

Highway engineers in state employ throughout the country are agreed that the type of co-operation which would be needed between the states in order to create an effective national highway system, is impossible to secure save by a degree of Federal control which would allow the state highway departments little or no independence, when acting as agents of the Federal Government, in the location, construction and administration of the Federal highways. Such subordination does not seem to appeal to the state highway officials. The alternative is Federal construction, and Federal maintenance.

National Highway System's Benefits

The benefits that will accrue from the establishment of a National Highway System, built and maintained by the Federal Government, can be classified under four main heads:—

1. Political, or spiritual;
2. Economic;
3. Military;
4. Benefit of the example which the national system will set for all highway construction and maintenance.

Political or Spiritual Advantages

By political benefit is meant the welding together of the people which comes from the obliteration of sectional lines and the realization that from the Atlantic to the Pacific, from Canada to the Gulf, we are not a collection of heterogeneous people, but a single nation. This breaking down of sectional lines can be brought about only by improved methods of communication and transportation, such as the telegraph, the telephone, the railroad and the highway.

What this breaking down of sectional lines means to the people of the United States became apparent during the great war. In April, 1917, there was doubt whether all our people would unite in the great cause. It was feared that we might find that we were merely a collection of heterogeneous races. The contrary proved to be the case. We were found to be a nation with a single ideal, and almost to a man we pledged our lives and our last dollar for the attainment of the great object.

In this work the passenger automobile has played no little part. With the extension of through routes, passable at all seasons of the year, interstate automobile traffic will be encouraged and any one who can afford to buy a \$400 automobile can be as well acquainted with districts a thousand miles from his home as he formerly was with the precincts of his own city.

Evidence that the country appreciates this political or spiritual benefit is shown by the money we spend for the maintenance of national parks and the provision we make for recreation in our national forests. The last report of the National Park Service indicated that more than \$800,000 was spent in the year ended in June, 1918, while a recent report of the United States Forest Service maintained that the national forests had afforded a recreational service to the people estimated in value at \$7,500,000.

No one can estimate the benefit to the nation of the wiping out of sectional prejudices. It is difficult, therefore, if not impossible, to appraise the spiritual benefit, but if this nation had not been united in the period between April 6, 1917, and November 11, 1918, we would at this time be bowing to the peace terms of the Hun (!?) and every dollar of value in the country would have depreciated enormously under the yoke of our war expenditures and the indemnity that would have been extorted by Germany. For the spiritual strength which the nation will gain from improved intercourse, the nation can afford to appropriate far more money than will be needed for the construction of an adequate National Highway System.

The economic benefit of a national system of highways is best indicated by the extent to which motor truck routes radiating from large cities cut across state lines. Those around New York furnish an excellent illustration. They cut into or across the states of Massachusetts, Rhode Island, Connecticut, New Jersey, Pennsylvania, Delaware, Maryland and the District of Columbia. In other words, motor

trucking routes are an important agency of interstate commerce.

Military Benefit

The third benefit of a National Highway System is that which would be derived in case of a military emergency. The war department has refused to designate any roads as military highways, but we have the testimony of leading army officers that every highway connecting large centres is a military highway, in effect, during war times. All of the trunk lines leading into the big munition centres last year were military highways, even though not so declared. We most sincerely hope that out of the Peace Conference there may come a league of nations, but even with that fortunate result, it will still be necessary for us to be prepared. No one will contend that if a league of nations is formed we shall abolish the war department. And if we do not abolish the war department, we cannot afford to neglect one of the essential means for the transport of materials and men—the highway system.

We had an excellent demonstration of the possibilities of the highway in war times when during the war 16,000 army motor trucks ran over our roads from the Great Lakes to the Atlantic seaboard. Such routes, to be effective, must be under a single control, in order that the construction and maintenance may be adequate to the demands of military traffic.

Benefit of Example

In addition to the benefits already emphasized, the building and maintenance of a National Highway System will furnish an object lesson to the citizens of every state in the union. The National government would be unhampered in the selection of roadway surfacing and in the methods of maintenance. In all of these respects the standards would be the highest warranted by present-day traffic conditions, and such routes, crossing every state in the Union, and coming under the personal observation of thousands of citizens, would set a standard for state and county road work that would be of inestimable value in the development of adequate local highway systems.

Extent of System

At the beginning we would recommend the planning of a highway system of 50,000 miles, or about 2% of the public-roads mileage of the country. This would be adequate to serve directly 46% of all of the counties of the United States, while another 41% of the counties would be adjacent to those through which the highways would run. In other words, such a system would serve directly or with a reasonable degree of directness 87% of the population of the country. At a cost of \$25,000 per mile, such a system would cost \$1,250,000,000, and if the appropriations for construction were made at the rate of \$100,000,000 per year, the fundamental system would be completed in 12½ years. Surely this is a small expenditure for a nation that raised \$15,000,000,000 in Liberty loans in 18 months, while three of its states have authorized state highway bond issues totaling \$210,000,000. The estimate of \$25,000 is purposely made high, though it is realized that in many sections of the country suitable materials are available for the construction of adequate surfaces at less cost.

Administration of System

As to the administration of the system, it is our judgment that the best benefit can come from a National Highway Commission, which would have no other duty or responsibility than that of studying, planning, building and maintaining the National Highway System. An indication that the mature judgment of the country is adverse to placing the Federal road work in a bureau subordinate to an administrative department is afforded by the fact that in practically every state, highway work is handled by a separate highway commission and is not placed under a bureau in the state department of agriculture, or in any other state department.

There is, however, much agitation for the inauguration of a Federal department of public works. Should this be established, the highway work of the nation would logically