

USA Interstate Highway System To Save 8,000 Lives Annually

The 41,000-mile interstate system of highways in the United States, when completed, will save at least 8,000 traffic accident fatalities annually, the International Road Federation was told last month by the nation's top highway official.

Addressing the federation's banquet on April 21 in Peoria, Illinois, in connection with the IRF's annual meeting, Federal Highway Administrator Francis C. Turner said that for each 1,000 miles of interstate highways opened to traffic 200 lives are saved that otherwise would have been the victims of traffic accidents on old obsolete roads.

Text of Mr. Turner's remarks follows:

Last year the International Road Federation honored me with an award which I value very highly. Today I am honored again by your invitation to address this 23rd annual meeting. I am pleased to have this opportunity because the IRF is an organization dedicated to meeting a universal and world-wide human need—the need for better transportation to improve the quality of living.

Whether we are speaking of a developing country or a highly developed one, the need for transportation is universal and axiomatic.

Transportation is an indispensable part of our economic life. It is essential to production, to distribution and to consumption.

Transportation is fundamental to our functioning as a society. Our social activities—our cultural, educational, religious, and recreational activities, not to mention our health and other public services—depend on it.

Transportation is essential to our well-being as individuals, not only for the personal mobility needed to participate in these economic and social activities, but for bringing us the goods and services which sustain life and allow us to enjoy the amenities.

While your organization is dedicated to highway development in all countries of the world and thus you might expect me to address myself this evening to road developments abroad, I believe that good works begin at home and to do a good job abroad we must set a good example at home, and so I want to discuss our own program here at home and what it means to each of our 200 million citizens.

\$200 Billion in transport outlays

In the United States transportation is so much a part of everything we do that it regularly accounts for one out of every five dollars of our Gross National Product. As we now approach a trillion-dollar economy we also approach a \$200 billion annual transportation bill.

By far the largest portion of the transportation services we use in this country is provided by highways.

Our urban areas are almost totally dependent on highway transportation. In 1968, in urban areas of more than 50,000 population, nearly 99 percent of all person trips and nearly 98 percent of all person miles of travel were by highway vehicle. In smaller urban areas this load carried by highway is practically 100 percent.

In intercity travel in 1969 it is estimated that of 1,130 billion person miles of travel, 86 percent were by automobile and another 2 percent were by bus, giving highways a total of 88 percent of

all such travel. Air travel was second with slightly more than 10 percent of the total.

In the movement of goods, virtually all movement within urban areas is by truck. In intercity movement, of a total of some 1,850 billion ton miles of goods movement in 1968, about 23 percent were by truck. Rail movement, with its longer haul distances, accounted for 41 percent. However, the value of truck transportation is considerably greater in proportion, and accounted for 73 percent of the total freight transportation bill in 1968.

Further, it should be noted that service industries, which employ more persons in the United States than manufacturing industries, rely almost entirely on highway transportation in their operations.

In providing this great volume and variety of transportation services, highway transportation at a 1968 level of \$142 billion accounted for 83 percent of all transportation costs in the nation and 16 percent of the GNP.

These then are the dimensions of highway transportation in the United States—dimensions which must be considered in forming public policy with regard to transportation generally and in shaping programs for the improvement of the publicly-owned highway facilities.

Objectives Influenced By Needs

The objectives of the highway program, of course, are influenced by and responsive to the needs of the times.

In the early days of the Federal-aid highway program the main thrust was to get the farmer out of the mud, to speed the movement of his produce to market, and to improve rural life.

These objectives have been met. Today, highway improvements serve other purposes and meet other needs, and in so doing they yield benefits to the nation that are so far-reaching they are often difficult to comprehend.

Highway improvements save lives and prevent injuries and property damage. They provide dollars and cents benefits in the form of more economical transportation. They are vital to national defense. They enable us to achieve a whole range of social goals. And they enhance the material quality of life for America.

As an illustration of the safety benefits, we know that for each 1,000 miles of interstate highways opened to traffic, we save each year thereafter 200 lives which otherwise would have been lost. When the entire Interstate System is open at least 8,000 fatalities will be avoided annually. Additionally a half million injuries annually will be prevented. Certainly this contribution to safety alone cannot be overlooked.

As to economic benefits, estimates for the year 1968 show that savings in operating costs on the portion of the Interstate System then completed, compared to the cost of performing the same travel on roads of earlier design standards were in the range of \$3.5 billion. Add to that a saving of over \$500 million in the cost of accidents avoided by virtue of the safer design, plus a saving of more than \$1.5 billion in the value of time saved, and the total 1968 savings exceeded \$5.5 billion, surely a good return on the investment we made.

\$90 Billion In Savings

By the time the Interstate System is completed in about 5 years from now, the saving in operating costs alone will

have amounted to at least \$90 billion, enough to pay the entire capital cost and have a substantial amount left over, while the savings will continue to mount, year after year. Again I emphasize this is surely a sound investment of highway user funds.

Hence, the savings in cost to the users, who are paying the entire cost of the system through user taxes, more than offsets the expenditures for these roads. The motor vehicle operator, one of the few taxpayers who gets a specific return for his tax dollar, is probably the only one who literally gets all of his dollar payments back, with interest.

The impact of highway improvements, however, goes well beyond the highway user to include enormous benefits to the social and economic structure of the nation. Many of these, such as increases in land values because of better accessibility, can be measured. In addition, there are other immeasurable but very real benefits, such as increased job opportunities, dispersion of industrial and commercial activity, wider choice of residence, easier and quicker access to parks and recreational and cultural centers, and the increased effectiveness of such facilities and services as schools, hospitals, and churches.

All these and many more add up to what can be broadly included in our highway system's contribution to what we have come to refer to as the quality of life.

Roads help national security

Nor should we overlook highways' contribution to national security, a contribution specifically recognized in the full name of the Interstate System—the National System of Interstate and Defense Highways.

What needs to be more fully appreciated is that the improvement in living and in widened freedom of choice in daily activities, such as I just described, result from a highway system fully paid for by the users at the time the facility is opened to travel. The many benefits that stem from the presence of the system, beyond the benefits to the users themselves, are in effect a pure bonus.

Highway users pay for the Federal share of highway improvements through the Highway Trust Fund, which was established by Congress in 1956 to finance the accelerated construction of the Interstate System and the improvement of other Federal-aid systems. And no other Federal monies than the users' taxes make these roads possible.

Progress in building the 42,500-mile Interstate System has been good. About 70 percent of the total system now is open to traffic. Another 11 percent is under construction, and engineering or right-of-way activities are underway on 15 percent. Only 4 percent of system mileage remain in preliminary status.

In speaking of these Federal-aid improvements special mention should be made of the top priority given to safety. Last year the number of traffic deaths rose to a new high. But the fatality rate in this nation, which has remained below 6 deaths per 100 million miles for the past decade, is the lowest in the world, among nations having large population and extensive highway systems.

The substantial improvements to the road system brought about by this Federal-aid highway program undoubtedly

(Continued on page 9)

USA INTERSTATE . . .

(Continued from page 8)

contribute to the lowering fatality rate—a rate which today is about one-third of what it was 35 years ago.

Safety aspects important

The highway program stresses safety considerations across the board—in the design and construction of new highways, in the "spot improvement" of hazardous locations on older roads, in a continuing program of railroad crossing improvement, and in a newly-funded program for urban traffic operations.

Under present legislation, Highway Trust Fund revenues will accrue only through September 30, 1972, and it is estimated that they will total about \$60 billion by that date. To complete the Interstate System and to continue other programs as presently projected, additional revenues will be needed. According to the 1968 Interstate cost estimate, which will soon be superseded by a new revised estimate, about \$13.5 billion in additional revenues would be needed; revenues which could be generated either by extension of the Trust Fund, by additional tax levies, or by a combination of these alternatives, as might be determined by the Congress.

As these important decisions for the future of the highway program are pending, there are some who loudly counsel that the program be severely curtailed. They deplore the dependence on the automobile and truck and urge that highway user tax resources be diverted to other programs.

The many positive benefits which we derive from our self-financing investment in highway improvements, which I outlined earlier and which both justify and compel us to continue a large highway improvement program, our critics either do not understand or else they conveniently ignore.

Instead, they level their fire on what they consider to be the sins of highway officials or the negative aspects of the highway program. Indeed there are some negative values as you would expect in any program, but we in the highway business know even better than our critics where and what they are, but most importantly, we are using this special knowledge to find practical ways to make desired corrections and improvements in management of the program, instead of just decrying the entire program and wringing our hands in vocal anguish.

So, let's examine a few of their charges and see what the facts are.

One line of complaint says highway officials are guilty of bad planning, or no planning at all; that we are possessed of a mindless impulse to lay down pavement in a straight line if possible, with no heed for community needs. Along with this it is alleged that we have a myopic obsession with highways, with no consideration for alternative means of transportation.

Now, the facts are that in this country, at least, highway officials practically invented planning. They have pioneered in long-range national transportation planning, in relating transportation planning to land use planning, and in urban intermodal transportation and community development planning.

Planners are busy

The 1956 Interstate highway legislation was the culmination of nearly 20 years of such planning activity. We are

now engaged in a number of unprecedented nationwide surveys and analyses, including classification of all roads and streets in accordance with the traffic service and land access functions which they perform. This is necessary for the preparation of new program recommendations anticipating the substantial completion of the Interstate System by 1975 and the future needs which must be met if our nation is to survive and grow.

In 1962 Congress enacted the requirement that Federal-aid highway projects in cities of 50,000 or more population be developed as part of a cooperative, comprehensive and continuing urban transportation planning process, including full coordination with plans for other modes of transportation and for local land development, and with greater participation by local government.

Although it was not made mandatory until 1962 this planning process had been developed through joint Federal-State efforts over a period of many years. It is now operative in all 233 urban areas of 50,000 or more population and we can expect as many as 43 additional areas to be added as the result of the 1970 Census.

This urban transportation planning process under the highway program is currently not only the most extensive, comprehensive, and effective national urban planning program, but it is actually the only such planning process in existence on any such scale. Where then would planning be except for the highway program? It directly relates the planning of areawide systems of all and I emphasize—all—modes of transportation to the planning for growth and development of urban lands.

It has provided for the first time in all metropolitan areas for the participation and cooperation of representatives of all political jurisdictions, civic groups, and business organizations, in the guidance and direction of a major public investment program, in cooperation with public officials.

It has helped, at all levels of government, in insuring coordination of plans for highways and transit, as well as other public works, and in achieving desirable urban growth patterns reflecting the aspirations of the local communities.

Basic to the joint land use and transportation planning effort is the establishment of goals and objectives of the metropolitan areas. Thus, for the first time cities have had to consider their future land use in terms of its requirements for transportation and whether it would lead to the desired social, environmental, and economic fabric of the community, and it has been highway program initiative, skills and funds which have made this joint planning possible—something that no other program has done—surely a much needed and desirable achievement that the critics say should be done. We agree with them and are doing something positive about it and more than just talking.

Special treatment for bus transit

Further, our interest in finding acceptable alternatives to automotive transportation modes goes beyond mere intermodal planning considerations.

At the national level we are working very closely with the Urban Mass Transportation Administration, which has the primary interest in solving public transportation problems. Steps are being taken to provide for special treatment of bus transit (which already accounts for

about ¼ of public transportation) by using highway funds.

Our objective is to promote the most efficient use of the public investment in the urban highway system for moving people, even including those who do not personally own or use automobiles.

Federal-aid highway funds currently are participating in a number of mass transit improvement projects, ranging from exclusive bus lanes and extra median width for rapid transit facilities to a series of special feasibility studies and an urban corridor demonstration program conducted jointly with UMTA.

Thus, throughout the broad range of transportation planning and development the highway program is making a positive contribution to the nation and its communities.

Another line of attack against the highway program says we are not considerate of people, that we run bulldozers through neighborhoods and throw people out of their homes and businesses, for the sheer thrill of it all.

I have already referred to the steps taken through the planning process to minimize neighborhood disruption and to identify ways in which highway improvements can be used to help achieve the community's social objectives.

To this should be added the public hearings requirements under which highway departments solicit the views of all interested citizens on proposed projects. Through the hearings a forum is provided whereby consideration be given to the economic, social and environmental effects of highway location, including both the direct and indirect benefits or losses to the community as well as to highway users.

Two such hearings now are required—one to consider the corridor or general location of the highway, and the other its more detailed design—and more are sometimes arranged as needed in order to more adequately inform the public and provide a mechanism for citizen participation in the location and design processes.

While great care is taken in highway location to avoid displacement of families, farms and businesses, some displacement necessarily must take place. Recognizing the burden this places on those individuals who are displaced, the highway program has pioneered in establishing a relocation assistance program that is a model for a Government-wide program now being considered by Congress.

Replacement housing guaranteed

The Federal-aid highway program is the first national public works program in history to provide the means by which displaces are guaranteed adequate replacement housing. The relocation assistance program enacted in the 1968 Federal-aid Act provides that in addition to normal moving costs displaces may receive up to \$5,000 above fair market value for homeowners and up to \$1,500 rental payments for tenants.

The Act also requires that no Federal-aid project can be approved unless sufficient, decent, safe, and sanitary housing is actually available for relocatees. Secretary Volpe recently extended this provision to all of the other programs of the DOT.

The benefits of the highway program relocation scheme to individuals include the substantial additive payments to enable a home owner or tenant to re-

(Continued on page 10)

USA INTERSTATE . . .

(Continued from page 9)

acquire comparable quarters and actually in many cases to substantially upgrade his quality of living. The additive payment is intended to insure that the payment made for the property of a displaced person will insure his being able to re-establish himself at least in comparable housing.

The community itself benefits in many instances by replacement of substandard housing units with other housing that is decent, safe and sanitary and better fit for human habitation. The economic well being of the whole community is thereby strengthened. So here again the highway program is making a positive contribution to social progress. Displacement by the highway program is actually a housing improvement contribution as a bonus feature apart from the highways themselves.

Still another line of attack against the highway program blames highway improvements for damaging the natural environment, for paving over the country, and for increasing air pollution.

First, we emphatically are not paving over the country. At our present rate we would not be able to pave over the country before about the year 10,000 at the very earliest date, somewhat into the future I'd say. Total highway mileage has increased from nearly 3 million miles when the Federal-aid program began in 1916 to around 3.7 million miles today, and is increasing very slowly. In our older cities the amount of acreage devoted to highways has changed little since horse and buggy days. On a per capita basis we actually have less space assigned to auto transportation than we had a century ago before we had invented the automobile. Most of the new mileage is built to serve developing suburban areas and most of the investment in highways during the last half-century has been made to improve an already existing system.

Social goals realized

Further, we have developed a sizeable set of tools over the years to enable the highway program to contribute to the enhancement of social and environmental value goals.

The impact of highways on people and

the environment is a factor which is considered in every stage of a project, from planning through to construction and maintenance.

In fact, the highway official attaches as much importance to noise, pollution, compatibility of land uses, amenities, ecological factors, and many other environmental considerations as he does to drainage, topography, cuts and fills, traffic accommodation, and the other engineering elements of location and design.

We estimate that about 15 percent of all Federal-aid highway program costs at the present time are directly associated with these social and environmental factors, and that at least as much again is indirectly concerned with the environment.

The critics who would like to see these highway funds used for other purposes have another complaint—that we are spending too much on highways.

I have tried to point out that we are buying more than transportation with our highway dollars, although as a transportation investment alone our highway expenditures are a bargain. But the highway program has recognized its social and environmental responsibilities, not only with words but with money. A significant portion of our total expenditures are made directly or indirectly to achieve non-transportation benefits.

As to actual construction costs, while general prices were increasing at an annual rate of 4 to 6 percent over the past decade, highway prices increased at an average annual rate of only 3 percent, and the price of material inputs increased at a rate of less than 1 percent annually over this period.

Competitive bidding important

Competitive bidding on Federal-aid highway construction has provided industry with the incentive to improve equipment methods and overall productivity, thereby keeping prices at a reasonable level.

The combined effect of all these various and continued critical attacks on the highway program has produced an element of opposition to it. A good deal of publicity has been given this opposition, particularly as it concerns controversies over a few sections of urban Interstate freeways.

At the present time progress on some

105 miles of Interstate routes, located in 11 cities, has been halted because of some controversial aspect of the proposed route. It should be emphasized that the total mileage in controversy represents less than 1½ percent of an urban Interstate mileage and that only 4 percent of the urban mileage (274 miles) has not yet passed the route location approval stage. Ninety-six percent has already been accepted and is built and in use or in the construction pipeline.

been paid to ten states for controlling tation, then, the shrillness of the anti-highway voices and the amount of attention given them in the news and editorial commentaries needs to be measured against the constructive, positive accomplishments of the highway program and its overwhelmingly beneficial results for the nation.

The need for clear thinking as to the future of the program is especially important at this time, since we must have legislation this year regarding the extension of the Trust Fund. It also would be desirable to begin now on the task of legislatively charting the future highway program.

Every American has a stake in the policy decisions that will be made. Those of you who are concerned about the quality of transportation in the United States and the resulting benefits to economic and social progress have a duty to weigh the facts and let your views be known to your elected representatives as the policy issues are being decided in the Congress.

My own view is well known. I believe firmly that the Trust Fund should be continued, because it has been demonstrated to be the best instrument for seeing the present vitally needed highway program to its present stage or completion, and for assuring a smooth transition into essential follow-on programs, utilizing proven management tools and sound business financing methods.

We are engaged in the serious business of building our America for ourselves, our children, and grandchildren to enjoy and utilize. Good transportation—most of it by highway mode—is an essential and indispensable building block in the process. I hope you will support the effort to continue to provide and improve the product.

African Road Progress Noted by IRF Official

An International Road Federation official's recent visit to eleven African nations is rated as a "successful mission" and a chance to observe progress in road developments.

Director E. Carron de la Carriere of IRF-Geneva paid a two month visit to these nations: Morocco, Senegal, Ivory Coast, Ghana, Mali, Dahomey, Togo, Cameroon, Gabon, Central Africa Republic and Chad.

"The Mission was successfully completed," said Mr. de la Carriere on his return, adding:

"The main obstacle to the construction of the infrastructure necessary for the economic development of the countries visited is the lack of finance.

"However, progress has been made although there are considerable differences between countries.

"The construction of new roads is progressing well, particularly in countries such as Ivory Coast, Togo and the Cameroon."

The IRF official said that finance organizations should continue their efforts at help, but "should not base their effort entirely on immediate economic justification at present, for there are many roads of which the economic justification is for the moment doubtful, but which are indispensable for the general economic development of these countries and indeed for the peace of the world."

Mr. de la Carriere feels that special efforts should be made to help provide routes to the sea for nations which have no direct access to the oceans.

Work undertaken by the IRF during the last few years, he said, "is beginning to bear fruit." Road associations are being formed and the work of the existing associations is "looked upon very favorably by public authorities."

IRF influence is increasing, he declared. "The African Highway Conference in Addis Ababa has received good publicity and the government officials who attended it were very impressed

by the high quality of discussions that took place.

"They hope that the resolution passed to establish an African Road Engineers Institute will bear results quickly for they feel more than before the need for the exchange of experience and information."

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USA Federal Highway Administrator Frank C. Turner recently announced that bonuses totaling \$1,220,384 have been paid to ten states for controlling outdoor advertising adjacent to the Interstate Highway System.

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On April 26, special ceremonies marked use of the Mont Blanc tunnel by the 3 millionth vehicle since the Alpine facility was officially opened on July 16, 1965, by General de Gaulle and President Saragat. The International Road Federation and important officials from France, Italy and Switzerland participated.