

19. Will plans permit or encourage the use of competent county engineering organizations?

20. Will the type of design be so closely allied to potential use as to permit the low-cost construction necessary to county participation?

21. Would it be possible to extend federal aid to two general types of local systems, such as:

(a) A system based strictly upon the findings of the planning survey, and largely dependent, as a secondary federal system, upon the determinations and control of national agencies?

(b) A system embracing the large residue of county roads that have been and will continue to be the administrative problem of local officials, and upon which the determinations of local agencies could be given serious weight in federal approving consideration?

There is no limit to the number of pertinent questions that could be asked about a proposal of this magnitude. I have tried to raise a few—not to be inquisitive, but rather to impress the great importance to county highway administration of this opportunity when and if it is presented, and to stimulate local thinking on these problems.

Perhaps the *most* important question must be put to county officials, “Is *your* organization for handling a road program geared up to the degree of efficiency necessary to seize this opportunity?”

This, to me, is the most important question of all, and concerns every county agency, for we are not judged by our best examples, but by our *worst*.

RESPONSIBILITY OF THE STATE HIGHWAY COMMISSION ON STATE ROUTES, BOTH RURAL AND URBAN

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Twenty-one years ago the General Assembly provided for the establishment of a state highway system in Indiana, created a State Highway Commission to supervise that system of roads, and set up a series of special laws to govern the acts and responsibilities of the commission. Succeeding sessions of the General Assembly have modified and added to the responsibilities of the Commission in the administration of the state highway system.

The original law enacted in 1919 required the State Highway Commission to establish a system of roads that would connect the county seats and all cities having a population of 5,000 or more. It provided for the employment of engineers and other assistants. It outlined how materials and supplies should be purchased, how contracts should be awarded and payments made for the work done. In other words, the law creating the state highway system and the State Highway Commission, to administer that system, was explicit in outlining the responsibilities of the commission.

It may be of interest to know that Indiana's legislators realized the problem of safety that would result from the establishment of the state highway system, and in the law enacted twenty years ago stated that the Commission should make rules and regulations to protect from harm the passengers traveling on that system. Previous laws, enacted in 1905, regulated speed at 8 miles per hour in business sections, 15 miles in other parts of municipalities, and not more than 20 miles outside of municipalities. The law required motorists to stop on meeting horse-drawn vehicles if the driver of the rig or wagon signaled properly. It required good brakes and a suitable horn, bell, or other signal. The license plate was a circle or seal of aluminum two inches in diameter. There was a \$50 fine for violation of the law.

Any discussion of the responsibility of the State Highway Commission must first recognize that the primary responsibility of the Commission in the operation of the state highway system is to the motorists—those who pay for all construction, reconstruction, and maintenance of the state highway system today. This responsibility is determined in two ways: first, by the laws enacted by the General Assembly, as a result of demands for such legislation by the motorists of the state; second, by the adoption of rules and regulations permitted or required by law.

Since 1919 when the highway system was established, there has hardly been a session of the General Assembly in which there has not been legislation enacted to increase the responsibilities of the Commission and more clearly to define the boundaries within which it could act. Many of these changes have been necessary to meet the changing conditions, the rapid increase in the volume of traffic using the highways, the greater load-carrying capacity of the trucks using the roads today, and the necessity for engineering skill in eliminating as many hazards as possible.

This development in legislation governing the actions and setting out the responsibilities of the State Highway Commission may be divided into two parts, the first applying specifically to the state highways outside the corporation limits of cities and towns, and the second applying to the state highway routes within the corporation limits of the

cities and towns of over 3,500 population. There are, of course, many provisions of the law that apply to highways inside as well as outside the cities and towns.

REQUIREMENTS OF ORIGINAL LAW

The original law led to the creation of a highway system that included approximately 3,300 miles of roads that had previously been built and maintained by the counties. It required the extension of many roads that had previously ended at county lines. It required the improvement of hundreds of miles of gravel roads, some of which were impassable at some seasons of the year. It required the development of some roads to a higher state of improvement than others, depending upon the volume and type of traffic to be carried. It required the use of a system of uniform marking of the roads for the information of the motorist, and the maintenance of that system of roads under all weather conditions so that they could be traveled with all comfort, safety, and convenience possible.

The mileage in the state highway system has grown until today it is approximately three times that of the original system. Legislation now provides that county roads shall not be added to the state system until they carry an average traffic of 200 vehicles or more daily, unless the addition connects two state highways or extends one already in the state system.

RESPONSIBILITIES IN CITIES AND TOWNS

Without question, the responsibilities of the Commission in the operation of the state highway system have been increased far more in regard to the mileage within cities and towns than to the mileage outside.

In the original law setting out the responsibilities of the Commission, there was no mandatory provision requiring the Commission to improve or maintain streets within the corporate limits of any city or town. There was a provision which set out that the Commission might, at its discretion, improve an unimproved street within a city or town when that street connected at the corporation line with a state highway being constructed or reconstructed.

In 1923 the General Assembly increased the responsibilities of the State Highway Commission by providing that the Commission should select, mark, and maintain routes through all cities and towns of the state that did not have a population of 2,500 or more.

In 1931, the General Assembly again added to the responsibilities of the Commission by making it mandatory to select, mark, and maintain routes through all cities and towns of the

state that did not have a population of 3,500 or more. In other words, the population limit had been increased by one thousand.

The next change came in 1937, when the General Assembly provided that the Commission should select, mark, and maintain routes for state highway traffic through all cities and towns with the exception of cities of the first class, which eliminated Indianapolis. This law affected the maintenance and improvement of streets in 79 Indiana cities and added 410 miles to the then-existing state highway system.

These streets, carrying state highway traffic through the 79 cities, had been built, maintained, and improved by the municipalities. Transfer to the state highway system meant that the maintenance and improvement became a responsibility of the State Highway Commission.

These 410 miles of streets have been a part of the state highway system now for more than a year, and I believe that you will be interested in knowing how the State Highway Commission has met this particular responsibility. You realize that, for the most part, the streets that carry state highway traffic through the 79 cities are subjected to unusually heavy traffic, not made up entirely of vehicles traveling the state highway system. In most cases these streets also carry a high percentage of the local or city traffic.

URBAN ROUTES ARE COSTLY

This means that the problems of maintenance, improvement, and traffic regulation on these 410 miles of highway routes in cities having a population of more than 3,500 are more numerous and more expensive to solve than on any other similar mileage in the state system.

During the past fiscal year, for example, the State Highway Commission spent \$415,039.42 in maintenance of the 410 miles of state highway routes in the 79 cities. This represents an average maintenance expenditure of approximately \$1,000 a mile, or nearly double the average maintenance cost per mile of the entire state highway system for the fiscal year.

Records of the State Highway Commission do not segregate maintenance expenditures on highway routes in cities and towns having a population under 3,500, but it would be conservative to assume that the cost of maintenance per mile on such streets is as high as it has been on routes in the 79 cities and towns for which records are available.

Maintenance of the state highway routes in cities of more than 3,500, under legislation enacted by the 1937 General Assembly, places additional responsibilities on the State Highway Commission. Among these are: the cleaning of the streets, the patching and repairing of surfaces, the maintenance of traffic lights and signals, the marking of surfaces to designate proper parking and lanes for pedestrian movement,



Fig. 1. State Road 32 in Lebanon business section before improving.

the removal of snow and ice in winter, and the establishment of traffic regulations governing the movement of vehicles on these routes. It has been necessary for the Commission, in carrying out the responsibilities imposed by the General Assembly, to send its engineers into the cities and towns traversed by state highways for studies of traffic conditions in order that they could intelligently make recommendations for traffic control.

The major item in maintenance of state highway routes in the 79 cities and towns has been the construction and reconstruction necessary to place these streets in good condition. During the past fiscal year, 58 miles of streets were resurfaced in 43 of the 79 cities, while other construction work



Fig. 2. State Road 32 in Lebanon business section after improving.

was completed, including paving and the building of bridges and grade separations. Resurfacing and other construction work on these highway routes through cities represented an expenditure for the fiscal year of \$1,350,617.30.

This expenditure may seem startling, especially in comparison with construction costs on rural highways in the state system; but you must remember that where surfaces on rural highways are 18 to 20 feet in width, the city streets improved were from 36 to 56 feet in width—two to three times the width of the rural highways.

Perhaps you can appreciate the cost of improvement and maintenance work done on these state highway routes through these 79 cities when you realize that the amount spent during the past fiscal year would have made possible the construction of 50 miles of ordinary two-lane, high-type roads in the rural areas. It would build such a road from Lafayette to Indianapolis. Or, with these funds, the Commission could have constructed a highway designed as a county feeder road extending from Lafayette to Jeffersonville, a distance of 175 miles.

When you realize that during the past fiscal year \$1,765,-656.72 of state highway funds were expended on construction and maintenance of the 410 miles of state highway urban routes, I am sure that you can appreciate how the financial responsibilities imposed by the General Assembly are being met by the Commission.

These figures and operations have been cited to demonstrate just what the new responsibilities resulting from new legislation have meant to the State Highway Commission and the effect that this legislation has upon funds received by the Commission for the operation of the state highway system as well as the services performed.

Members of the State Highway Commission realize that the city and county officials charged with the care of roads and streets also have their problems and that their activities are guided by legal restrictions. It is the hope of the Commission, that through a better understanding, the counties and cities can co-operate in giving the Indiana motorist a road and street system that can be traveled with even greater comfort, convenience, and safety.

OUR RESPONSIBILITIES ON STATE ROADS AND ROUTES THROUGH CITIES

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It might be expected that a city official would discuss this subject from the viewpoint of one who objected to the assignment of responsibility for state roads and routes through