

ENGINEERING EXTENSION  
SERIES No. 108

**proceedings of the 47th annual  
road school**

held at

PURDUE UNIVERSITY

March 27-30, 1961

compiled and edited by

J. F. McLaughlin

Associate Professor of Civil Engineering

and the staff of the

Joint Highway Research Project

**purdue university • lafayette, ind.**



# CONTENTS

	Page
PREFACE .....	7
ACCOMPLISHMENTS AND OBJECTIVES OF THE INDIANA STATE HIGHWAY DEPARTMENT, by George M. Foster, executive director, Indiana State Highway Commission.....	15
GOOD MANAGEMENT PRACTICES FOR THE STATE HIGHWAY DEPARTMENT, by E. T. Weiler, dean, School of Industrial Management, Purdue University .....	29
SCIENTIFIC HIGHWAY DESIGN FOR SAFER MOTORING, by K. A. Stonex, assistant director, General Motors Proving Ground, Milford, Michigan .....	40
WHAT IS A QUALITY ASPHALT?, by J. York Welborn, chief, Bituminous and Chemical Branch, Bureau of Public Roads.....	79
THE IMPACT OF INTERSTATE HIGHWAYS IN RURAL AREAS, by William C. Pendleton and Raymond D. Vlasin, agricultural economists, Economic Research Service, Farm Economics Research Division, U. S. Department of Agriculture.....	92
COOPERATIVE PLANNING OF METROPOLITAN TRANSPORTATION FACILITIES, by Alger F. Malo, director, Department of Streets and Traffic, Detroit, Michigan.....	110
WHO PAYS FOR THE ROADS—HIGHWAY FINANCE AND TAXATION, by G. P. St. Clair, highway engineer, and Stanley F. Bielak, highway economist, Bureau of Public Roads, U. S. Department of Commerce .....	117
STATE AND LOCAL COORDINATION OF HIGHWAY PLANNING IN INDIANA, by George M. Foster, executive director, Indiana State Highway Commission .....	155
PLANNING CONTROLLED-ACCESS HIGHWAYS IN RURAL AREAS, by Raymond D. Vlasin, agricultural economist, Economic Research Service, Farm Economics Research Division, U. S. Department of Agriculture .....	162

TRAFFIC ENGINEERS ARE LAND-USE PLANNERS, by William C. Pendleton, agricultural economist, Economic Research Service, Farm Economics Research Division, U. S. Department of Agriculture .....	170
THE CITY ENGINEER AS TRAFFIC ENGINEER, by A. D. Ruth, Jr., city and traffic engineer, West Lafayette, Indiana.....	173
LOCAL ORGANIZATION FOR TRANSPORTATION PLANNING, by T. W. Schulenberg, executive director, Indiana Department of Commerce .....	177
REVIEW OF VEHICLE DIMENSIONS AND PERFORMANCE CHARACTERISTICS, by K. A. Stonex, assistant director, General Motors Proving Ground, Milford, Michigan.....	182
THE NEED FOR COORDINATION OF STREET IMPROVEMENTS AND TRAFFIC OPERATIONS, by John A. Mascari, assistant city civil engineer, Indianapolis, Indiana .....	213
WHEN TO USE WHAT GRADE OF ASPHALT AND WHY, by Ellis G. Williams, district engineer, The Asphalt Institute.....	218
GETTING MORE BLACKTOP MILES PER DOLLAR, by Claude F. Skidmore, district engineer, The Asphalt Institute.....	229
SIZES AND GRADING OF AGGREGATES FOR ROAD MAINTENANCE AND CONSTRUCTION, by W. A. Sutton, field engineer, Materials and Tests, Indiana State Highway Commission.....	237
HOW GOOD IS GOOD ENOUGH FOR CRUSHED STONE SPECIFICATIONS?, by J. E. Gray, engineering director, National Crushed Stone Association .....	244
DENSE-GRADED AGGREGATE BASE CONSTRUCTION—ISHC SPECIFICATIONS AND PRACTICE, by W. T. Spencer, soils engineer, Indiana State Highway Commission.....	249
SUBDIVISION CONTROLS AND THE LAW, by Daniel R. Mandelker, associate professor of law, Indiana University.....	253
THE ADMINISTRATION OF THE SUBDIVISION CONTROL ORDINANCE, by Glenn Dunkle, executive secretary, Lake County Plan Commission .....	265

A LAND SURVEYOR'S MANUAL, by John H. Matthews, associate professor, School of Civil Engineering, Purdue University.....	270
SOME CONCEPTS ON THE USE OF DEFLECTION MEASUREMENTS FOR EVALUATING FLEXIBLE PAVEMENTS, by Richard D. Walker, research assistant, and Eldon J. Yoder, research engineer, JHRP, Purdue University .....	274
USE OF ACCELERATION-DECELERATION LANES, by Neddy C. Jouzy, graduate assistant, and Harold L. Michael, assistant director, JHRP, Purdue University.....	289
STUDIES OF HIGHWAY IMPACT IN INDIANA, by Joseph A. Fletcher, Jr., graduate assistant, and Harold L. Michael, assistant director, JHRP, Purdue University .....	307
MAINTAINING TRAFFIC IN SNOW AND ICE, by W. W. Harris, executive director, Indianapolis Civic Progress Association, Inc., Indianapolis, Indiana .....	316
AN ORDINANCE REGULATING CONSTRUCTION OF DRIVEWAYS, by H. B. Woodling, traffic engineer, Akron, Ohio.....	320

