

**INTERNATIONAL
CONFERENCE
ON CONCRETE
PAVEMENT
DESIGN**

**FEBRUARY 15-17, 1977
PURDUE UNIVERSITY
WEST LAFAYETTE,
INDIANA, U.S.A.**

FOREWORD

The International Conference on Concrete Pavement Design was set up for the purpose of permitting an exchange of ideas on latest information on design of concrete pavements for roads and streets of all classes, airfields, and for specialized uses.

The primary objective of the conference is to present latest information on economical and practical aspects of portland cement concrete design. Over the past several years, a great amount of research data have been presented relative to design concepts for all types of concrete pavement. These findings are published in the proceedings of various organizations and, hence, it has been a secondary purpose of the conference, to collate this information and to present it in one forum.

Concrete pavements have been constructed throughout the world using techniques which have evolved for specific environments and traffic conditions. This conference is the first to bring together engineers from over the world to discuss design and construction of concrete pavements on an international basis.

The first announcement and call for papers was issued in January, 1976. More than 150 paper offers were received by the Program Committee. Each paper was reviewed in two stages. First, a preliminary selection of papers was made based on the synopses submitted in May of 1976. At that time, the committee met and laid out a tentative program in which the papers were grouped according to topic. This lay out substantially set the stage for the final program. Finally, each paper was reviewed and the final selection of papers, and the final program, was based upon this last review process.

The papers which are preprinted in this proceedings are grouped according to the format selected for the program as follows:

- Session 1 — State of the Art
- Session 2 — Design Principles
- Session 3 — Airport Pavements
- Session 4 — Highway Pavements
- Session 5 — Bases, Subgrades and Drainage
- Session 6 — Joints, Maintenance Strategies and Innovations
- Session 7 — Closing Session and Summary

The format of the conference has been established to permit each author to present their own paper. In addition, ample time for discussion from the floor will be permitted after each paper presentation and the author is given time for a closing statement. In addition, the closing session allows ample time for discussion of any topics on concrete pavements the participants may wish to give.

The compilation of papers presented at this conference would not be possible without the cooperation of many individuals and organizations. The cooperating agencies and Program Committee are listed in separate paragraphs. Special gratitude is expressed to the Federal Highway Administration for financial assistance in publishing this preprint.

My sincere appreciation goes to the members of the program committee and certainly to the authors of the many papers for their efforts in preparing the papers and sharing their experience with us. It is believed that the papers presented in this proceedings will constitute a useful reference and tool for engineers engaged in design of concrete pavements of all types for many years.

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SPONSORS AND SUPPORTING AGENCIES

The International Conference on Concrete Pavement Design has been made possible by the cooperation of various organizations in the United States and other countries. The conference has been planned by a Program Committee representing the following agencies:

SPONSORS:

Purdue School of Civil Engineering
Federal Highway Administration
Portland Cement Association
Transportation Research Board
Indiana State Highway Commission
Federal Aviation Administration

SUPPORTING AGENCIES:

American Concrete Institute, Committee 325 on Concrete Pavements
ASCE Committee on Structural Design of Roadways
ASCE Committee on Airfield Pavements
American Concrete Paving Association
Associated Reinforcing Bar Producers
(Continuously Reinforced Concrete Pavement Group)
Cembureau (European Cement Association)
Corps of Engineers, Waterways Experiment Station
Permanent International Association of Road Congresses (PIARC),
Technical Committee on Concrete Roads
Roads and Transportation Association of Canada
U.S. Air Force Civil Engineering Center
U.S. Naval Facilities Engineering Command
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