transit capital grant funds for contract services. Sections 9, 18, and 16(b)2 funds would all be authorized for such services. He expected opposition to the amendment from labor and transit management, but he urged these groups to recognize that it would strengthen the core transit system in terms of both ridership and political support. It would remove the capital investment bias of the federal program and would result in a slower rate of payout from public funds for a given amount of service because capital investments would be paid for over the full life of buses and other facilities.

WORKSHOP SUMMARIES

I. PUBLIC-PRIVATE COOPERATION IN TRANSPORTATION AND REAL ESTATE DEVELOPMENT

A. Transit Related Development: The Private Sector Role

J. Thomas Black, Urban Land Institute,
Moderator

This workshop was designed to review current thinking and practice regarding the linkage between mass transit system development and associated real estate development -- or what has come to be called "joint development" in a broad sense of the term. The workshop involved presentations and discussion among expert panelists representing viewpoints of developers, two transit agencies, professional consultants, and the federal transportation agencies. All are now actively involved on a day-to-day basis in joint development activity at some level. Current experience in Los Angeles, New York, Miami, Washington, D.C., Denver, and Baltimore were represented on the podium.

The subject of transit-related public-private cooperative real estate development is many faceted, as the panel discussion reflected. The discussion was extremely rich in seasoned observations and conclusions gained from deep experience and much thought by the panelists.

The concept of marrying transit planning and development with development planning, controls, and market potentials is firmly established, at least in those cities represented. Los Angeles, New York, and Miami have, and are pursuing such a coordinated approach with what appears to be considerable sophistication and success. Also, the private development community now recognizes the value of transit-served locations.

Important elements of a successful strategy are:

1. A public policy supportive of joint development;
2. The presence of strong real estate capabilities on the transit side to participate in system planning and design, and implementation strategy, as well as specific station area development efforts;
3. The transit agencies acceptance of the private development community as part of

the team which is important to the total success of a system and not just a source of funds to construct the system or an adversary of the public;

4. A single credible and authoritative office with which the private development community can deal and who can make or obtain decisions promptly; (emphasized over and over in the discussion);
5. The use of development incentives such as density bonuses, tax-exempt financing, federally-funded financial assistance through UDAG or other programs, exclusive access to stations, favorable lease provisions for transit properties to attract private developer and investor interest in developing to support transit, economic development, and urban design objectives;
6. Commitment to the project and project objectives but maintenance of sufficient flexibility to be able to deal with changing market and financial conditions, with unanticipated site conditions or design requirements, or new opportunities;
7. The use of negotiated development approvals with trade-offs for density bonuses, zoning changes, variances, PUD approvals, public improvements, and air rights transfers. Important public or transit benefits can be development of amenities, contribution to station development or operating costs, of right-of-way easements through private property for station access, or private development of required facilities;
8. The use of general benefit assessment districts to recapture transit benefits and to finance part of the system costs.

In general, the experience reported in New York City provided to be most illustrative of the variety of possibilities of public-private deals linking transit and private development. Most of those present were not aware of the large number or innovative character of the projects in New York which suggests the need for better monitoring and dissemination of reports on such activities than is currently occurring.

At the federal level, policy appears to be in a transition stage with Urban Mass Transportation Administration officials now exploring new financing strategies which reinforce joint public-private ventures that improve transit economics. Chuck Graves advised that UMTA has decided that revenues from leasing real property can be used for capital or operating costs (any purpose authorized by statute). He reported that UMTA has not decided whether UMTA Section 3 discretionary funds and Section 9 formula funds can be used to fund excess land acquisition or infrastructure to support private real estate development.

B. Transportation Management in Large Scale Suburban Developments

William Eager, TDA, Inc.,
Moderator

What Is Transportation Management?

This workshop, a panel of twelve highly qualified speakers, represented a variety of interests and approaches. Included were those representing the private development sector, public officials, and those representing employer associations.

Travel demand has continued to grow, while, at the same time, public funds for construction of capital transportation facilities have been declining. As discussed by the panel, transportation management refers to a variety of responses to this gap between demand and supply. Transportation management is commonly used to cover the activities of ridersharing (carpooling, vanpooling, subscription transit), other programs to encourage transit ridership, and parking management. Also included under this umbrella were private-sector programs to fund and build streets and highways.

The objectives of these transportation management programs include:

Response to governmental regulation.

In some areas local government is mandating that private development projects establish or participate in transportation management programs and/or that they help fund local street and highway improvements.

- * Marketing. In some cases private development projects provide ridersharing or special transit programs as one of the amenities offered in marketing the project.

- * Response to Congestion. In some cases the purpose of the transportation management program is to ease existing roadway congestion. In others, projections of congestion have created limits on the amount of development that may occur. An effective transportation management program may raise the amount of development that can happen within the capacity of the capital transportation facility.

What Is Being Done?

In response to these needs, there have been a variety of programs. Summarizing:

1. Several of the projects provide management, marketing, and outreach activities to encouraging ridesharing.
2. Associations of employers are being formed to bring economies of scale to transportation management programs.
3. The basis for determining the amount of private contribution to highway improvement programs ranges from setting the amount equal to the difference between cost of the construction and the amount of public funds available (the take-it-or-leave-it approach), to a fixed charge per square foot or per daily trip. A variation makes payments equal to the amount of improvement that is required to maintain satisfactory levels of operating service.
4. Some projects directly provide transportation vanpools or transit.
5. At least one association has been instrumental in fostering the development of high occupancy vehicle lanes on highways.

Summary

So far most of the activities have been responses to immediate problems. It is too early in the process to have generated a framework within which to judge the equity, performance, and precedent of these programs. On this latter point, some concern was expressed that the more the private sector indicates willingness to pay to get improvements underway, the more government will pull back. This suggests that there is a need for a set of principles or a framework within which to judge equity.

So far it is difficult to show the economic benefits of some of the transportation management programs. Their value as an alternative available to individual employees at times they need it or to a larger society in times of energy shortage, for example, may be as important as actual day-to-day change in the transportation characteristics.

II. MAKING MORE EFFECTIVE USE OF PRIVATE PROVIDERS

A. Service Contracting

Wendell Cox, Los Angeles County
Transportation Commission,
Moderator

The public transit industry faces two great challenges. First, costs have been insufficiently controlled, rising more than 60 percent ahead of inflation from 1976 to 1982. Second, conventional public transit services have not adequately met the mobility needs of lower demand areas. To maintain service within constrained budgets, public transit authorities have increasingly contracted for service with private providers. The trend began with smaller agencies and has spread now to the largest transit authorities. A variety of services are being contracted, ranging from demand responsive to conventional fixed route.

Because of the importance of this emerging public-private service alliance, the Conference on Transportation Partnerships included service contracting as a primary topic. Experts from both the public and the private sectors participated. A summary of recurring themes follows.

Cost Effectiveness

Comparable service can be provided by private operators for a minimum cost savings of 35 percent. Often, vehicles are supplied by the private providers, reducing capital grant requirements. Cost savings of up to 70 percent and subsidy savings of 97 percent have been documented.

Because private provider costs increase at or below the inflation rate, even greater long-term savings can be anticipated. In some cases, contracted service costs have decreased from one year to the next.

Market Orientation

Conventional public transit services are not well matched to lower demand areas. As a result, suburban jurisdictions have withdrawn from regional transit authorities, removing locally generated subsidies. Private providers offer greater flexibility to provide market-oriented service to lower demand areas.

Competition

Competition induces cost control and market orientation. Private transportation providers operate in a competitive environment.

Conversely, public transit is characterized by monopoly. It began with the private companies which held exclusive service franchises, and continues today as these franchises have passed to public agencies. Monopolies maximize revenues and impose products on the market. Public transit exhibits these characteristics through super inflationary cost increases and services which are poorly matched to suburban markets. The antidote to monopoly is competition.

Survival in a competitive environment requires cost control and sensitivity to the market. Public transit can obtain cost control and market sensitivity through competitively bid service contracting. The benefits to riders and taxpayers are substantial.

The Evolving Public Role

Service contracting focuses public transit policy on the rider. The public transit agency sponsors service, retaining service ownership and full policy control. The privately provided service is an integral part of the public transit system and is monitored to ensure quality and compliance with contract provisions. The services with the poorest fare return should be contracted to private providers so that deficit savings can be maximized.

The essential policy role of the public transit authority is to develop the system, establish fares and ensure service quality, while minimizing public costs. Directly providing all of the service necessitates inordinate attention to the mechanics of service delivery. Service contracting permits the public transit agency to focus more clearly upon its mission of service to the riders and stewardship to taxpayers.

Barriers

There are impediments to service contracting, all of which can be overcome. Transit employee concerns can be addressed by pacing the conversion to contracting. Some have questioned contracting, confusing it with the franchised private transit systems which predated the public takeover. The similarity is a matter of semantics and not of substance. Under contracting, full public control is retained, and no private franchise is granted. Service contracting is a logical next step in urban transport.

Conclusion

Service contracting has resulted in improved cost effectiveness and market sensitivity. As financial and market challenges continue to intensify, it will be utilized even more increasingly.

B. Private Bus Operations

Wendell Cox, Los Angeles County
Transportation Commission,
Moderator

In recent years there has been a pronounced increase in the utilization of private bus operators in public transportation. Contracting services to these operators has better positioned public transit agencies to:

1. Lower operating costs and subsidies
2. Contain cost increases
3. Obtain capital grant savings
4. Establish innovative services
5. Effectively control service quality

There is a large potential supplier market of private bus operators, from which services may be purchased by public transit authorities. These suppliers include operators of charter, airport, intercity, transit service, and school bus service.

In the New York City area private operators pay the same wage scale as the New York City Transit Authority. More than 600 buses are in daily service, and total subsidies are less than the gross receipt taxes which are paid to the city.

In Los Angeles private bus companies provide subscription services to major employment centers. More than 100 such buses carry almost as many passengers as the Southern California Rapid Transit District park-and-ride services. A study by the Southern California Association of Governments indicated that contracting of public park-and-ride services to these private operators would achieve cost savings of 50 percent, and subsidy savings of 97 percent. The savings would actually be more, because the private costs included vehicle capital costs, while the public costs did not.

In Chicago private subscription services were established in response to substantial commuter rail fare increases. Now, about 75 buses are in operation without public subsidy. Private transit operators are also providing similar service in Washington, Boston and other areas. Private bus operators can provide effective contract service in various public transit markets.

No public transit service is more costly than commuter express. These are usually operated only during peak hours, and thus incur substantially higher labor costs in relation to the service hours provided. For example, in Los Angeles about 45 minutes of service is obtained for each pay hour on all day services. However, on services which operate only during peak hours, such as commuter express, only 21 minutes of service is obtained.

Even in the face of this evidence some transit agencies continue to consider commuter express service as relative revenue producers rather than the deficit producers which they are. This results from using average costs, which are insensitive to the high costs of peak service. Peak period commuter express services are far more costly than the system average.

Even with premium fares, the subsidy per passenger tends to be far above the system average, commonly \$2.00 or more. Comparison of these high subsidies to the much lower subsidies on high demand local services raises a question of equity. A Los Angeles study showed that commuter express services are subsidized at rates seven times greater than central city local services. What makes this equity question even more compelling is that public agencies can purchase such service for much less than they can produce it. Contracting for commuter express service can free funding for transit service to other markets.

Private bus operators are providing contracted commuter express services in Los Angeles, Chicago, Boston, Kansas City, San Francisco, San Diego, Minneapolis and other areas.

Local services can have very substantial deficits where passenger demand is light. Private bus operators can assist in reducing that deficit by providing less costly service, while serving the same passengers, as the following examples indicate:

In Yolo County, California the entire local bus network is contracted to a private operator. Savings of more than 35 percent are being achieved, and the private operator is supplying the vehicles.

In Carson, California a new bus system has just been contracted to a private operator. This system will operate for \$17 per service hour, about 70 percent less than the cost of the regional operator and 50 percent less than the costs of the municipal public carriers in the Los Angeles area.

Local services are also being contracted in San Diego, the Antelope Valley, California, Minneapolis, Beaver County, Pennsylvania, Sonoma County, California, and in other areas.

Public transit has had relatively little impact upon the large and still expanding suburban employment centers, such as Route 128 (Massachusetts), El Segundo (California), and other areas. The land use patterns of these centers, and the dispersed residential locations of employees render conventional transit approaches impotent. Yet commuting traffic has made access to these locations at least as difficult as is automobile access to downtown areas. To address this situation, companies and employer associations have established bus services for their employees, with planning assistance from public agencies. In El Segundo the Hughes Aircraft Company has contracted with a private bus operator to supply a comprehensive bus transportation system for its employees. This service is a model for other suburban centers.

In summary, private bus operators can assist public transit authorities by providing cost-efficient and market-oriented service under contract. The market of potential suppliers is large. Private bus operators are currently providing commuter express and local services. They are also serving suburban employment centers. The resourcefulness of these operators can be marshalled to public benefit through contracting.

III. CREATIVE FINANCING MECHANISMS Gary L. Brosch, Rice Center

A. Non-Federal Funding Alternatives

The panel discussion focused on the potential of public-private partnerships as an alternative to federal funding. The general consensus was that the future for partnerships is very promising, although they should not be expected to completely replace more traditional revenue sources. Examples of partnerships were presented by panel members throughout the workshop discussion.

Panel members viewed the definition of "public-private partnerships" from slightly different perspectives. Heidi Zukoski of the Rice Center viewed partnerships as negotiated agreements concerning special benefits to private businesses and corporations, with the value of the benefits varying by the type and value of a particular facility or service and by the characteristics of the site. From an absolute dollar standpoint, the most lucrative partnerships tend to involve rapid rail systems. However, from a percentage standpoint, even cities which operate bus systems may benefit from partnerships.

Erskine Walther of the North Carolina A & T State University suggested that partnerships fall

into two broad classifications: (1) power-of-state taxes and fees and (2) payment-by-benefits-received taxes and fees. He also noted that the term partnerships implies that both sides benefit equally from the agreement, otherwise there would be no partnership. If so, he recommended that the public sector develop the expertise to evaluate the value of benefits flowing to the private sector in order to obtain a fair agreement.

Marilyn Skolnick of the League of Women Voters of Pennsylvania, and Bob Reinshuttle of the Council of State Governments both stated that the full range of partnerships is still new to many state and local officials. They recommended dissemination of information about the different types of partnerships and the methods for evaluating their use to individual transit agencies.

In summary, the panel agreed that public-private partnerships are important to the future of transportation financing. However, they should be viewed as supplemental revenue sources. While partnerships can be the determining factor in whether a project is financially feasible, partnerships cannot be expected to replace federal, state and local taxes and subsidies.

B. Administrative Impacts of Private Financing

For this workshop Duane Windsor of Rice University made a substantive presentation of his year-long study, "Administrative Impacts of Private Financing Techniques for Urban Transportation." The purpose of the study, funded by the U.S. Department of Transportation, was to examine the changes needed in federal policies and local administrative practices to encourage greater use of private enterprise, investment, and participation in the provision of public transportation services.

The study found that the U.S. Department of Transportation's use of federal grants instead of loans to support local transportation services has resulted in local agencies developing procedures and practices to suit the federal grant process that inhibit consideration of private sector involvement in public transportation services. The overall recommendation was that the federal government should establish a set of incentives that explicitly and systematically encourage transit agencies to operate financially viable services. Such incentives should encourage greater use of innovative financing techniques which, in turn, should reduce the need for federal subsidies.

The question and answer period focused on the role of federal policy today and the flexibility of existing laws to encourage greater use of innovative financing techniques. Most agreed that local agencies are not adequately prepared for immediate elimination of federal subsidies, nor is it likely to occur in the near future, and that revamping the federal grant process to reward financial innovation and reduce dependence on federal monies is a difficult long-term task. There was also concurrence with the recommendation that more information is needed by state and local officials concerning the negotiating process associated with joint development projects.

In brief, the conclusions and recommendations of the study are listed below.

Conclusions:

1. There is definite interest by state and local agencies in innovative financing techniques.

2. State and local efforts to use innovative financing are haphazard due to lack of information and experience and substantial administrative barriers.
3. Substantial volumes of private investment are unlikely in the immediate future due to fragmentation and disorganization of private credit markets.
4. The critical test of private sector participation is its impact on provision of high specific facilities and services that create special benefits, and on the efficiency and effectiveness of local agency operations.

Recommendations:

1. Incorporate a new objective in the Urban Mass Transit Act to develop non-federal, both public and private sources of transit financing.
2. Support this new objective by a) enforcing Urban Mass Transit Act planning provisions for private participation in provision of mass transportation services, and b) replacing the existing formula grant strategy with a federal subsidy system which rewards financial innovation and viability.
3. Develop federal incentives, state legislation, and administrative procedures that encourage use of innovative financing techniques before eliminating federal subsidies.
4. Encourage use of federal loans over grants.
5. Incorporate incentives in the federal subsidy strategy for local agencies to achieve more effective operations.
6. Moderate labor-management provisions to permit negotiation on productivity standards and use of private transportation services.
7. Prepare a model state transportation act that encourages use of innovative financing techniques.
8. Disseminate information about innovative financing techniques.
9. Disseminate information about joint development as a revenue source, particularly about the negotiating process.
10. Retain safe harbor leasing.
11. Recognize in federal policies that auto transportation is underpriced relative to its real resource cost.
12. Clarify federal policy on disposition of property and other assets acquired with federal grants.
13. Investigate methods for improving the private credit market for transportation services.

C. Benefit Assessment District

The panel discussion focused on the potential of benefit assessment districts as a revenue source for transit agencies. Spence Ballard of the Metro-Dade Transportation Administration, Miami and David Nutter from Denver described their ongoing experiences with assessment districts, and Mike Lewis of the Southern California Rapid Transit District (SCRTD) described the plans of the SCRTD to establish benefit assessment districts along the new rapid transit line. These three experiences are briefly summarized below.

Miami A benefit assessment district has been formed in downtown Miami to finance \$27 million of the cost of constructing the Downtown People Mover (DPM). The total cost of the DPM is estimated to be \$69 - \$100 million. The district will repay the bonds at a fixed rate over a fifteen year period. Assessment rates are less than 20¢ per square foot of net leasable office space. The district includes 700 properties. Churches and federal buildings are exempt from the assessment.

Denver Maintenance of the fourteen block transit mall in downtown Denver is being funded through a special assessment charged to property owners immediately adjacent to the mall corridor. The assessment and maintenance are being supervised by The Denver Partnership, Inc., which represents a group of downtown businesses. Assessments are 5¢ to 45¢ per square foot of land area, depending on the distance from the mall. In 1983, \$1.5 million was collected.

Los Angeles The California State Legislature passed a law enabling SCRTD to establish assessment districts around each of the eighteen stations on the planned rapid rail line connecting downtown Los Angeles and the San Fernando Valley. No districts have been established yet. Assessments are anticipated to provide five percent of the total system cost.

Most of the discussion concerned practical questions about the feasibility of establishing a district. The role of the private sector was discussed at length. It was noted that political opposition and legal challenges can be minimized by involving the property owners in the early planning stages. For example, in Miami the County Manager commissioned a private sector task force to study the downtown people mover's financing; the task force recommended the district technique to the Board of County Commissioners, which passed an enabling ordinance in 1983. In Los Angeles the SCRTD will involve property owners in the design of the station sites.

It was also noted that political opposition and legal challenges that could result in the dismantling of the district reduce the confidence of investors in bonds to be repaid by assessment revenues. In Miami the county pledged to retire the DPM bonds if the assessment revenues prove to be insufficient. This pledge reduced the cost of the debt service by 25 percent.

In general, the conclusion of the panel was that benefit assessment districts provide a lucrative revenue source for capital and operating costs of mass transportation facilities.

D. Innovative Loan Instruments

A panel discussion focused on opportunities to blend public and private resources to help transit agencies meet their capital and operating assistance requirements.

Opportunities to generate additional revenues and smooth cash flow cycles through the use of safe harbor leasing and grant anticipation financing were extensively discussed. A survey conducted by David Yudin, under contract to the Rice Center, pointed out the wide variation in loan arrangements transit agencies have used to meet their cash flow requirements. Joe Scatchard of SCRTD was able to advise smaller transit systems on how they could benefit from safe harbor leasing and grant anticipation financing on their own, as well as through pooling arrangements sponsored by the states.

A large portion of the session was devoted to exploring the credit value of UMTA's multi-year commitments. Based upon experiences in Allegheny County, Pennsylvania, it was felt that an opportunity for cost savings on the order of ten to fifteen percent of total project costs could be achieved if transit agencies could borrow against future year federal commitments in order to build their projects on an efficient time schedule. The importance of this concept was reinforced by representatives from Los Angeles and Seattle, who are preparing to begin major transit investment projects.

An example of public-private cooperation identified in the discussion was research on transit finance opportunities sponsored by Blyth Eastman Paine Webber, Inc., related to the Advance Construction Notes desired by the Port Authority of Allegheny County.

The service contract approach to financing transit investments was also discussed as an important mechanism for allowing transit agencies to receive funds on a predictable basis, without the need for holding a referendum. This approach has been pioneered by the New York Mass Transit Authority potentially has broad application. The service contract concept may also serve as an important mechanism for allowing privatization of transit capital projects, using the model developed in the waste water treatment field.

The most important recommendation to arise from the session was the need for additional information and training on innovative finance techniques. Both transit agency staff and board members expressed the concern that there was simply not enough written background on the subject of transit finance so that they could make timely and accurate decisions and that a conference or series of training meetings on this subject was needed.

PARTICIPANTS

Aland, Richard K., Salomon Brothers Incorporated
 Allan, Donna, Minnesota Department of Transportation
 Alston, Sherri Y., District of Columbia Department of Transportation
 Anderson, Phillip, Colorado Department of Highways
 Andrews, John S., Housman Bus Sales and Parts Company
 Armstrong, Katharine A., Smith Barney, Harris Upham and Company
 Arrington, G. B., Tri-Met, Portland, Oregon
 Ballard, Spencer, Metto-Dade Transportation Administration, Florida
 Barbati, John, Paratransit Services, Cincinnati, Ohio
 Barber, Carlton J., Chairman Transit Authority, Raleigh, North Carolina
 Barker, William G., William G. Barker and Associates
 Barnum, John W., White and Case
 Barrett, Carol D., Greater Washington Board of Trade Washington, D.C.
 Bauman, Sue Starrett, Dallas Chamber of Commerce
 Bautz, James, Urban Mass Transportation Administration
 Bay, Paul N., Transit System Development, Houston Metro
 Becker, A. Jeff, Tidewater Transportation District Commission, Norfolk, Virginia
 Behan, Michael C., City of Fort Worth, Texas
 Berlin, Harvey, Metropolitan Washington Council of Governments, Washington, D.C.
 Berrent, Barbara K., Colonial Taxi and Paratransit Service, Inc.
 Biehler, Allen D., Port Authority of Allegheny County, Pennsylvania
 Bien, Harold J., Hudson General Corporation, Texas
 Black, J. Thomas, The Urban Land Institute
 Boatman, Larry A., Spillman Boatman, Inc.
 Bolton, Kenneth, Urban Mass Transportation Administration
 Borges, Francisco L., City of Hartford, Connecticut
 Botzow, Herman S., Port Authority of New York and New Jersey
 Bradley, Richard H., Downtown Council, Hartford, Connecticut
 Brosch, Gary L., Rice Center, Joint Center for Urban Mobility Research
 Buck, Richard J., EMJ Engineers, Inc.
 Bullock, Raynond A., Tech Center Development, Englewood, Colorado
 Burke, John C., City of Hartford, Connecticut
 Callahan, Joseph W., Jr., CPS, Real Estate Company
 Callison, Anne W., Tide Water Transportation Commission, Norfolk, Virginia
 Cameron, Cliff, First Union Corporation and Charlotte Uptown Development Corporation, Virginia
 Campitelli, Giovanni, Ministry of Transportation and Communications, Ontario, Canada
 Carter, Maurice, Dallas Area Rapid Transit, Texas
 Carter, Ronald, Antelope Valley Bus Company, Inc.
 Cefaratti, Carla, Ohio Department of Transportation
 Chapman, Dick, Texas State Department of Highways and Public Transportation
 Clark, Michael, Metropolitan Structures
 Cloar, Jim A., Central Business District Association, Dallas, Texas
 Coleman, Jonathan C., The Rideshare Company
 Connolly, Walter J., Eagle Paratransit
 Conte, Christopher R., Wall Street Journal
 Cook, Steve H., Michigan Department of Transportation
 Cooper, Larry C., Texas Southern University
 Cord, Henry W., Southern California Rapid Transit District
 Cox, Mildred, Dallas Department of Transportation
 Cox, Wendell, Los Angeles County Transportation Commission
 Cuellar, Robert, Texas State Department of Highways and Public Transportation
 Cullinan, Thomas J., New York State Department of Transportation
 Currey, Fred G., Buslease, Incorporated
 Curry, David A., Crain & Association, Incorporated
 Dancer, Jerry D., Transportation Service Fluor Engineers, Incorporated
 Danna, Louis V., Commuter Express, Houston, Texas
 Davidson, John, International Taxicab Association
 Davis, Edward L., Atlanta University, Georgia
 Deaton, W. R., Charlotte Department of Transportation, North Carolina
 DeLaPena, Don, De La Pena Associates
 Dent, Sharon K., Phoenix Public Transit Administrator
 Deutsch, Susan M., Blyth Eastman Paine Webber, Inc.
 Dorosin, Edie, Santa Clara County Manufacturing Group, California
 Duncan, James B., Broward County, Florida
 Eager, William, TDA, Incorporated
 Ehrhardt, Paul A., Cigna Corporation
 Eisenmenger, Al J., City of San Antonio, Texas
 Emerson, Norman H., Atlanta Richfield Company
 Eury, Robert, Central Houston, Incorporated
 Evanhoe, Michael P., California Department of Transportation
 Evans, Tom, Southwest Coaches, Incorporated
 Everett, Carol, The Urban Institute
 Everett, Peter B., Pennsylvania State University
 Fandialan, Angel M., Michigan Department of Transportation
 Feldman, Jerry E., Checker Taxi Company
 Fitts, C. Austin, Dillon, Read and Company
 Fonts, E. Larry, Central Atlanta Progress, Incorporated
 Ford, Glen, The Flexible Corporation
 Ford, John J., Dave Systems, Incorporated
 Fox, Victoria, Peninsula Transportation District Commission, Hampton, Virginia
 Franklin, Cliff, Dallas Transit System
 Furniss, Robert E., UTNC (USA)
 Gaffney, Jerry G., Metcalf and Eddy
 Gaudette, John, Transit Consulting Group, Denver, Colorado
 Gerard, Robert, Morgan, Stanley and Company
 Gilbert, Gorman, Paratransit Services, Incorporated
 Glaze, Richard S., Florida Department of Transportation
 Gosnell, Jim R., South California Association of Governments
 Graves, Charles, Urban Mass Transportation Administration
 Gray, William R., Contra Costa County, California
 Greanias, George, City of Houston
 Griffith, Steve, The Trailways Corporation
 Hawthorn, Gray C., U.S. Environmental Protection Agency
 Heineman, Robert, The Woodlands Corporation
 Hellstrom, Carl E., Central Massachusetts Regional Planning Commission
 Henry, J. Murray, Citizens Advisory Committee, DART
 Holmes, Thomas L., HJT Industries
 Hough, Mary, Orange-Seminole-Osceola Transportation Authority, Florida

Howard, Jane Algin, S. G. Associates
Hueholt, Dick L., Bernard Johnson Incorporated
Humann, Walter, Hunt Oil Company and Dallas
Transportation Task Force

Johnson, Jerry, Dallas Transit System
Jones, Go-don B., Gordon B. Jones and Associates

Kaiser, Fred, Kerrville Bus Company, Incorporated
Kasten, David O., Post Buckley Schuh & Jernigan,
Incorporated
Keefer, Louis E., Keefer Associates
Kemp, Michael A., Charles River Associates
Kenow, Charles R., Minnesota State Planning Agency
Kershner, Mindy, Rides for Bay Area Commuters,
California
Kessenigh, Peter G., Public Financial Management,
Incorporated
Kiepper, Alan F., Metropolitan Transit Authority,
Houston, Texas
King, David D., North Carolina Department of
Transportation
Klika, Steven, Central Oklahoma Transportation
and Parking Authority
Knaus, William A., Colonial Taxi and Paratransit
Services, Incorporated
Kroohs, Kenneth C., City-County Planning Board,
Winston-Salem, North Carolina

Lagasse, Al, International Taxicab Association
Lave, Charles, University of California, Irvine
Leazer, Nancy, City of Madison, Wisconsin
Lede, Naomi W., Texas Southern University
Lewis, Michael W., Southern California Rapid
Transit District
Lighbody, James R., Santa Clara County Transit,
California
Linden, Amy, New York City Metropolitan
Transportation Authority
Lockwood, Stephen C., PRC Engineering
Loudon, William R., Cambridge Systematics, Inc.
Lynch, Ralph, Jr., Baskin and Sears

Mallery, Gilbert, Regional Planning Council of Clark
County, Washington
Maring, Gary E., Federal Highway Administration
Martz, Jon W., Van Pool Services, Incorporated
Matkin, Dan, Dallas Area Rapid Transit Board
Maxan, Robert J., Metcalf & Eddy, Incorporated
McCarthy, Ellen M., The Urban Partnership, Hartford,
Connecticut
McKnight, Claire E., University of Illinois at
Chicago
McPeak, Sunne Wright, County Supervisors Association
of California
Mednick, Marcia, Vitalize Van Nuys, California
Miller, B., Oak Lawn Commission, Texas
Miller, Gerald, The Urban Institute
Mister, Melvin A., Citibank
Moody, Jim, Congressman from Wisconsin
Morlok, Edward K., University of Pennsylvania
Musarra, Gerald C., Urban Mass Transportation
Administration

Nasher, Ray, Ray Nasher Company
Nettnin, Jerilyn, International Taxicab Association
Nutter, David, The Denver Partnership, Incorporated

O'Hare, Shanna, Metropolitan Transportation
Commission, Berkeley, California
Ojala, Robert E., Worcester Regional Transit
Authority, Massachusetts
Orkin, Susan, Montgomery County Paratransit,
Pennsylvania
Orski, C. Kenneth, Corporation of Urban Mobility

Palmer, L., Oak Lawn Forum, Dallas, Texas
Pant, Shiva K., Fairfax County Office of Transportation,
Virginia
Parker, Jeffrey A., Washington, D.C.
Parks, Robert B., VIA Metropolitan Transit,
San Antonio, Texas
Pattillo, D. Ladd, Blyth Eastman Paine Webber,
Incorporated
Payne, Marianne A., Southern California Rapid
Transit District
Perry, Susan, American Bus Association
Peskin, Robert, Peat, Marwick, Mitchell and Company
Pezzotta, Paul, Regional Planning Council, Baltimore
Pistler, Willard C., Jr., Parsons Brinckerhoff
Poole, Robert W., Jr., The Reason Foundation
Posthuma, Ron, Metro-Municipality of Metropolitan
Seattle
Prince, Robert W., Kerrville Bus Company
Prost, James L., Zuchelli, Hunter and Associates, Inc.
(AHA)
Pugh, Richard D., Kimley-Horn Research Institute

Quirk, Michael F., De Leuw, Cather Company

Raines, Franklin D., Lazard Freres and Company
Reed, Dana, Business, Transportation and Housing
Agency, Sacramento, California
Reid, Jim, City of Dallas
Reinshuttle, Robert J., The Council of State
Governments
Richardson, John H., Henningson, Durham and
Richardson, Incorporated
Rood, Rodney W., Atlantic Richfield Company
Rosenbloom, Sandra, University of Texas at Austin
Rosenstock, Joan B., TDA
Rouse, Mitchell, Wilmington Checker Cab
Russell, Rush, Texas House of Representatives

Sachs, Leon F., Metro-Dade County, Florida
Scatchard, J. B., Southern California Rapid Transit
District
Scherbarth, Jeff, City of Dallas
Schneiderman, Michael, Charlotte Uptown Development
Corporation
Schotz, John, Ehrlich Bober
Schreifler, Eric N., Transportation Systems Center,
U.S. Department of Transportation, Cambridge,
Massachusetts
Seelman, Gerald W., Daniel, Mann, Johnson and
Mendenhall
Selsam, Robert E., New York Metropolitan Transportation
Authority
Siegel, Steven M., Metro Service District, Portland,
Oregon
Simpson, Lee M., Dallas Area Rapid Transit Authority
Board
Skolnick, Marilyn, League of Women Voters of
Pennsylvania
Smith, D. J., D. J. Smith Associates, Incorporated
Smith, George H., Gannett Fleming Engineers and
Planners
Smith, Wayne J., United Bus Owners of America
Smythe, W. H., IV, Yellow Cab, Memphis
Sommerfeld, Warren, City of Madison, Wisconsin
Somerville, Richard J., Commuter Express, Houston
Spillman, John T., Spillman Boatman, Incorporated
Sproles, Max R., De Leuw, Cather and Company
Stanley, Harriett L., Transportation Finance Group
Smith Barney, Harris Upham and Company
Stanley, Ralph, Urban Mass Transportation Administration
Stein, Mark, Dallas Central Business District
Association
Steinman, Christina K., National Association of
Regional Councils
Stone, Richard W., Jr., John W. Galbreath and Company
Stowers, Joseph, Systems Design Concepts, Incorporated

Trosch, Minetta, Mayor Pro Temp, Charlotte,
North Carolina

Urton, John C., John W. Galbreath and Company

Valk, Peter J., Commuter Transportation Services,
Incorporated

Vaitman, Donald F., ATE Management and Service
Comapny, Incorporated

VanDerAA, Terry L., Vancom, Incorporated

Verchinski, Paul L., U. S. Department of
Transportation

Voit, Robert D., The Voit Companies

Walden, Donald H., Texas State Department of Highways
and Transportation

Walker, Hollis A., Jr., Kimley-Horn and Associates,
Incorporated

Wallen, Martin, Wallen Associates

Walther, Erskine S., North Carolina A & T State
University

Weiner, Edward, U. S. Department of Transportation

White, David W., Bechtel Incorporated

Widby, Tad D., Commuter Transportation Services,
Los Angeles, California

Wiesehuegel, Jim, Dallas Transit System

Williams, Nancy C., City of Charlotte, North Carolina

Williams, William R., Raleigh Transportation Service
North Carolina

Wilt, Kathryn E., Greater Cleveland Regional
Transit Authority

Windsor, Duane, Rice University

Yu, Jimmy, Urban Mass Transportation Administration

Yudin, David, Washington, D.D.

Yuratovac, Donald, Greater Cleveland Regional
Transit Authority

Zissler, A. J., Californians for Better
Transportation, Incorporated

Zukoski, Heidi, Rice Center

TRANSPORTATION RESEARCH BOARD
NATIONAL RESEARCH COUNCIL
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

ADDRESS CORRECTION REQUESTED