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

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREFACE</td>
<td>7</td>
</tr>
<tr>
<td>ACCOMPLISHMENTS AND OBJECTIVES OF THE INDIANA STATE HIGHWAY DEPARTMENT, by George M. Foster, executive director, Indiana State Highway Commission</td>
<td>15</td>
</tr>
<tr>
<td>GOOD MANAGEMENT PRACTICES FOR THE STATE HIGHWAY DEPARTMENT, by E. T. Weiler, dean, School of Industrial Management, Purdue University</td>
<td>29</td>
</tr>
<tr>
<td>SCIENTIFIC HIGHWAY DESIGN FOR SAFER MOTORING, by K. A. Stonex, assistant director, General Motors Proving Ground, Milford, Michigan</td>
<td>40</td>
</tr>
<tr>
<td>WHAT IS A QUALITY ASPHALT?, by J. York Welborn, chief, Bituminous and Chemical Branch, Bureau of Public Roads</td>
<td>79</td>
</tr>
<tr>
<td>COOPERATIVE PLANNING OF METROPOLITAN TRANSPORTATION FACILITIES, by Alger F. Malo, director, Department of Streets and Traffic, Detroit, Michigan</td>
<td>110</td>
</tr>
<tr>
<td>STATE AND LOCAL COORDINATION OF HIGHWAY PLANNING IN INDIANA, by George M. Foster, executive director, Indiana State Highway Commission</td>
<td>155</td>
</tr>
</tbody>
</table>

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