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UNIVERSITY OF KENTUCKY
ENGINEERING RESEARCH

PROCEEDINGS
of the
KENTUCKY HIGHWAY CONFERENCE

held at the University of Kentucky
MARCH 3-4, 1949
sponsored by
College of Engineering
University of Kentucky and
Kentucky Department of Highways

Edited by
E. EVERETT ELSEY
Associate Professor of Engineering Research

BULLETIN NO. 12
JUNE 1949

The Engineering Experiment Station
College of Engineering
University of Kentucky
Lexington
UNIVERSITY OF KENTUCKY
ENGINEERING EXPERIMENT STATION

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The Engineering Experiment Station of the College of Engineering was established on July 1, 1946, by an act of the Board of Trustees of the University of Kentucky. Its objectives are:

(1) To organize, initiate and promote engineering research of special interest to the State.
(2) To aid and consult with industry regarding its research problems.
(3) To promote the conservation and utilization of the State's resources.
(4) To provide support for research training in the fundamental and applied sciences.

The management of the Engineering Experiment Station is vested in a Director and an Executive Committee which controls its policies and operation. They are as follows:

Director: Dean of the College of Engineering
Head of the Department of Civil Engineering
Head of the Department of Electrical Engineering
Head of the Department of Mechanical Engineering
Head of the Department of Mining and Metallurgical Engineering
Director of Aeronautical Research Laboratory

To make available to the interested public the results of its Industrial Research and investigations, the Engineering Experiment Station publishes and distributes a series of bulletins each year.

For copies of publications or for other information address:

Engineering Experiment Station
University of Kentucky
College of Engineering
Lexington 29, Kentucky
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ACKNOWLEDGEMENT

Appreciation of the efforts of all those who made the Kentucky Highway Conference a success is gratefully expressed. Additional thanks are due the authors of the following papers. These extra contributions of their time, knowledge, and experience were most beneficial.
FOREWORD

Feeling the need for an exchange of ideas on better roads, the College of Engineering, University of Kentucky and the Kentucky Department of Highways cooperated in sponsoring a two-day conference early in March.

The results of this conference as evidenced by the attention, attitude, and comments of those who attended were quite gratifying. This was the first meeting of its kind for a number of years and it is hoped now to make it an annual affair. The talks delivered are set forth in this bulletin as a record for the visitors at the conference and as information for others.

It is hoped that this meeting and those planned for the future will be a means of closer cooperation and understanding not only among members of the Highway Department but with all State, County, and City officials whose work is connected in any way with the motor transportation system of the State.
Certificates of Achievement and other tokens of appreciation for more than 35 years service to highways in Kentucky were presented to D. V. Terrell, Dean of the College of Engineering, University of Kentucky, and Mack Galbreath, District Engineer, Public Roads Administration, at the dinner-meeting of the Conference on March 3. Left to right are: D. Bray, Chief Engineer, Kentucky Department of Highways; J. Stephen Watkins, representing the Bluegrass Automobile Club, Lexington; Dean Terrell; Mr. Galbreath; and Eugene Stull, representing the Louisville Automobile Club.
KENTUCKY HIGHWAY CONFERENCE

PROGRAM

University of Kentucky
Lexington, Kentucky

THURSDAY, MARCH 3

MORNING
8:30 – 9:45
Registration—Anderson Hall (Engineering Building)
10:00 – 11:30
Session 1—Lecture Room, Training School
Presiding—D. V. Terrell, Dean, College of Engineering, University of Kentucky
Welcoming Address—H. L. Donovan, President, University of Kentucky
Highways and Highway Engineering in Kentucky—D. H. Bray, State Highway Engineer
Announcements

AFTERNOON
12:00 – 1:15
Luncheon—Student Union Building
Introduction—G. D. Davis, Past President, Kentucky Association of Highway Contractors
Address—Hon. John A. Keck, Commissioner of Highways

1:30 – 4:30
Session 2—Lecture Room, Training School
Presiding—T. H. Cutler, Consulting Engineer and Member of Board of Trustees, University of Kentucky
Selection and Acquisition of Rights of Way—Arthur Lewis, Right of Way Engineer, Kentucky Department of Highways
Soils and Subgrade Support for Highways—L. E. Gregg, Associate Director of Research, Kentucky Department of Highways Research Laboratory, University of Kentucky

Specifications and Specification Writing—Dwight Tenney, Lecturer, Engineering Administration, University of Kentucky

Design, Construction and Maintenance of City Streets—W. W. Sanders, City Engineer, Louisville

NIGHT
6:30

Dinner—Student Union Building

Toastmaster—W. E. Lehman, President, Lehman-Roberts Company, Lexington, Kentucky

The Relationship of Highway Builders to Society—N. W. Daugherty, Dean, College of Engineering, University of Tennessee

FRIDAY, MARCH 4
MORNING
9:30—12:00

Session 3—Lecture Room, Training School

Presiding—J. T. Sabel, County Road Engineer, McCracken County

Standards of Construction on Secondary and Rural Highways—A. L. Chambers, Professor of Highway Engineering, University of Kentucky

Maintenance and Drainage Facilities on Secondary and Rural Highways—Paul Owen, Assistant Director Division of Rural Highways, Kentucky Department of Highways

Highway Safety—James D. Hill, Southern Field Representative, National Safety Council

Use of Polarized Headlights—Lewis W. Chubb, Jr., Research Engineer, Polaroid Corporation
AFTERNOON
12:00 – 1:15
Luncheon—Student Union Building
Introduction—J. Stephen Watkins, Consulting Engineer, Lexington, Kentucky
Address—Professor C. S. Crouse, Secretary Kentucky State Board of Registration for Professional Engineers

1:30 – 4:00
Session 4—Lecture Room, Training School
Presiding—Professor R. E. Shaver, Head, Department of Civil Engineering, University of Kentucky
Consideration in Planning a Rural Highway Program—Dave M. Humble, County Road Engineer, Boyle County, Kentucky
The Value of Competent Engineering Supervision on County Roads—W. E. Wehrman, County Judge, Kenton County
Allocation of Funds for a Rural Highway Program—Hon. Emerson Beauchamp, Commissioner of Rural Highways, Kentucky Department of Highways