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A VIEW FROM THE ROAD

by
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Three years ago in Phoenix, the Committee held a conference on Suburban Congestion and Major Activity Centers. It's summarized in TRB Circular 304, in which we targeted several important research needs. One was better concepts of cost and benefit sharing. A second was improved transportation facility design standards for major activity centers and a third was increased knowledge about travel behavior. During the past three years there has been substantial activity in several of these areas and I will review it briefly.

COST AND BENEFIT SHARING

The way in which many jurisdictions have embraced impact fees and privatizing is a simplistic solution to the question of cost and benefit sharing. There is the implicit contention that developers either owe more to cover their fair share of the cost of transportation infrastructure improvements or the fees and/or agreements are an investment on their part in order to get more development rights. Transportation Management Associations are essentially privatization ideas which parallel impact fees on the demand side. During the last three years, we have gained a new sense of the limitations of many of the strategies that people are using to manage demand.

KNOWLEDGE ABOUT TRAVEL BEHAVIOR

In Montgomery County, MD, the Maryland National Capital Park and Planning Commission, which is responsible for land use planning in the County, has embarked on research on travel behavior. They are setting up a data base line. Although the data were not gathered originally for that purpose, what it

accomplished was essentially that. For those who do not know Montgomery County, it is a fast growing county in the Washington D.C. suburbs. It has an adequate public facilities ordinance. It has a highway impact fee ordinance. It has transferable development rights which allow you to place development in one area on the basis of limiting development capacity which ought to occur somewhere else. It has a sophisticated, computerized modeling system to try to estimate traffic impacts of development. Over the last year they have been collecting data to drive the transportation modeling system. Trip generation rates, delay and travel time will be used to calibrate models based on performance rather than just on link volumes. The study collected trip generation rate data for 78 office buildings.

The results were surprising. For example, the peak hour trip rates for offices in Montgomery County are 35% to 45% lower than the average ITE reported trip generation rates. Not only that, 90% of the buildings have an average rate below the average rate reported by ITE. Why the difference? First we looked at employment density. Most of the buildings in Montgomery County have 2-1/2 to three workers per thousand square feet. The normal assumption is 4 employees/1000 square feet in most cases, maybe 5 in some areas. But one of the things we are learning is that travel behavior in major activity centers is not consistent with past CBD patterns and we have to investigate them more thoroughly. Other characteristics of the suburban transportation environment which indicate strong auto dependencies include:

PARKING

Because parking was probably designed on the basis of anticipated higher employment densities, we found that many buildings have more than one parking space per employee. The informal target among developers is 4 parking spaces per thousand square feet, which they feel produces a good rentable building.

AUTO OCCUPANCY RATES

One way to estimate the efficiency of Transportation Demand Management programs is by observing changes in auto occupancy rates. In our case, the results have been discouraging. (These data were collected over the past year in the midst of the TMA formation in North Bethesda). The observed auto occupancy rates range between 1.1 and 1.14. There are only a few buildings that run as high as 1.25, which means that we have very little carpooling impact, although there are carpool programs.

PEAK SPREADING AND FLEX-TIME

Most Montgomery County employers, who do not support carpool programs, do support flexible hours. The results are obvious. During the adjacent street peak hour, observed trip rates are 52% of the peak 2 hours, which means the spread is almost flat. For buildings with more than 200,000 square feet, only 47% of the employees leave during the peak hour of the adjacent street. That means they are shifting their arrival and departure times to avoid the peak hour

trips around in the peak period. For the peak period, we are talking about 42% of the 2-1/2 hour traffic in the peak hour, where 40% would be flat. The spreading appears to be a function of roadway percentage of the peak period than in the evening, as high as 57% of the peak two hours. That is when congestion is lower.

CHANGES IN TRAVEL PATTERNS

We also have found some evidence of longer trips or of increased through trips in the County. Although we have lower trip generation rates that we had anticipated before the survey, we have the same or more vehicle miles of travel. That means either the trips are longer or our highways are handling more cars traveling through the county. The basis for our modeling process in the future will depend on these kinds of data, and I would recommend to you a forthcoming report on trip generation rates, which will be available form the Maryland-National Capital Park and Planning Commission, Silver Spring, MD.

IMPROVED DESIGN STANDARDS

We have not learned much about improved traffic design standards in the last three years, or at least we have not seen much change. Most suburban centers continue to be unfriendly to pedestrians, bikers and transit users. Building setbacks and landscaping plans stymie all but the most intrepid transit commuter. Improvements in this area will require a major change in the vision of corporate America and its architects.

On a larger scale, zoning in most areas prohibits the densities and clustering necessary to support all but the simplest ride-sharing program. Even these require measures which most employees find Draconian.

PLANS FOR THE FUTURE

I think there is deeper recognition of a need for organizations and new institutions to control the major activity centers. We still need a vision of what we want, and we need new creative solutions.

The Atlantic Monthly reported that the urban vision for most Americans is a 3-bedroom house, with lots of grass, close to shopping, schools, work and recreation. The model is a Victorian village. That is going to be tough to find. Very few people said they wanted to live in an apartment or townhouse. Se we are still dealing with a major schizophrenia in our society, that we want a type of development which is very hard to support.