

REPORT OF DIRECTOR

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My report will be very brief, as I do not propose to burden you with the details of the administrative duties of the Director of the Highway Research Board. I wish, however, to bring out a few facts which I think will be more or less interesting to the men who are closely allied in highway construction.

Economy in highway construction and maintenance is necessary because of the great increase both in the number of vehicles using the highways, and in their weight. But economy does not mean the cutting of construction programs, nor does it mean the spending of less money, it does mean, though, that the money spent shall be spent more economically. Although many states are today following the latest and best methods and practices, other states and road-building divisions have not taken advantage of the more recent developments in cost saving. Highway builders are wasting thousands of dollars annually because they do not follow standard practice, or because they fail to avail themselves of the findings of completed research.

There are at least two reasons for this seeming neglect on the part of highway officials. The one is, that even in states where large programs are being carried out and where the executives are aware of the latest and most economic methods, it is difficult to secure properly trained and informed men to carry out the details of construction and operation. The other reason is, that the executives themselves, for want of time or for other good reasons, do not themselves keep pace with the latest findings of highway research.

I think it has been the history in practically every state and county where highway bonds have been issued once, that there has been a repeating of the bond issues. There is a limit to the number of times that we can go back for more money for road construction, as we know that the till would be entirely expended before we could get all the roads hard surfaced. There is, however, another source of revenue and that is the till of research.

Vast stores of completed research exist, but most of those stores are hidden away in reports that are not available to the interested engineers. For instance, analysis has shown that much of the most valuable highway research has been completed by state highway commissions during the process of working out their own local problems, but as no obligation to distribute such information rested upon the states, that information has been virtually buried in the form of technical reports stored away in library archives. Now, obviously, the solution of local problems in one state ought to be of help in solving the problems of other states.

As an example of how the results of research done in one state were of benefit to another state, may I recount a personal experience? The

largest problem encountered with sand-clay, top-soil, or gravel roads is the dust problem. It was felt that dragging would overcome all of the difficulties of this class of road except the dust nuisance. Several methods of treatment were tried, but the expense was so great that these methods were not adopted. In looking around for some solution to this problem, I happened to go to a place where the engineers had solved this particular problem. They had been using the method for six or eight years and it had been developed to an extent which was satisfactory and economical. But that information was not available to us until we happened to chance upon it. It is the aim of the Highway Research Board to help bring to light just such stores of completed research and to make them immediately and practically available.

In a similar way the Board also hopes to make available the store of information that has been acquired by various committees attached to road-building associations. The men on these committees have solved the special problems confronting them, and their solutions have proved of great benefit to themselves and to others. These committees report their findings, usually, in bulletin form. These bulletins contain the information, but the busy executive, occupied with the general planning of the work and with expenditures as well, finds it difficult to secure the information quickly. If these treasure-houses of completed research could be unlocked, and the reports of the various committees could be so written as to give their findings in a brief, concise form the resulting economy would amount to millions of dollars annually.

It seems as though the obstacles that now obstruct the spreading of highway knowledge might be overcome by consolidated and condensed reports from the Highway Research Board, working in cooperation with the state highway commissions, with the various associations, and with the universities and other road-building and research agencies. The function of the Highway Research Board is not to undertake actual research work, but to act as a clearing-house for completed research, and to conduct fact-finding surveys that will indicate what research is necessary to be undertaken.

The conducting of fact-finding surveys by the Highway Research Board constitutes one of its most important functions. As the Board has no axe to grind, the studies are made from an absolutely impartial standpoint, and without any predetermined conception as to results. The data obtained from these surveys, and also the reports of the various committees, are already presented in a comprehensive annual report. But in the interest of economy, time, and money they should also be presented in a condensed summary bulletin. Such a summary report, although intended primarily for the busy executive, would also be designed for the use of the field man anxious to conserve his time. Such a report would summarize in a few words the important facts of the fuller report, but would give sufficient details of the research to afford a good understanding of results. It could be read in a few minutes, the results noted, and if further details were needed the full report would be available. Busy men could, and would, read such a summary.

bulletin, whereas they now lay aside the full report until they "can find time to go through it"—and we all know how easily those full reports find their way to files and library shelves. The summary bulletin would not only give crystalized information but would serve as an index to the complete reports.

I was sorry to hear two men this morning state that the information will be in the record, for I know that not more than ten people in this room will probably read it. That information which is stored in elaborate reports, and filed in archives, does little good. I feel that if research data could be gathered together in such a way that the busy man could read it, he could benefit from studying it, and would then apply the information to his particular problem.

I remember one instance riding home from Chicago with a very busy man who has spent seventy-five or eighty million dollars in the last three years in highway construction. At that time he was trying to secure data to formulate a bill for an additional bond issue. I handed him a bulletin which I had read on that subject. He read a little of it and handed it back to me saying that he would read it at some other time. In the conversation that followed, we talked about the different methods of financing, and he finally asked me where I got the different facts. I told him that I got them out of the bulletin he handed back to me a few minutes ago. The information was in the booklet, but it was not presented in such a way that the facts could be quickly gained.

The Highway Research Board has designed a summary bulletin that gives a condensed version of the reports of the various committees. Direct statements of the findings of the committees are tabulated in this bulletin and it can be read in a few minutes. If you want to go into the detail of the report, you can turn to the complete proceedings. When we go to New York, we buy a ticket and sit in the car, we don't care anything about the operation or the dynamics of the engine, we are interested only in getting to our destination. That is what the summary bulletin is designed for—simply the results.

The Highway Research Board is a part of the Division of Engineering of the National Research Council and was organized at a meeting of the Division of Engineering on November 11, 1920. Its main committees are composed of men who have made studies of the particular problems on which the committees are working. While this arrangement has worked satisfactorily, it is hoped that the committee chairmen may have paid vice-chairmen, or assistants, who can devote their entire time to the work of the committee. This is an extremely important policy and it is earnestly hoped that financial arrangements can be completed whereby it can be put into effect.

The organization of the Highway Research Board has recently been strengthened by the representation of the various state highway commissions. State contact men appointed by the highway commissions are the medium between the states and the Highway Research Board. This close working arrangement with the various states has made possible the efficient utilization of research principles.

When the idea of appointing contact men was first thought of, I stated that we should be happy if we could get twenty-five or thirty states to join us, as that would be enough to insure the success of our plan. Forty-five states have appointed their contact men. These men are showing remarkable interest. In many states the commissioners are the contact men, in others the state highway engineer or the materials engineer is chosen as contact man. The point which I wish to bring out is, that in forty-five states we now have active men who act as the point of contact between the state commission and the Highway Research Board.

The organization as it now stands, with its committee arrangement supplemented by the state contact men, is an ideal working arrangement. The operating expense of the Board is very small as compared with the results it may accomplish. Fortunately, the results of the Board's achievements do not depend upon the amount of money spent in its operation. They depend upon the complete cooperation of those taking part in its activities.

Chairman Johnson appointed the following committees

Committee on Resolutions W K Hatt, Chairman, P St J Wilson,
C M Upham

Nominating Committee H E Breed, Chairman, A T Goldbeck,
T J Wassel, C N Connor