

## WHERE ARE WE GOING?

Remarks by Francis C. Turner, Director of Public Roads, Federal Highway Administration, U. S. Department of Transportation, at the 59th Annual Meeting of the Mississippi Valley Conference of State Highway Departments, Sherman House, Chicago - March 14, 1968

You chose an appropriate theme for your 59th Annual Meeting and I have borrowed it as a title for my remarks this morning. The question of where we are going is a good one. There have been some significant developments since your last meeting that are bound to influence the direction of the Federal-aid highway program as well as the future of the Federal-State partnership.

Of these developments I want to refer first to the new Interstate System cost estimate, prepared with your help and submitted to Congress in January. This, as you know, totals \$56.5 billion -- up \$9.7 billion from the 1965 estimate. The reasons for this increase also are known to you but in this connection I want to make a couple of comments for the record.

The new cost figure reflects the current considerably expanded concepts of the System and what it should do to enhance general public goals in addition to just being a transportation facility. Most of the increase is due to significant improvements in the System itself, including upgraded safety standards and the more elaborate designs necessary to conform to the demands for compatibility with environmental features, both rural and urban.

Certainly none of us would quarrel with enhanced safety standards, nor with increased attention to human and social values provided that they are consistent with the basic purpose of all transportation. But these features

do cost money and this should be remembered by those of our critics who view with alarm the rising cost of the Interstate System.

The second significant development I want to mention is the 1968 National Highway Needs Report, the body of which was submitted to Congress last month, with recommendations to follow on or about April 1. But without considering recommendations, the report arrived at a preliminary figure for the annual cost of road and street needs for the years 1973-85. This comes to an average annual capital cost of \$17.4 billion, more than double the \$8.5 billion per year estimated annual capital accomplishments during the remainder of the current period, 1965-72.

As a group you are already generally familiar with both the new Interstate System cost estimate and the Highway Needs Report so I won't dwell on the details. The point I want to make by way of preface, though, is that the financial outlays proposed -- or estimated as needed -- in these two studies are tremendous, and realistic. And if past experience is any criterion, the estimates are likely to provide new ammunition for critics of the freeway program, especially in the urban areas.

The past year has been a particularly difficult one for urban freeway development and there has been an apparent swelling of the ranks of those who would have all urban dwellers walk or take a non-existent railway car. It has become increasingly fashionable to accuse highway engineers and officials of diabolical schemes to pave over entire downtown areas, while polluting the air with motor vehicle fumes and deliberately creating monumental traffic jams. Most of the critics suggest instant rapid rail transit as the easy and obvious answer to all of these problems. But I have observed

that even in the recent rail transit projects, the same problems are being experienced -- rising costs and finance difficulties, controversies about esthetics and compatibility with the urban area, dislocation of people, elevated versus depressed grade lines, routings -- et cetera, et cetera.

Anyone who has studied urban transportation objectively knows that rail transit, with its fixed routes and schedules, is no general substitute for freeways. But, to demonstrate this does not diminish the responsibility of highway officials to recognize that there is a growing urban transportation problem and then get in the forefront of the fight to meet it with practical solutions. These practical solutions must be assumed by us as our responsibility -- and this is where I think we are going.

In outlining a few thoughts on how to do this, I want first to make my position clear. I'm in favor of all forms of transport because there is such a huge demand for this service that any and all modes must be utilized in that mix which will provide the desired level of service -- and this mix will require an overwhelmingly large proportion of highways for many years, as well as many dollars. The broad objectives of the Department of Transportation, of which the Bureau of Public Roads' share is the largest part, are to unify national transport policy and to assure this desired transportation system for a population that will reach 300 million by the year 2000.

Because a majority of our people already live in urban areas, and gravitation to the cities continues, it is obviously these dense concentrations of population that demand a major share of that transportation, and which at the same time pose the most difficult problems and decisions. The

movement of people and goods in these urban areas is largely dependent on privately-owned vehicles and mass transit, rail or rubber-tired, or both. The principal challenge of today and of the years ahead, for which we are now planning, is to determine which combination of modes will best serve the needs of the urban dwellers in each instance. The combination will not necessarily be the same in Chicago that it is found to be in St. Louis or Milwaukee or any of dozens of other cities of varying size.

Such determinations involve research, study, analysis -- and delay. This delay, necessary as it may be in some instances, has encouraged an organized campaign against the automobile and the freeway -- even those which have been planned for a decade or more under the Interstate and other Federal-aid highway programs. And too often the solution suggested by opponents is to substitute a form of transportation that won't work satisfactorily in a specific case for one that will. There is hardly ever an either/or situation in any urban area. Rail transit serves an urgent need in some instances but is totally unadaptable to others and this kind of conclusion is arrived at by our experienced highway planners from objective study of the whole transportation spectrum - and not from some pretty brochures which resemble a pressurized sales promotion campaign.

The argument is an appealing one if you just close your eyes and dream, but it won't stand up when you awaken to life's hard realities. First of all, it completely ignores the need to move products and essential public services, in addition to people. Subways and other high speed rail lines are ill adapted to the distribution of farm produce and manufactured goods - or police and fire protection - or garbage pickups. It follows that even where rail

rapid transit lines are already in use or projected as being feasible, a system of freeways together with other urban arterials must still be provided in large amounts to assure the efficient distribution of goods and services.

More basic is the fact that rail transit, even when only the movement of people is considered, is feasible in very few cities and only for very limited areas within these.

Travel to the downtown area, essential though it is, represents only a minor part of the total trips that must be accommodated every day - even in New York with its large rail network. The greater mass of urban area travel is performed wholly outside the station-to-downtown commuting route. It is made up (as much as 95 percent in the largest cities) of the countless trips to school, to visit friends and relatives, to go to work or to move about in earning a living, to go to church, the neighborhood theatre, restaurant, drive-in, bowling alley, or shopping center -- all of these being trips that neither rail nor bus transit can acceptably serve for the majority of our people and which are almost wholly made by private vehicle or taxi.

A statement often made and recently repeated in a national magazine is that "one track of (rail) transit can carry as many people as 20 lanes of highway." This is carefully worded to be misleading. Assuming that a single rail line would have a capacity of 40,000 persons per hour, 20 lanes of highway would need have only 2,000 persons per hour in each lane to equal this volume. Actually, a single traffic lane devoted to buses exclusively can carry 50,000 persons per hour. One mixed traffic lane in the Lincoln Tunnel carries now, and has been carrying for a number of years, well over 20,000 passengers an hour, while no rail transit line anywhere is actually

carrying the 40,000 persons per hour for a full hour over any distances comparable to normal highway trip lengths.

Rail transit therefore cannot be economically justified nor successfully operated under its own financing except in densely populated service areas. Five cities in the United States now have rail rapid transit systems in operation, a sixth has one under construction, and five others are seriously considering such systems for the future. But even in these areas, the proposed rail system cannot do away with the needed additional streets and highways, but can serve only as a complementary and supplementing facility to carry a portion of the total peak hour load.

For example, in four of the five urban areas considering rail rapid transit systems, it should be remembered that such systems would serve only about five percent of the urban area's total daily person trips and only about ten percent of the area's peak hour trips. The five percent which would be carried by rail transit in these estimates is just about the amount of the annual traffic growth now being experienced in these same cities. Even where rail transit is already available, another form of transportation must also be provided to collect the riders from their homes in the morning and then to redistribute many of them, almost entirely by highways and streets, to their ultimate downtown destinations; back to the rail stations at night, and then to their places of residence.

In simplest terms, the choice of a transportation system must take into large account the known habits and travel wishes of its potential customers. Most of them won't walk more than a few blocks to ride any form of transportation and they won't wait more than a few minutes for that ride.

Therefore the width of the band that can be serviced by a fixed rail track is only about 8-10 blocks, unless and until the service has been supplemented by feeder buses or individual passenger cars. This raises the quite logical question in many instances: Why not just go all the way to or near the final destination by bus or passenger car instead of getting off and changing trains?

Here in Chicago the Eisenhower Expressway, which has a rail line in the median, carries over 150,000 vehicles per day and several times as many customers as does the rail line. So does the Long Island Expressway, serving an area with many electric railway facilities. Both these express highways also move large freight tonnages every day and provide additional public services which cannot be provided by the rail lines.

Since most of my remarks up to now have been on the negative side, in describing what won't generally work, what then is the answer to the mounting traffic problem in urban areas? New freeways are needed, but these alone are not the total answer to all traffic problems in every city, nor is the answer to be found in the mere addition of more lanes to existing facilities. It seems obvious that we haven't yet exploited to the fullest the potentialities of the streets and highways that we now have and those which we are developing. We have to think more about measuring highway capacity in persons moved rather than vehicles carried and this, of course, means the active encouragement of mass bus transit over our road and street networks which can thus be utilized as "bus quickways."

Theoretical economic investment approaches to public transportation programs therefore are not an acceptable controlling concept to the customers - nor is efficiency by itself.

There will always be an irreducible minimum of passenger car traffic, made up of trips that cannot be accommodated by any other means of transportation. But I think we can with some imagination and with the full cooperation of the bus transit industry, lure the average urban dweller out of so much dependence on his car as a daily commuting vehicle. We have some fairly good evidence of this.

An interesting idea of possible significance for the future is now being investigated under a Department of Transportation research contract. The purpose is to find out whether free bus rides would substantially reduce the rush hour crush in cities across the country. There are many practical difficulties, of course, but without passing on its merit at this time, I believe the proposal embodies the kind of imaginative thinking needed to solve the traffic congestion problem.

Every 50 persons lured to mass transit by whatever means represents a reduction of 30 automobiles in the traffic stream, which is the equivalent of a 2 percent reduction in volume. This performs the desirable multi-function of helping to ease downtown traffic and parking congestion, to reduce air pollution, and to stretch the people-carrying capacity of already existing streets and highways. In fact the capacity in many communities is entirely adequate right now and will be for a number of years ahead if any considerable number of persons bound to and from the downtown areas can be induced to use bus transit. In other cases, very little expansion of existing capacity would be required and frequently this can be accomplished at minimum cost.

The TOPICS program, familiar to all of you, is an important step in this effort for fuller utilization of our highway plant. Projects in this



program can produce in some instances an increase in the capacity of a city street network of from 10 to 15 percent, with a decrease in accident rates and a further incentive and assist to the transit industry to improve bus service. While highway officials and engineers have very little control over the quality of the transit equipment, we should do our part of the job by providing good routes to serve as "bus quickways."

We believe in the Bureau of Public Roads that there is a great potential in the use of reserved lanes or reserved streets for buses and, as you know, we are allowing Federal-aid funds to be used for this purpose under certain conditions. Where bus service would not justify such exclusive use of special lanes during rush hours, buses could be given priority, with a limited but additional number of private cars also allowed. This program is so new that it still amounts mainly to a concept or blueprint for future action. At present there are no exclusive bus lanes in operation on freeways in the United States. However, at least 14 cities have established exclusive bus lanes on urban streets, with indications that both buses and other vehicles can save 10 to 30 percent in travel time as a result. In Seattle, two ramps from Interstate 5, leading into downtown will be used exclusively for buses for a two-year period beginning this spring.

Similar planning is in progress for other cities across the country, all in the direction of expanding the people-carrying capacity of highways in the urban areas. I urge you to keep in the leadership of this developing trend for here is another opportunity for the highway engineer to demonstrate again that he is interested in and doing something practical about the problem of providing improved transportation facilities to his millions of customers. Since it is obvious that future highway needs in urban areas

will be greater than we can finance, regardless of programs to improve mass transit, we must make certain that the highway plant we already have is used to the fullest extent possible.

I believe the transportation problems of the cities can be largely met through a judicious mix of new facilities and the fuller use of those now existing. I firmly believe also that these problems can be best handled under the traditional proven State highway department-Federal Bureau of Public Roads partnership, despite strong pressures to dissolve this partnership or weaken it to the point of being ineffective. We must continue to demonstrate by working example not only the effectiveness and efficiency of the partnership but also its adaptability to the growing and changing needs of our customers.

As a group of public officials responsible for the largest and most generally utilized public service, we have been subjected in recent months and years to an abnormal amount of amateur Monday-morning-quarterbacking and second-guessing by hind-sight prophets. These commentators all seem able to solve all our problems so simply and easily -- by mere talk and little else -- despite the complexity of these problems to those of us who are responsibly charged with their solution. The free and unsolicited advice which we are receiving in this manner sometimes overwhelms us to the point of almost making it impossible to do any constructive work on our assigned tasks.

But difficult as it is to maintain progress under such conditions, these harassments are perhaps a part of public service life in a free-speaking democracy and it therefore behooves us to get on with the job of continuing to build the world's finest highway system, while being ever alert to find new ways to improve that job. Regardless of what critics say - and regardless of who they are, or what positions they temporarily occupy - or presume to occupy - I believe firmly that there is much positive good for our public being produced by our efforts - and that it far outweighs the negative. Our true batting average is high - let's keep it that way - and strive to make a good job even better.