

Chairman Mehren We shall now hear the Progress Report of the Investigation on Development of Earth Roads

PROGRESS REPORT OF INVESTIGATION ON DEVELOPMENT OF EARTH ROADS

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Highway engineers have long felt the need of a type of road surface that would serve for secondary or local traffic and yet be low in first cost and maintenance. Though considerable has been accomplished in the development of the higher type surfaces for use on main traffic roads, comparatively little progress has been made in the methods for improving secondary or natural soil roads, which constitute about 85 per cent of the total road mileage in the United States. In their present unimproved condition the local roads can not function properly as feeders to the main routes, thus depriving considerable areas and great numbers of individuals of the benefits of those portions of our highway transportation system already completed.

In view of the enormous mileage of local roads and the comparatively small amount of traffic upon them, it is evident that for many years to come it will be economically impossible to surface all these roads with the more costly types of pavements.

Realizing this fact, the State highway departments and the universities have conducted experiments for the purpose of stabilizing and protecting the surface of earth roads. These have included soil selection methods, bituminous treatments, chemical treatments, and veneer-macadam.

The objects of this investigation are to coordinate the efforts and data already available on the improvement of earth roads and to stimulate further research in order to find an inexpensive road surface to carry intermediate traffic. It is recognized that no single answer to this problem would serve the entire country, but that due to differences in soil and climatic conditions the solutions will be matters affected by geography and geology. It is also felt that a proper solution may need to take into account the chemistry of the road itself, a field of research as yet untouched, but one which may help solve not only the earth road problem but also many of the subgrade difficulties encountered in the use of the more costly surfaces.

The writer's connection with this investigation has been a temporary one, and the study thus far has been preliminary and chiefly for the purpose of assembling and correlating all available information of completed, current and proposed research on earth road treatments. No field inspections have yet been made, but the material assembled will

enable the investigator to study effectively in the field the experiments completed or under way in many sections of the country

Thus far the following work has been done

- 1 Statistical material has been collected for determining the mileage of and expenditure on earth roads in the States
- 2 Through the kindness of the Chief Bibliographer of the Library of Congress, and with the aid of the U S Bureau of Public Roads, a bibliography on earth roads and earth road treatments has been prepared
3. A search has been made in the Patent Office of all patents granted on earth road treatments of which about a hundred have been assembled
4. Information has been gathered of research on earth roads now under way in various States and by universities
- 5 Through the State contact men of the Highway Research Board information has been secured as to methods of earth road treatment now in use in the States
- 6 By correspondence and conferences interest in the earth road problem has been aroused among highway engineers and researchers
- 7 By radio talks and by articles in the press, the attention of the public has been called to the importance of the present investigation

I desire to express to the State highway departments and to the universities my appreciation for their cooperation in the study thus far. Not only have they shown a readiness to supply all information they possess, but they have expressed a desire to be informed as to how they might contribute by research toward the success of this investigation. With such united effort the solution to this important problem can not be far distant

We would appreciate your suggestions and any information you may have concerned with this study

DISCUSSION OF PROGRESS REPORT OF INVESTIGATION ON DEVELOPMENT OF EARTH ROADS

Led by W B CATCHINGS

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It gives me great deal of pleasure to have this opportunity of bringing up for your consideration the methods of treating soil roads we are using in North Carolina. This includes sand clay, top soil, shale, chert, marl, spar, etc. By this method we get results in appearance very closely