

## BROADENING THE HIGHWAY PROGRAM

Paper by Thos. H. MacDonald, Chief, Bureau of Public Roads, 32nd Annual Convention, American Road Builders' Association, Washington, D.C., January 22, 1935.

To an audience composed of those engaged in the actuality of highway improvement including all of its phases, it is not necessary to call attention to the fact that the broadening of our national highway program is not a probability of the future but is a policy which has already attained definition and considerable stature.

Since July 1933, in the Public Works highway programs more than 11,000 individual projects have been placed under way. That 60 percent of these projects are off the Federal aid highway systems of the States as they existed at the start of the program, roughly measures the velocity attained in broadening the program through liberalizing the Federal highway policies. These projects off the Federal aid highway system provide for its extension at both its extremes, - on the one hand the feeder roads of the rural districts and on the other the principal thoroughfares of cities and towns. The addition of these two classes of roads and streets to the Federally supported highway program is not the only element of this broadened highway policy structure. The elimination of grade crossings without railroad participation in the financing, landscaping and planting of roadsides, and the building of footpaths, are other, but not all, of the worthy additions to the rapidly progressing highway policies.

Because of this constantly changing picture it becomes highly important to examine critically what we are doing, that we may project a course into the future safeguarded from at least those hazards which experience has already uncovered. The easiest possible mistake is the failure to visualize the dimensions of a problem so vast as that of adequate road and street improvement in an area more than 2000 miles wide and more than 3000 miles long. The number of people alone that must be brought into a common and efficient operating organization goes far beyond ordinary conceptions. Here is a field in which faith, good will and devotion to the public service will produce results beyond any other power to reach.

The response that the nation has had from highway officials, contractors and material producers is of so high a quality generally that the departures stand out conspicuously as exceptions to a record of which the nation can be proud.

Passing for the moment the employment aspects of the highway program, which is the cause underlying the enlarged undertakings in this field supported with Federal funds, it appears desirable to review briefly the experience of the years through which we have come to the present stage of highway development, that in the broadening of the program we may yet adhere to sound policies.

As a matter of history, between the abandonment of national and state projects undertaken in the early days before the advent of the railroads, and about 1890, the localities were in control and there was no conception of planning highways on a state-wide basis.

The first State highway departments were established to assist the localities rather than to undertake as a State policy the building of a State highway system. In the Federal legislation of 1916 there was still no conception of the setting up of systematic highway improvement. The first requirement of this character in modern Federal legislation came with the legislation of 1921 when as a first undertaking the application of Federal funds was limited to a system of interstate and intercounty roads consisting of not more than 7 percent of the total rural road mileage. In the decade and a half now intervening, marked by the improvement of some 200,000 miles of highways in part with the aid of Federal funds, this restricted system was rigidly maintained as a first objective. Year after year in both State and Federal legislative bodies there were drives innumerable to spread the application of the cooperative Federal and State funds more widely, but it is to the credit of our law-making bodies that the principle was preserved intact for a period sufficient to establish communication over highways on this skeleton framework, consisting of a small percentage of our total highway mileage, but so carefully selected that it is now possible to travel from one end of the country to the other with a degree of speed and comfort, -- not that the building of long distance roads was the prime objective, for the traffic is now, and will remain, so far as this mode of transportation is concerned, primarily local.

Our long distance highways have come as a by-product of the careful planning and coordination of the most important highways within and between the States. This deliberate policy of restriction has established reasonably universal communication over the roads within the minimum possible mileage. No other course would have made it possible, in so short a time, to create the main highway system capable of serving, if imperfectly, so large a part of the total of highway traffic. No other course would have so quickly joined with reasonably serviceable highways so many of our towns and cities or placed a usable road within so short a distance of so many of our farms. No other course would have made it possible for the average American citizen and his family with the modern moderately priced car to become acquainted with neighboring States and with the more distantly located national parks and forests, or would have opened to him so many other recreational and educational opportunities.

No other course would, within this relatively short period, have brought us to the point where we are enabled soundly to broaden the highway program with good effect. We can, and we unquestionably will, continue the building of Federal roads extending from the improved main network into the farm communities. Every such road will bring to the land it serves not only its own important benefits but the multiplied benefits of the arterial system to which it becomes thus attached. Had the building of these feeders been undertaken before the improvement of the main system it would have been comparable to the digging of the laterals of a drainage system before the opening of the outlet channel.

The principal difficulty which we encounter in this broadening of the highway program is the varying degrees or stages to which the several States have advanced. The more conservative highway officials may still point with adequate proof at hand to the considerable mileage of the more important roads still inadequately improved. To these the time to take on responsibility of an additional mileage will be at some future period when the main system is more fully improved. There are a considerable number of States in which this is undoubtedly at this time the correct attitude, and any future Federal legislation must be sufficiently flexible to take such situations into account.

The broadened program of the future must provide for the progressive development of the main roads in which we have now a tremendous investment. Otherwise, they will be found inadequate for the greater traffic which their very improvement has developed. There are many things yet undone on the main road systems, which have been deliberately passed in the doing of the pioneer work that has engaged us up to now. On a very large mileage of these main roads the improvement of today must be regarded as providing only the minimum of service. Not only the density, but the speed of traffic has been so stepped up that the project designed for conditions not more than five years ago has now fallen below the acceptable and safe minimum. Such essential, but in the past necessarily deferred details, as the elimination of railroad grade crossings, replacement of narrow bridges, and the general

construction of footpaths where justified, are important elements which must be continued in this broadened highway program.

The provision for the separation of more than 500 dangerous grade crossings is a real achievement of the present going program. Added to this is the construction of adequate roads around as well through the cities. Through the special highway user taxes the people of the cities have contributed in some States the major part of the funds used for the upbuilding of our rural main road system. They can not with justice claim more attention.

All of these are essential concomitants of the necessary provision for our developing highway transportation which have been for the most part omitted from the simpler program of the past. From these it will be clear that the broadened national highway program consists not merely in the inclusion of additional mileage of local feeder roads or city streets justifying improvement, but a general changing of the aim of the improvement effort to include objectives, the relative importance of which has increased as we have approached the first goal of "getting the traffic through" which has occupied so large a place in the past perspective.

To characterize most of what has been done thus far as a pioneer effort is not to detract from the magnificence and speed of the accomplishment that stands to the credit of the cooperative action of the State and Federal Governments. It only seeks to put this accomplishment in its true relation to what remains to be done. It suggests that

answer to those whose conception has not yet been lifted to the new level of highway facility which has become possible and desirable. Even these suggestions do not touch upon the development which it is evident is not far around the corner, of highways conceived primarily upon the interstate or national basis in those sections where the population density and traffic already developed on the inter-city roads, point to the necessity of new highways or parkways outside of the congested areas and high-priced suburban developments.

In a moderate program of carefully conceived highways of this character lies not only the possibility of providing for recreational traffic of a character now denied upon our most heavily traveled roads, but the provision for the enlargement of recreational facilities within easy reach of our industrial population, and in some cases, as with the Shenandoah Parkway of the Blue Ridge Mountains, the providing of a new climate to a large population sweltering in the summer heat and humidity of the valleys. Here is an example of the possibility of bringing to the average citizen and his family the benefits of a cooler and more helpful climate and more beautiful surroundings within easy reach of his home. The flora in the higher elevations of the Smoky Mountains National Park is that of Labrador. Highways are the gateway to a climate otherwise denied to the majority who have neither the time nor the means to travel to the north country. So the ending of the pioneer period brings us to new and more difficult decisions. It is not a question of giving or denying highways to the rural districts or to

the cities. It is the far more complex one of balancing the program within the reasonably supportable expenditures in such a ratio between these different and all desirable objectives so that consistently there will be the greatest benefit to the greatest number.

The various classes of improvements, the extent to which each shall be undertaken, not only within the highway field itself but in the wider field of coordination of highways and other transportation facilities all accent the complexity of our future policies and program, but there are many circumstances which determine that quite definite decisions shall be made. One of the principal of these is the transfer of complete authority over all highways to the highway departments, a movement that will doubtless progress with gathering momentum at the coming State legislative sessions.

Of the benefits to be obtained by such transfer there is little doubt, but they bring with them a danger if transfer of responsibility is not accompanied by commensurate provision of income.

The tendency to divert from highway uses revenues intended for such purposes and no other is acute. The persistence of unemployment which has prompted large Federal appropriations has unfortunately been met by diversion from highway needs of the special revenues accruing from highway use. There is nothing to be gained by such diversion from the employment angle alone, since the dollar spent for highway work reaches as far to relieve unemployment as any other expenditures that could possibly be made.



Adjustments of the future highway program to meet changing economic conditions forced upon the railroads and the improvement of the highways to fit the presumed program of the railroads which appears to contemplate faster and lighter trains, are as important as the development of highways to take over traffic where unprofitable branch line operations are abandoned.

Confronted by the unavoidable necessity of broadening the highway program in many directions and recognizing the demand for prompt decision on numerous questions, the inevitable conclusion is that further development of a coherent plan sufficiently broad to encompass the major needs here touched upon, is one of the prime essentials of the immediate operations of each State highway department. In the absence of existing authority on the part of the State highway departments to undertake such planning, I have urged that legislative sanction be sought. The Federal highway legislation has already recognized the benefits to be obtained through such studies and provided for Federal cooperation in them.

Studies of this sort cannot be of a perfunctory nature. They must contemplate the formulation of a comprehensive plan for the development of a fully adequate highway transportation system consistent with modern economic and social trends. The facts obtained must be sufficient to indicate the relative importance of both rural and urban roads which for economic or social reasons may be considered eligible for inclusion in the improvement program. The special problem of approaches to cities and the connections through and around them needs the attention necessary to plan such improvements in anticipation of their undertaking.

An inventory of the entire existing highway plant is imperatively needed, and a careful estimate of the financial provision necessary for its preservation, renewal and progressive development.

This extends to all major parts such as the examination and rating of the condition and capacity of bridges and the fixing of priority for the elimination of existing grade crossings of railroads in which we should, of course, seek the opinions and plans of railroad managements.

As a final object there should be the conception and formulation of a composite plan for the development of all highways, regardless of their present legal classification or condition, and an estimate of the probable cost. Such study also should indicate the benefits which are to be realized from such improvements, considering the direct users, the land owners and others who benefit indirectly. On the basis of such information intelligently consolidated, there need be no hesitation in undertaking the broadened highway program with faith that the growth of population, the promotion of the safety and economy of highway transportation, and the enlarged social and recreational benefits to be secured, will justify and maintain the cost if the plan is laid with intelligence and faith in the future.