

New Dimensions in Highway Transportation

by F. C. Turner
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Condensed from a talk by Mr. Turner at the Virginia Highway Conference in Lexington on October 29.

I am delighted to be here with you to tell you that we in Washington are aware of the outstanding job you are doing to provide the roads this state must have if its mobility is not to be impaired.

We also are aware and appreciative of the pioneering you are doing with bus rapid transit in urban areas, which we see as an effective way to move more people in fewer cars.

Nor are we unaware of the innovative work Virginia has done in other fields, such as urban planning, development of a state arterial network, and concern for the environment through which highways pass. The leadership Doug Fugate has demonstrated since he became Highway Commissioner in 1964 is recognized not only by the Federal Highway Administration, but by the nation's highway builders. They made this clear when they elected him president of the American Association of State Highway Officials in 1969.

It is an undeniable fact that the Old Dominion is adding some new dimensions to the highway transportation program.

A large amount of money has been spent on the Virginia highway program, but it has been a wise investment in lives and money saved; in the making of recreational, educational, cultural, and economic opportunities more accessible to more people; in more efficient highway transportation for the fast movement of people and goods; in the opening of new areas for residential and commercial development;

and generally in providing a higher standard of living for Virginians.

When I said a large amount of money, I was not kidding. For the federal aid program alone, almost \$2 billion has been invested since 1956.

A huge investment? Yes. But this is a program where the taxpayer is getting his money back with interest. The financial return, however, is but one of the payoffs. Of even greater importance is the saving of lives because of highway improvements.

Because the interstate system is designed and built for safety, we estimate that by its expected completion date in 1978 it will be responsible for saving 62,896 lives.

As a matter of fact, we estimate that between 1956 and 1969, 16,021 persons who would have died on older, conventional roads lived because of interstate routes. After the entire 42,500-mile network is opened to traffic, we expect it to save almost 8,000 lives a year.

Doesn't the reduction in the nationwide highway slaughter make the investment in the interstate system a judicious one?

In addition to saving lives, though, there are economic benefits which the interstate system is returning to users. The total cost of the interstate system is now estimated at around \$70 billion. By the time the system is completed, total user benefits from the program are expected to be \$107 billion, even if no values are assumed for automobile driver and passenger time savings. This total benefit is made up of \$45.8 billion in operating cost savings, \$15.8 billion in accident cost savings, and \$45.8 billion in commercial

vehicle time savings, figured at \$5.56 per truck hour.

Need any more be said about the highway program being worthwhile? To me, it is not only a bargain. It is a necessity we cannot do without.

We must not forget that at the end of this year—the country's motor vehicle population will be 109 million. And there is nothing in the foreseeable future that is going to replace the automobile and truck.

We who have the responsibility of providing the arteries to keep motor vehicles moving cannot sit back and await the development of some esoteric forms of transportation that are years away. We are confronted by the reality of a steadily growing number of vehicles demanding highway facilities on which they can move. Our problem is to furnish the additional road capacity to accommodate the motoring public, particularly in our urban areas.

By more capacity, we do not necessarily mean the construction of new highways. We can also mean making more efficient use of the roads we have.

One of the ways to increase capacity in urban areas is through the Traffic Operations Program to Increase Capacity and Safety (TOPICS). This program uses traffic engineering techniques to improve traffic flow and unsharl tieups without resorting to expensive reconstruction with all its attendant problems. Virginia is expected to have about six TOPICS projects under construction in Alexandria, Roanoke, and Norfolk by December. By next May, 16 projects are due to be under construction all over the state.

Another method of increasing capacity is undergoing intensive testing in northern Virginia and is being watched keenly by many urban areas throughout the country. By providing special lanes exclusively for buses on the Shir-

ley Highway into Washington, D. C., during rush hours, this project is designed to induce commuters to leave their cars at home or at fringe parking stations and use buses to get to and from their jobs. When the entire 8.5-mile project is completed, travel time by bus will be 30 minutes faster than by car.

We have placed new emphasis on moving people rather than vehicles, and we are encouraging the use of buses in preference to individual cars. One bus usually carries 50 passengers during peak hours. To move 50 people by car requires 30 vehicles. If one bus can keep 30 cars off urban roads, it makes sense to foster the switch to buses, because congestion would be decreased, capacity increased, and safety enhanced.

I repeat what I have said before: It will not be financially possible or socially desirable to provide all the highway facilities that would be needed to satisfy peak period demands for all who want to drive automobiles.

Bus transit offers a means of stepping up traffic without the disruption and expense that would be inevitable if major highway improvements were undertaken. In essence, we see bus transit as a means of increasing the productivity of urban highway systems.

Virginia's concern with rapid transit is not confined to the Shirley Highway. The state is looking into the possibility of providing fringe parking and express bus service from Richmond's western suburbs to its central business district, and is conducting a mass transit study in Norfolk which could possibly lead to preferential treatment for buses. And in a move that goes even beyond bus transportation, the Department of Highways and the Washington Metropolitan Transit Authority are planning to use the median of I-66 between I-495 and

Fairfax Drive in Arlington for rail rapid transit. This may turn out to be the first intermodal transportation corridor in the state.

I mentioned earlier Virginia's concern for environment in relation to highways. Aesthetics and ecology are nothing new to this state. Stretches of the interstate system in Virginia are breathtakingly beautiful. Your rest areas are extremely attractive. That beauty is definitely a consideration in your highway program is illustrated in the construction of an artificial hill along the I-64 Charlottesville bypass to screen a city dump.

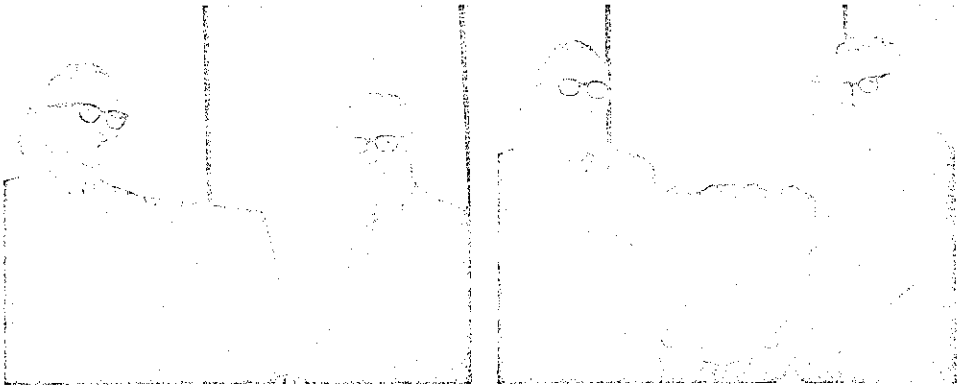
Another Virginia program that has attracted considerable attention is the development of an arterial network, which will give the state much-needed highway capacity when the 1,738-mile system is completed. In addition to furnishing capacity, the arterial network is increasing the safety and efficiency of the state system without the

expense of building interstate-type freeways.

Another area in which Virginia is doing a commendable job is in planning. In addition to the continuous, comprehensive, and cooperative planning required by federal law for cities of 50,000 or more, Virginia requires planning studies for all towns of 3,500 or more. In all, there are 47 studies, which seek to relate transportation to land use and to total community planning, with local government officials participating.

Every area transportation study must be reviewed at public hearings and must win the approval of local planning groups and governing bodies before it can be sent to the Highway Department. In this way, full, broad local support is assured.

If you get the impression from my remarks that I think Virginia's highway program is a fine one, that is exactly what I have in mind. Thank you.



Top Safety Awards

Deputy Commissioner and Chief Engineer John E. Harwood (left) presents the Department's top safety award for personal-injury accident prevention to Salem District Engineer C. F. Kellam; the Salem District had the lowest number of accidents per million man hours—1.9. At right, Mr. Harwood presents the top award for fleet safety to Assistant District Engineer D. H. Gaulden; the Lynchburg District had the lowest number of vehicle accidents—4.2 per million miles of travel. The presentations were made at the Engineers Meeting at Natural Bridge on October 28. Him photos.