



DEPARTMENT OF  
TRANSPORTATION

NEWS

## FEDERAL HIGHWAY ADMINISTRATION

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ADDRESS BY FEDERAL HIGHWAY ADMINISTRATOR  
F. C. TURNER BEFORE THE DENVER (COLORADO)  
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### "WHAT BALANCED TRANSPORTATION IS ALL ABOUT"

One of the phrases you hear repeated most often both in and outside of transportation circles today is the need for "balanced transportation" systems.

This is heard frequently in Washington and many of our other large cities. I am sure you have also heard it here in Denver.

Unfortunately, as is the case with most catch-phrases, it is being used more and more loosely -- and more and more inaccurately. To some, "balanced transportation" simply means to build mass transit systems -- usually rail -- and to halt all highway construction while mass transit expenditures catch up. Again, to some others it seems to mean that highway funds should be taken away from highways to build these rail mass transit systems.

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At the outset, let me assure you that I am strongly in favor of balanced transportation systems. But also at the outset, let us get into clear focus what balanced transportation is all about -- and what it is not about.

What balanced transportation does not mean is that you should spend exactly the same number of dollars on each of the several transportation modes. In fact, to do so would insure the very imbalance in our transportation system which critics of the highway program deplore. And would either cause duplicative systems which we cannot afford, or it would only partially meet the needs of each one of the complementing modes.

What balanced transportation does mean is that each mode is utilized in those amounts that will achieve an over-all system in which all elements complement -- rather than duplicate or compete, with one another. A balanced transportation system must be designed to meet the total transportation needs of urban areas, and should do so in a way that will provide the most efficient, effective, satisfactory and economic service attainable.

A balanced transportation system must provide flexibility of travel from any place in an urban area to any other place. It must be designed not only for the morning and evening rush hours, but for 24-hour usage during every 365 days -- and nights -- of every year.

It must be designed not only for those who commute to jobs in the central business district but also and at the same time for those who commute in the reverse direction, and in even larger measure, for all the residents of the metropolitan area, and for all of the nonwork trips -- because such trips far outnumber the work trips.

It must provide, too, for the movement of all those goods and service vehicles making trips which are vital to all residents of an urban area, whether they be commuters, stay-at-homes, shoppers, or even totally dependent shut-ins.

In brief, then, a balanced transportation system must give full weight to the individual preferences and needs of all the residents of an urban area -- while at the same time being responsive to the over-all goals, objectives, needs, and fiscal capability of the community.

Prudent funding decisions regarding such a system must be guided by what combination or mixture of modes will provide the most efficient, effective, satisfactory and economic blend of service. If such decisions are made on any other basis -- such as by an arbitrary and equal division of money between two or more modes -- the inevitable result will be: an uneconomic and unbalanced system and a misuse of the public investment.

Regarding rail rapid transit, we welcome it in that handful of large cities where a need for it is obvious and where it is financially feasible to provide it. We welcome any and all help in solving our total

transportation problems, and as I have frequently stated, more transportation capacity in all modes is needed -- not less in any. In a truly balanced transportation system, rail rapid transit can make a very definite contribution to the over-all program. It can play an important role in a few urban areas' transportation schemes -- but only a few.

However, to assume -- as some erroneously do -- that construction of a rail rapid transit system will be the immediate and easy panacea to all of every city's transportation needs would be a costly disaster. For in most cases, the cost of a ride by a rail transit system will be considerably higher than a ride by bus or even by automobile, or taxi.

Think, for example, of New York City, which has the most extensive subway system on the North American continent. Even with such a large and costly facility, New York cannot exist without its streets and freeways. Even with those great masses of people which the subway daily moves, the streets still are crowded with cars, trucks and buses -- and the city has great need for better streets and more freeways. The New York subway does its part -- the part it was intended to do -- but it cannot by any stretch of the imagination come anywhere near to handling New York's total transportation needs of either people or goods and services. While 9 out of 10 of the center city workers reach their jobs by transit, at sometime during the day

a majority of them will use a taxi or bus -- and all of them are serviced by trucks operating on the street system and only on the street system.

The same principles hold true of each of our other cities.

I think that this would be a good time to note the popular misconception regarding mass transit -- that it and "rail" are synonymous.

But of course they are not.

Good mass transit can be -- and is being -- provided by buses on modern streets and freeways -- and I believe that this is the real wave of the seventies insofar as mass transit is concerned. It is the only readily available mode that we can realistically expect to obtain within the next 20 years or more.

The reason is that, at most, there are only about 10 of the largest cities in this country where rail rapid transit systems could practically be implemented. Simple economics dictate that conclusion -- along with the fact that rail transit is adaptable only when a city has certain definite characteristics, such as densely crowded population corridors. Denver does not have these characteristics and neither do very many other cities. By dense -- I mean 60-70,000 persons per square mile -- which is ten times the density of Denver and most other U. S. cities.

So for practical purposes, when we talk about rapid transit, we really are talking about bus transit or at least we should be. And let there be no mistake about it -- buses can do, and are doing the job.

Even in New York City more people are moved each day by bus than by the rail transit facilities.

We have several on-going demonstration programs around the country, and the one that has probably received the most national publicity is the exclusive bus lane that we have provided on Shirley Highway (I-95) in Washington's northern Virginia suburban area. This 11 mile facility speeds commuter buses into the heart of downtown Washington, providing bus riders a time savings of up to 30 minutes over other commuters in passenger cars.

While still not fully implemented, this experimental program has already been a rousing success. Since September of 1969, ridership on the buses has increased by 79 percent, and it is expected to show even more substantial gains after a fleet of new buses, purchased under a grant provided by our sister DOT agency, the Urban Mass Transportation Administration, begins going into service next month.

Similar bus mass transit can be provided relatively quickly and inexpensively in any city in the Nation. If there is interest in such a system in Denver, and certainly there should be -- we will be happy to discuss details with your State and city officials. Interestingly and importantly, all of the highway and roadbed facilities for a bus mass transit system can be provided from highway monies out of the Highway Trust Fund.

Thus, rapid mass transit can be provided by the highway and street program -- and in most of our cities, that is the only way by which it can be provided in your and my lifetime.

Some brand-new tools are available to us this year to assist in solving the urban transportation needs -- because the 1970 Federal Aid Highway Act has supplied us with the tools with which to implement such bus rapid transit facilities. For example, if studies show that construction of an exclusive busway would move more people more expeditiously and practically than construction of a proposed highway project, then, the funds that would have been used for the highway project can be used to build the busway, instead.

This is another example, I think, of how highway officials are concerned with planning, and should indicate clearly that it is not their desire to just blindly force the construction of highways, as some critics might have you believe.

As a matter of fact, the highway program has a clear responsibility for helping to improve our mass transit facilities, since as I have pointed out, most of the transit in this country is going to be by bus -- and, of course, these buses must travel on the street and highway network. So since most of our mass transit is going to be on our highways, mass transit very properly is provided for in the highway program and reciprocally, the transit interest is synonomous with highway interest. This program under the Highway Act,

when coupled with 1970 legislation for our sister agency in DOT, the UMTA, to acquire modern buses, can jointly provide Denver and other cities with a balanced, flexible, and readily available transportation system.

Of course, freeways by their very nature provide a capability for rapid transportation. Here in Denver, for example, the average speed on your freeways is shown to be between 46 and 60 miles per hour -- as compared with 15 to 40 miles an hour on major arterial streets and 15 to 30 miles an hour on minor streets. I think that most everyone will agree that, except during the worst of the rush-hour congestion, freeways are even now getting you to your many destinations quite quickly.

Almost always overlooked by transportation critics is the fact that the movement of people in an urban area involves much more than the rush-hour movement of commuters to and from the central business district only. The fact is that there are many people traveling in metropolitan areas -- at all hours of every day and night -- who rarely, if ever, go downtown. It may surprise you but -- 85 to 95 percent of all metropolitan area trips do not go downtown. These are the trips made by people who travel at right angles to the radial transportation corridors which lead into the center city, plus those who travel around entirely within the suburban areas. They do this,



of course, by street and highway -- because it is the preferred way, and reality shows us that it will continue to be the only way for a long time to come. These residents of the metropolitan area must be served no less than the center-city commuters, if you are to have a balanced transportation plan. And they can be served, in a very practical way, only by highway.

By no means is a city's entire work force centered in the downtown area of a metropolitan area. Here in Denver, for example, a study has indicated that only 22 percent of the area working force is employed in the central business district, while 78 percent works in the fringe and suburban areas. In most of our cities, the downtowns are growing at a slower rate than the area as a whole -- in a few cases -- the center city is actually declining.

I think it is obvious that it would be manifestly impossible to provide either rail -- or bus transit facilities to handle all or even a majority of such widely dispersed movements, simply because of the almost infinite number of combinations of trip origin, destination, route, and timing.

Up to this point, I have been discussing the question of moving people in metropolitan areas -- admittedly a very important problem.

But there is far more to a balanced transportation program than that -- in fact, a lot more.

For example, consider truck traffic, which is essential to the economic life of a city. It has been said -- and correctly so -- that in the movement of goods, no matter what mode of intercity transport is used, trucks almost exclusively originate and finally terminate all cargo. It is by means of these trucks that the stores in the city -- and the surrounding suburbs as well -- receive all that infinite variety of goods so essential to the life of an urban area: the food, the clothing, the housing materials, and appliances, and medicines, and newspapers, etc. ad infinitum. None of these commodities is-or could practically be shipped-by any existing or proposed mass transit. Only highways and streets can do this essential job.

Think, too, if you will, of the innumerable services so vital to the life of a community which are utterly dependent on highways -- and which in no conceivable way could be performed by any kind of mass transit.

These are the everyday things which I fear we all pretty much take for granted.

Consider, for instance, the ambulance, which in an emergency can mean the difference between life and death. It can travel only by highway. Have you ever seen an ambulance for general use that was mounted on rail flanged wheels?

Think of the fire truck, which can save a home or a place of business -- if modern streets and freeways are available to help speed

its trip and get it there in time. No such vehicles that you depend on in Denver are intended for anything except street travel.

And then there is the police car, which quickly provides you with protection or assistance when you need it.

The garbage truck removes your refuse by using the street system.

The repair truck brings the plumber, the electrician, the carpenter, the TV repairman, to your home or business, via the street and highway network.

When you need groceries you get in your car, drive to the supermarket and load up a week or two weeks' supply using city streets.

If you go to the drug store, the movies, a concert, a sporting event, your church, or take the kids to school -- the chances are that you go by car and use the highway network.

In fact, can you imagine the ordinary, everyday life of our cities without highways? Complete chaos -- even death would be the inevitable result in a very short period of time.

I think the relative importance of good highways in an urban area is quite obvious. They simply are irreplaceable -- because there is nothing with which to replace them.

I know, of course, that some people, who for one reason or another seem to hate highways and automobiles, wish they would just

go away, to be replaced by some hazy form of Utopia where there would -- in their unreal dream world -- be no traffic problems.

But wishing won't make it so. The traffic problem will not disappear unless the people also disappear. So our task is to work out the best way to live with autos and other motor vehicles and quit wasting our time wishing they would go away. Let's get on with the job of improving the environmental qualities and safety characteristics of our automotive vehicles and devise the best ways to make them meet our many urgent transportation needs.

It is time that all of the facts are faced squarely.

I wonder how many of those who criticize highways actually practice what they preach and do not own cars -- or would voluntarily get rid of them? I think the number would be small, indeed. Let's get sensible and realistic in all this discussion about transportation balance and planning and how we are going to service our needs.

Another fact is that for as far into the future as we can foresee, highways are going to remain essential to the mobility and economic life of urban communities. No city can remain viable without them. Our objective in FHWA is to find the most effective ways to use them and complement their usage with additional amounts of mass transit bussing capability -- bussing which will also use our existing street systems and their proposed improvements.

Of course, not just the cities are dependent on highways. The fact is, 95 percent of all travel in this country is by highway.

It is a curious irony that highways are such a vital part of our national life that they -- and the contributions they make -- have come to be so taken for granted by the public.

Here in the Denver area you have some 91 miles of freeways in operation. I imagine that while you use them extensively, you don't really give it much thought. But what if your highways were to disappear tomorrow -- could something else pick up the slack and fill the void? What would happen to your pattern of life -- or even to life itself?

In the Federal Highway Administration we have a new computerized analysis called "TRANS" -- which is an acronym for Transportation Resource Allocation and Needs Study. And with this complex new analytical system we have developed some interesting projections.

In a city the size of Denver, TRANS tells us that the population is likely to increase by as much as 50 percent by 1990 -- less than 20 years from now. During the same period, the daily vehicle miles traveled in the metropolitan area will also increase by 100 percent -- but transit trips will account for only five percent of the total movement.

Think about that for a moment -- and I believe it becomes obvious why we had better keep on with the job of providing the highway and street facilities that are going to be needed in less than two decades

from now. Because if we don't plan and begin now, our cities are going to face staggering transportation problems that cannot then be solved.

Both freeways and a good arterial street system are essential to a balanced transportation system. Since each mode and element of the system is designed to complement the other elements, and all the parts are designed to function smoothly together as a whole, if you take away any of the parts you are going to have problems, because the system is not going to function efficiently. That means that an adequate street and highway network is essential to any balanced system, whether it incorporates bus transit or rail transit as one of its people-moving elements. Incidentally, the street and highway network would still be required -- even if we did away with all motor vehicles -- and went back to horses and wagons -- or went ahead to exotic personal jet back packs or something else out of the Sunday magazine pages.

Let us get this whole question of balanced transportation clearly in focus. While we are providing needed mass transit facilities in cities -- both rail and bus -- let us not lose sight of what these facilities can and -- very importantly -- what they cannot do; what they are intended to do and what they are not intended to do; what they are designed for and what they are not designed for.

Above all, let us not be lulled into believing that any amount of mass transit facilities will completely eliminate the need for a lot of new and improved highways, or that some presently unavailable scheme

can interchangeably provide the services and movement of goods that realistically only highways and streets and motor vehicles as we know them today can do.

And by all means let us not make the mistake of taking our vitally needed funds away from highways to help finance some other transportation idea unless -- unless -- capable study shows that this will provide more total transportation and increased service at lesser total cost. Such fiscal legerdemain -- like all magical tricks -- would merely be an optical illusion -- without substance or reality.

More funds are needed to accomplish our mass transportation goals -- and highway people will readily agree that they are -- so by all means let us try to find these funds. But not at the expense of the highway program with its equally compelling or perhaps more compelling needs. We are already contributing very substantial shares of such transit funding needs and I believe that any needed additional funding appropriately should come from other sources.

To do otherwise would mean that our total transportation program would suffer badly -- and the American people as a whole would be the losers.

So let us make certain that the balanced transportation that we need and are striving for is kept in balance, by providing for all of the parts which are needed to make up the whole machine. Let us look ahead to the time when our highway system and mass trans-

portation systems fully complement one another in all our major cities -- and when each plays the role for which it is designed and for which it is most capable. For Denver, I believe this means a continued street and highway improvement program as now being planned plus a substantially augmented bus mass transit system operating on that highway and street network, plus some measure of traffic, parking, and working hours controls. Such a combination, now attainable under present funding and statutory authorizations can solve Denver's urban transportation needs for the rest of the century.

This is a balanced transportation program -- I commend it to you.

You know what happens when something is not in balance.

It falls.

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