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THE FEDERAL GOVERNMENT'S PART IN THE COUNTRY'S HIGHWAY PROGRAM.

UNITED STATES CHAMBER OF COMMERCE CONVENTION

During the year 1914 the expenditure for road and bridge work in this country was less than \$250,000,000. It is probably fair to estimate that the sum which must be spent this year to pay for the vast program of work which has been laid out is not far from \$600,-000,000.

One of the most important factors in the development of the engineering machinery which is required to administer these huge funds, and to build up our highways on this unprecedented scale has been the Federal Aid Act of 1916.

That act laid down two requirements with which the States were asked to comply before they could receive their allotments of Federal aid: First, that the Federal aid should be met by an appropriation of at least an equal amount of State funds; and second, that each State should have an adequate highway department.

These requirements of the Federal aid law brought about a condition within one or two years which otherwise would not have been reached in five or ten. State legislatures quickly complied with the Federal requirements, and almost overnight, it may be said, it was found that every State had provided ample funds to meet the Federal aid allowance, and a State highway department, competent to cooperate with the Federal government in the construction of roads.

To the confidence that the creation of these State Departments has inspired, and the wisdom that has guided them in the expenditure of the sums of money heretofore entrusted to them, may be traced the willingness of the public to place in their hands for expenditure the most tremendous sums that have ever been expended for public work. Back of the organization of many of these trustworthy agencies stands the Federal Aid law of 1916 as the immediate cause of their creation.

Of the four years which have nearly elapsed since the passage of the law, nearly two were years in which the energies of the nation were directed to the winning of a great war. Other interests were subordinated to the one great aim; and Federal aid road construction was curtailed, wherever possible, to release vitally necessary men and materials for the more important purposes of war.

Since the armistice the funds previously at the disposal of the government have been nearly quadrupled, and on December 31, 1919, little more than one year after the cessation of hostilities, the Bureau of Public Roads had approved projects the total cost of which will be over \$260,000,000, which is a greater expenditure for Federal aid roads alone than was spent in 1914 for all the roads and bridges constructed in the country.

Of course this vast sum has not yet been expended. Roads are not constructed in a day. The Panama Canal, which cost only \$373,000,000, not half again as much as the cost of Federal aid roads approved for construction last year, was over 10 years in the building after we acquired it. Americans are accustomed to point to the record of that construction as a monumental work which American brains and American energy completed in marvelously short time. Shall we then be surprised that a program of road construction nearly as large is not completed in one year?

The record of Federal aid highway construction must be viewed in the light of the economic history of the time. Though we have the money available, we can build our highways only as fast as materials, and transportation, and labor are made available for the purpose, and no faster.

The Federal aid plan of highway construction has not been permitted to operate without criticism. There are those who would say that it has not measured up to the need of the country -- that it has not resulted in the building of the volume or character of roads which the country required. The criticism has crystallized into a definite proposal, which involves two principles opposed to the principles of the Federal aid plan. The first of these calls for the substitution of a commission to take the place of the Secretary of Agriculture for the administration of Federal aid road work; the second substitutes a policy of complete federal construction and maintenance of a national system of highways, for the Federal aid policy under which the construction is carried on by the States and the government in cooperation.

The necessity for the first change can be explained only on the ground that the present administration of the work has broken down, that is has not accomplished all that might reasonably have been expected of it. I have given you already some idea of the really large accomplishment in the face of extraordinarily difficult economic conditions. I may add that if the present arrangement were really inadequate it is hardly likely that it would have received the endorsement of the American Association of State Highway Officials, as it did last December at their annual convention at Louisville.

The association of State Highway Officials is a body made up of the executive heads, and principal officials of the several State Highway Departments. The men who compose the organization are probably better able to formulate the highway requirements of the country than any other group of individuals. They, also, by virtue of their positions as State Highway officials, are most competent to pass judgment upon the performance of the government under the Federal aid plan. When, therefore, such a body endorses our policy and recommends a continuation of the work under the same policy, I take it for granted that we have not been culpably remiss in our administration.

The second proposal of those who advocate changes in the present plan involves the construction of a national system of roads as

distinguished from a State or local system. The recognized need for a system of roads, nation-wide in extent, provides the basis for the suggestion that the Federal government, alone and unaided, should acquire the rights to a special system of national roads, construct them and maintain them forever solely with Federal funds.

Let us examine this proposal in the light of the use of our highways. Primarily our highways are arteries for the transportation of agricultural and other products to and from the farms and rural communities. They connect the farm with the railroad, the city with the country, the rural dweller with his post office, with his church, with his school. These are local uses. The system of roads which best meets the requirements of traffic of this nature is one in which the highways radiate from the cities, from the towns, from the country railroad shipping points into the contiguous agricultural area. We have found by scientific study of the character, origin and destination of highway travel that 90 per cent of the traffic which uses our average highway is of this local character. There are special roads to which such a statement will not apply. They are few indeed, and the fact that they exist does not detract in the least from the force of the general statement that 90 per cent of our highway traffic is local in character.

The 10 per cent of the traffic, which in normal times, pushes out beyond local limits, across State lines, and which can therefore be properly described as national in extent, is due to tourist travel by automobile, and freight and express haulage by motor truck.

Certainly we must provide the arteries along which this traffic may flow. We would rather have the people of these Atlantic Coast States go west to spend their vacations, than force them to go in the other direction across the water for their pleasures, because of a lack of inter-State highways suitable for touring. The motor truck has amply demonstrated its usefulness for long distance transportation in emergencies. Without it we should have been greatly hampered in our war work; and we would be blind, indeed, did we fail to foresee that there may be similar serious emergencies in the future, in which the services of motor trucks transporting commodities over long distances may provide our only relief from a complete stoppage of transportation. We must provide the roads for these emergencies as well as the carriers. But it is not necessary to build an especially chosen national system to reach this desired end. The same result can be obtained, probably in a shorter span of time, under the present plan of Federal and State cooperation; and the roads we construct under that plan will be so located as to serve the local as well as the national uses.

In this connection, with due regard to the possibilities of the motor truck, I feel that I must refer to what I regard as a misconception of the proper use of the truck which has led many persons to believe that the highway may eventually take its place as a dangerous competitor of the railroad for the transportation of long distance

freight. The work which the truck can perform to advantage consists principally of the transportation of high grade freight and express over short distances. Its load must be of a high class to support the necessarily high transportation charges which the costs of truck operation entail. The bulk of the freight transported by the railroads is not of this class. Indeed the great volumes of commodities hauled, largely mineral products and the raw products of the fields and forests, are transported by the railroads at a rate so low as to preclude the possibility of their transportation by truck without enormously increasing their cost. A study of the tonnage carried by the railroads during 1916, which is a typical prewar year, shows that the classification of commodities carried was as follows:

Mineral products	54%
Agricultural products	10%
Forest products	9%
Manufactured products	16%
Animal products	3%
Miscellaneous	8%

Moreover, the limitations of the highway are not due only to the greater expense of operation but also to the fact that the business of the railroads is composed so largely of the long haul transportation of commodities which it is desirable to haul in large bulk. Only 5 per cent of the business of the railroads is L. C. L. business, which means that only 5 per cent is transported in lots of less than about 40 tons; and the average haul of all railroad freight is nearly 280 miles. Such service in normal times is beyond the ability of the highway and the motor truck, both in capacity and length of haul.

It seems clear to me, therefore, that while it must be our national policy to provide roads to facilitate commerce by motor truck - the modern highway vehicle, a commerce which is national in extent, and which is not limited by State borders, we can do so by the development of properly articulated local and State systems better than by building special long transcontinental highways, across tributary territory which for some time may not be able to share in the benefits of the through roads because of a lack of local road development.

There is no support for the assumption that such long through roads are required for the purposes of military defense. Except in isolated instances no such national military highways are demanded. In special cases roads will be required to connect points of strategic importance, which would not otherwise be required for the development of the agriculture or commerce of the locality; but in the main the highway requirements of war coincide with those of peace, and certainly there is now no authority for the supposition that a special system of national roads will be required for purposes of national defense.

What we must regard as most important in these days of high prices of the necessities of life, and reduced production of the fruits of the soil, is the prosecution of whatever works will help in the betterment

of the conditions of rural life. The promotion of the educational and social opportunities of our rural communities, and the development of the inherent attractions of country life to the end that we may increase our agricultural population, and consequently our production of vitally necessary raw materials should be our first concern. In accomplishing this end it is the local road which will be most helpful -- not the great transcontinental highway -- and we feel that we are right, therefore, in assigning to the development of local systems the first importance. Ultimately the local system will take its place as a part of a well conceived national system, and the attainment of such a national system will not be long delayed under the Federal aid plan, I can assure you, for at this time, in practically every State, Federal aid funds are being expended only on roads which will become important links in such a national system.

Turning for a moment from the classes of roads in which the Federal government may interest itself to the types of roads which it is desirable to construct, the Federal aid law requires that any improvement paid for in part by Federal money, must be substantial in character.

In interpreting the word "substantial" the Secretary of Agriculture has taken cognizance of the fact that an improvement which is substantial for one intensity and kind of traffic may not be substantial for another. It has been recognized that the types of roads which it is desirable to construct in New York and Massachusetts and Pennsylvania are not suitable or necessary for Nevada and Idaho and the Dakotas. The fact that the former group of States have a density of population of from 170 to 400 people per square mile, while the latter have from less than 10 to less than 1, is sufficient to indicate that the road type requirements of the two groups are far from identical. Recognizing these facts, the decision as to the type of road which will be constructed in a given locality has been based in every case upon an examination of the character and volume of traffic which is using the existing road, and which it is estimated will use improved road. The result is that the Secretary has approved roads of all types from graded earth to concrete and brick, and the highest types of bituminous roads. It happens that the larger part of the mileage constructed has been of the cheaper types of construction. Responsible for this in a large measure, is the fact that the roads of so large an area of our country are in the earliest stages of development. Vast areas in the West, through which we are now building, have never before been penetrated by any constructed highway. Obviously the construction of even a well graded earth road represents a substantial improvement in such sections.

In other sections the cheaper types, particularly earth and sand-clay roads, are built now with the intention of later surfacing them with a high-type surface. In view of the loss which results from the surfacing of new grades, and the fact that money spent for the grades themselves goes into a practically indestructible improvement, I feel that the decisions to build low type roads in such cases have been in accord with the best economic policy.

I should, perhaps, add that while the earth, sand-clay, and gravel types have been built in much larger mileage than any other type, more Federal money has been allotted for one of the pavement types than for all these types together, so that while the mileage is large, the allotment of money for them is not large in proportion.

The decision as to type of road as well as the location of the road to be built are based in each case on an ascertainment of the facts which is as complete as it may be. Such decisions must be mutually acceptable to the State Highway Departments, which have the interests of the State at heart, and the Secretary of Agriculture, who acts for the Government. Such a plan seems to me to be ideally designed for the administration of a work which has so important a bearing on the future of the States and the National Government. The time may come when it will be desirable for the National Government to build some roads, solely with Federal funds, but that time has not yet arrived; and it would be the most serious mistake for the Federal Government to withdraw its support from the States while they are building up their highway organizations and their State laws, and enter into competition with them for the materials, transportation and labor supplies which are already inadequate. The situation at present is too critical to justify any marked departure from the course already laid down, and such new principles as may be found to have merit, should, in my judgment, be incorporated into the existing Federal aid plan.