

## Name Highways

## National Asset

By Francis C. Turner, Director,  
U.S. Bureau of Public Roads

I am glad to participate with the Government of Costa Rica, the International Road Federation, and the Costa Rican Road Association in inaugurating this Regional Workshop on Highways. The Bureau of Public Roads has long maintained a deep interest in the highway programs of this Region, and I know that many of you are close friends of the Public Roads engineers who have served in your countries over the last 30 years. I bring you greetings from all of the officials and personnel of our Bureau.

This is truly a Regional Workshop, with eight or more nations represented here. We can all benefit from meetings such as this and the forums they provide for exchanging information on the lessons we have learned in developing our respective highway systems.

All nations are in fact developing nations though in age they range from the newly-formed, such as my own country, through those with centuries of continuity such as many of yours. The stage of development of highways in a sense parallels the age and development of the nation, though the inter-relationship between transportation and a nation's economy depends upon the stage of development of both.

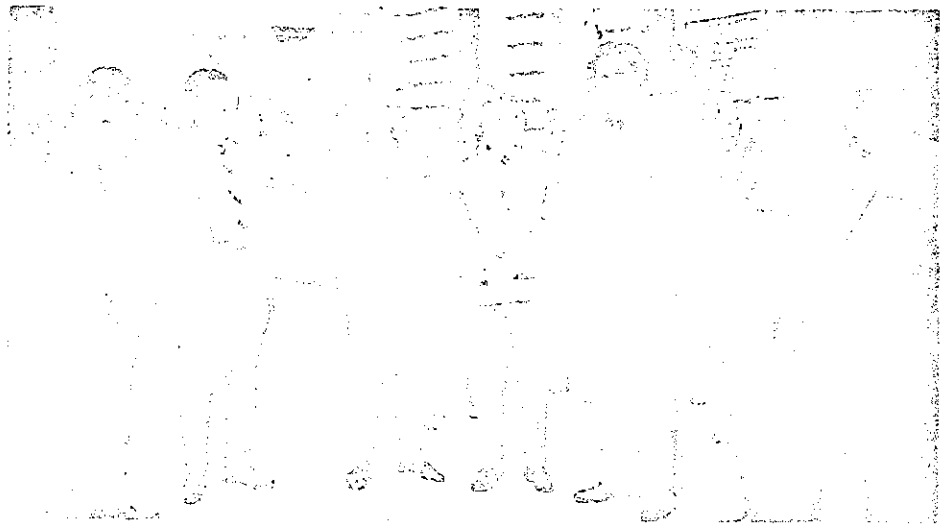
Historically, development of highway transportation falls readily into three stages; the first of which emphasizes the pioneering need for access or the opening up of undeveloped areas in which stage the objective is to enable the traveler or vehicle merely to "get there." The least possible cost is the ruling criterion and the roadbuilder must stretch his resources to the utmost.

The second stage comes when the highway facility may be adjusted more towards providing acceptable standards of transport service, more convenience to the public, and the emphasis is directed to increased levels of efficiency.

The third stage is one in which society has acquired a considerable affluence and begins to exert controls and restrictions upon the highways, thus making greater allowance for the environmental, land use and for community and social values.

The United States generally has progressed well into the third stage even though in some areas of our country we are still in stage one. In reaching the third stage we have learned certain lessons the hard way, and I hope that our RPR representatives at this workshop session will be able to share a few of these thought-provoking lessons with you during these next few days.

First, though, it may be appropriate to make a few general comments about the place of highways in the total scheme of things, both in my own country and in Central America. As most of you are aware, highway building in the United States is a joint venture conducted under a partnership arrangement between the Federal government and the States. The arrangement has been in effect since 1916 and it has served the country well. It has continued to exist as a partnership of equals even though in the case of our National Systems of Interstate and Defense Highways, the Federal government pays 90 percent of the cost, with the States paying the other 10 percent.



**DISTINGUISHED GROUP OF DELEGATES** in front of the National Theater in San Jose included, from left, Eddy Bravo, Costa Rican Vice Minister of Transport; Winston Daniels, U.S. Bureau of Public Roads representative in Costa Rica; Angelo F. Ghigliano, deputy director for operations, and Francis C. Turner, director, U.S. Bureau of Public Roads; Costa Rican Minister of Transport José J. Rodríguez; Francisco J. Hernandez, representative of the Secretary General of the Organization of American States and Permanent Secretary of the Pan American Highway Congress; and Camilo Carles, Panamanian delegate, Executive Director of the Darien Sub-committee.

Highways are national assets that promote economic growth and development and raise the standard of living of any country or region. The late Thomas H. MacDonald, who headed the Bureau of Public Roads for 34 years, stated the situation in the United States very well when he said: "The United States was not a wealthy nation when we began improving our highways . . . but the roads themselves helped us to create a new wealth, in business and industry and land values . . . So that it was not our wealth that made our highways possible. Rather, it was our highways that made our wealth possible."

I believe that the full economic and other benefit potential of a good transportation system have not been sufficiently stressed in many countries in the world. We hear much talk about highway expenditures but very little about highway investments. We pay a stiff price for inadequate roads and streets; not only in deaths, injuries and damages, in nerve strain and inconvenience, and in time and gasoline wasted, but more importantly in the cost of everything we buy and in the delay caused to economic development and the general improvement in the quality of life for our people. Our studies in the U.S. show that highway-user benefits of the Interstate System will total some \$11 billion during the first year after the System is completed. These benefits result from lower operating, time, accident, and strain of driving costs. This is about 1/5 of the entire investment in the system, or an annual return of 20 percent. The safety features of the System are expected to save at least 8,000 lives and countless injuries during the first year of full operation, and an equal number in each succeeding year.

We do not yet have sufficient experience with the Inter-American Highway to catalogue all of its benefits. However, we do know that travel time has been cut as much as 50 percent, with all the economic savings that such a reduction makes possible. We know that the highway is giving new freedom and new speed and safety to the movement of

people and goods. Deliveries are faster and trucking operations more productive. Farm products move more quickly and with less deterioration in quality, and entire new regions and industries have been created where none existed before, such as the beef production activity here in the Guanacaste region of Costa Rica.

Statistics show that highway transport is the most important mode of travel in the Central American Region and indications are that it will become even more important in the future. Each mode of transportation has certain advantages in the movement of various classes of passengers and commodities. However, in the Central American Transportation Study, conducted in 1964-65, observed that in the past, and to a certain extent in the present, the other modes have been serving areas that could better be served by highways and that because quantities of bulk commodities to support railroad lines are limited and distances are not great, a high percentage of the movements by this mode will likely shift to highways as the highway network expands. While there will always be a place for the other modes, their importance in relation to highways will diminish in time.

It seems obvious that there will be a considerable expansion of the Central American highway network in the years ahead. And it is in view of this prospect that I now cite one of the lessons which we have learned in the United States and which I believe may be of interest and value to you.

The first lesson is that transportation is not truly an end in itself but is a means to other ends. The ends it serves, or the goals it reaches, are many and varied and few are possible of monetary expression. Planners indeed must use their tools with discretion. No economic analysis can take adequate account of intangible values, whether it be to a developing area in Central America or in the heart of New York City. If 50 years ago the decision to build the present highway system of the United States had been dependent on our ability to

(Continued on next page)

(Continued from preceding page)

justify it solely on an economic basis, then we surely would never have started.

A second lesson which we have learned is that highway planning must consider and include the other forms of transportation, and transportation planning as a whole must be carried on as a part of broader planning, whether it encompasses the smaller locality, or an entire nation. This lesson, I believe, is of transcendent importance to developing countries and regions. Certainly long range plans for highway systems to serve the whole of each country should be adopted, but full attention must also be paid to the adequacy of connections with neighboring countries.

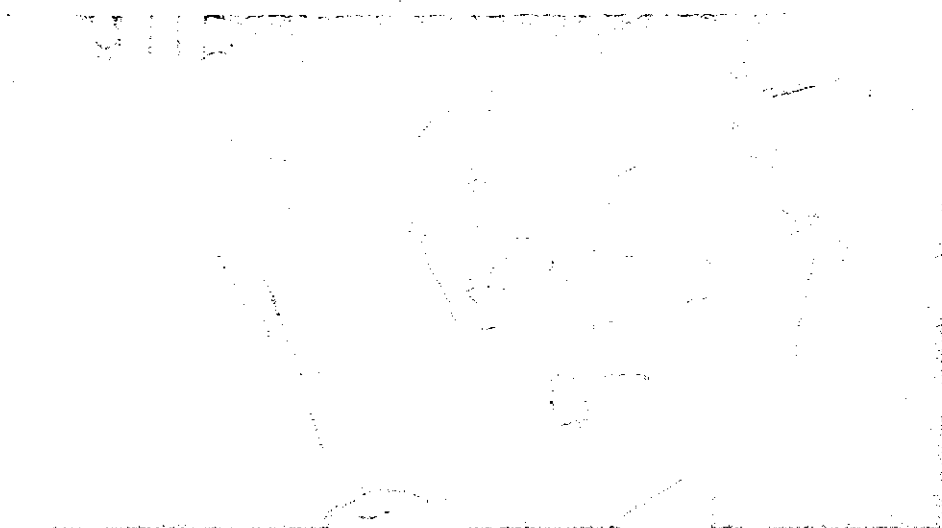
Likewise, the highway network should be developed as part of an overall master plan of land use so that it will realize its full potential and accomplish as many purposes as possible with a minimum expenditure of public funds. The network must move people to the various places they want to go but it also must serve as an efficient conveyor belt for the products of the farms, forests, mines and factories—those existing and those not yet in operation.

As in every other region of the world, the urban areas in this region are expanding rapidly, with new housing, office buildings and manufacturing plants reaching completion in both the central cities and the suburbs. These, of course, have noticeable effects on traffic patterns and at the same time make it more difficult and expensive to relieve traffic congestion. In view of this problem, which is universal, comprehensive plans including a complete study of present and future land use and its effect on the movement of persons and goods, should be developed in all urban areas.

I know that your deliberations over the next three days will cover all aspects of highway planning, programing, construction, and maintenance and that the exchange of ideas will aid each of you in doing a better job when you return to your assignments. Not only will you have gained technical information of value for your work, but more important, you will have made contacts, associations, and new friends that will be invaluable to your career and to the integration of highway development throughout our hemisphere.

I have been visiting in each of your countries at varying intervals, in connection with the Inter-American and Pan-American highway activities for almost 20 years, during a part of which time I was directly in charge of the Bureau of Public Roads' Inter-American Highway office succeeding the late Mr. E. W. James, whom many of you know or have heard of with the respected and beloved Don Tomas Guardia of Panama as the fathers of the Inter-American Highway.

In these years I have been able to observe, perhaps more graphically than you could, the changes that have been occurring due to the Inter-American Highway. I have seen whole new areas opened up to new activity creating employment, income, and wealth that did not exist before. Such growth is self-multiplying. I am confident that our collective efforts in the development of better highways in our several countries



COSTA RICAN HIGHWAY ASSOCIATION PRESIDENT Don Fernando Madrigal (left) extends the traditional warm welcome of his country to the Minister of Public Works of El Salvador Enrique Cuellar on the opening day of the Seminar. In the center is Costa Rican Highway Association Member Franz Arrhezin.

### Delegates Receive A Hearty Welcome

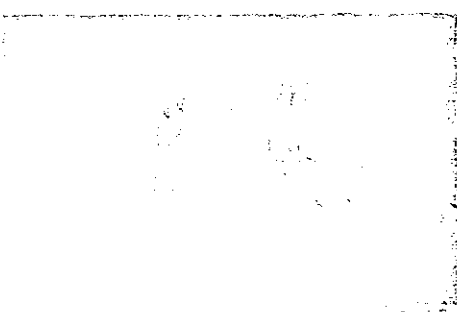
By Fernando Madrigal, President,  
Costa Rican Highway Association

On behalf of the Costa Rican Highway Association it is my pleasure to cordially welcome you all here.

It is a great satisfaction for the Costa Rican Road Association to have the pleasure of cooperating with the Government of Costa Rica, the International Road Federation and the U.S. Bureau of Public Roads in organizing this Seminar on Highways for Central America, the United States and the countries of the Caribbean region.

This seminar has brought to our country a selected group of highway experts, whose lectures, presentations and comments will certainly be of great benefit to us.

The Costa Rican Highway Association opens the doors to each of you visitors and wishes all of you a very fruitful and happy stay in Costa Rica.



U.S. ROAD DIRECTOR ADDRESSES INAUGURAL—Francis C. Turner, Director, U.S. Bureau of Public Roads, addressed the delegates to the Regional Workshop during the inaugural session.

will continue to bring better living for our people.

This is why I congratulate the other sponsors of this Regional Workshop on highways and wish to them and you every success.

### Minister of El Salvador Speaks for Delegates

By Enrique Cuellar, Minister  
of Public Works, El Salvador

I have been asked to say a few words on behalf of the delegations present here today and I have accepted this task with alacrity as it gives me the opportunity to express our pleasure in meeting here with our good friends and participants in this seminar and to express our special thanks to our good friend Robert O. Swain and the International Road Federation, to the U.S. Bureau of Public Roads and to all our long-standing friends of the Costa Rican Government and the Costa Rican Highway Association.

Mr. Swain has expressed in his remarks something I would like to re-emphasize. Because of the improvement of living conditions in our countries and the increasing population, our transport and traffic problems are becoming more serious every day. A solution to those problems will take more than improvisation. An efficient investigation must first take place and this must be followed by sound planning and designing as Mr. Turner from the U.S. Bureau of Public Roads pointed out.

Seminars like this are very useful since through them we can improve our knowledge and use it in future investigations. That is why we consider it is so important to have large delegations. The delegation from El Salvador numbers around 35 members.

I offer congratulations to the seminar organizing committee and wish to present as a proposition the suggestion to have these seminars annually in each of our countries in Central America and the Caribbean. As far as I know this is the second highway workshop to take place in Central America. The first one, I think, took place in Nicaragua. Therefore it would be very advantageous to make an effort to establish this system of Workshops on Highways and Traffic every year, or at least every two years, in our countries.

My congratulations again to the organizing members of the Seminar. On behalf of all delegates I would like to wish the seminar the best success which I am sure it will achieve.