

Sixty-first Annual Meeting Papers

Symposium on

APPLICATION OF SOIL TESTING IN HIGHWAY DESIGN AND CONSTRUCTION



Published by the
AMERICAN SOCIETY FOR TESTING MATERIALS
1916 Race St., Philadelphia 3, Pa.

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SYMPOSIUM ON APPLICATION OF SOIL TESTING IN HIGHWAY DESIGN AND CONSTRUCTION

Presented at the
SIXTY-FIRST ANNUAL MEETING
AMERICAN SOCIETY FOR TESTING MATERIALS
Boston, Mass., June 26 and 27, 1958



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FOREWORD

The expansion of the National Highway Program has placed increased emphasis on the use of soil testing procedures both in design and construction. In line with this trend eight papers are published here describing explorations, investigations, and laboratory and field tests of soils relating to highway construction. Three papers describe explorations with various types of equipment, a particular exploration and mapping project in Illinois, and the investigation of banded sediments in Quebec, respectively. There are four papers which discuss testing procedures used in compaction, moisture density, and soil classification based on compaction tests. The eighth paper provides a variety of examples of highway soil engineering.

The papers and discussions in this group of papers were presented at the Thirty-seventh and Forty-second Sessions of the Sixty-first Annual Meeting of the Society, held in Boston, Mass., June 26 and 27, 1958. The Symposium was sponsored by ASTM Committee D-18 on Soils for Engineering Purposes through a special committee under the chairmanship of H. B. Seed, University of California. C. A. Carpenter, Bureau of Public Roads, and E. J. Kilcawley, Rensselaer Polytechnic Institute, served as chairmen of the sessions.

THIS PUBLICATION is one of many issued by the American Society for Testing Materials in connection with its work of promoting knowledge of the properties of materials and developing standard specifications and tests for materials. Much of the data result from the voluntary contributions of many of the country's leading technical authorities from industry, scientific agencies, and government.

Over the years the Society has published many technical symposiums, reports, and special books. These may consist of a series of technical papers, reports by the ASTM technical committees, or compilations of data developed in special Society groups with many organizations cooperating. A list of ASTM publications and information on the work of the Society will be furnished on request.

American Society for Testing Materials



Application for Membership

The undersigned hereby applies for $\left\{ \begin{array}{l} \text{sustaining} \\ \text{company} \end{array} \right.$ $\left\{ \begin{array}{l} \text{individual} \\ \text{associate} \end{array} \right.$ membership in the American Society for Testing Materials including subscription to ASTM BULLETIN. If this application be duly approved, he agrees to be governed by the Charter and By-laws of the Society and to further its objects as laid down therein.

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Application for membership should be mailed to
AMERICAN SOCIETY FOR TESTING MATERIALS—1916 RACE ST., PHILADELPHIA 3, PA.

AMERICAN SOCIETY FOR TESTING MATERIALS

EXTRACT FROM CHARTER

1. The name of the proposed corporation is the "American Society for Testing Materials."
2. The corporation is formed for the promotion of knowledge of the materials of engineering, and the standardization of specifications and the methods of testing.

EXTRACT FROM BY-LAWS

ARTICLE I. *Members and Their Election*

SECTION 1. The Society shall consist of Individual Members, Company Members, Sustaining Members, Associate Members, Student Members and Honorary Members.

SEC. 2. An Individual Member shall be a person, technical or scientific society, college or university or department thereof, library, government bureau or department, or such other organizations as the Board of Directors may deem as appropriately coming under this classification.

SEC. 3. A Company Member shall be a company, corporation, firm, industrial or trade association, or such other organizations as the Board of Directors may deem as appropriately coming under this classification.

SEC. 4. A Sustaining Member shall be an Individual Member or Company Member who wishes to support and participate in the work of the Society through the payment of larger dues.

SEC. 5. An Associate Member shall be a person less than thirty years of age. An Associate Member shall have the same rights and privileges as an Individual Member, except that he shall not be eligible for office. His status shall be changed from Associate Member to Individual Member at the beginning of the fiscal year next succeeding his thirtieth birthday.

ARTICLE V. *Meetings*

SECTION 1. The Society shall meet annually, for the transaction of its business, including actions on standards, at a time and place fixed by the Board of Directors. Twenty-five members shall constitute a quorum.

SEC. 2. Special meetings may be called whenever the Board of Directors shall deem it necessary, or upon the written request of 25 members to the President.

ARTICLE VIII. *Dues*

SECTION 1. The fiscal year shall commence on the first day of January. The annual dues*, payable in advance, shall be as follows: For Individual Members, \$18; for Company Members, \$75; for Sustaining Members, \$200; for Associate Members, \$10; for Student Members, \$2. Honorary Members shall not be subject to dues.

SEC. 2. The entrance fees, payable on admission to the Society, shall be \$10 for Individual Members, Company Members and Sustaining Members, and \$5 for Associate Members. Student Members shall pay no entrance fee. The fee payable upon transfer from one class of membership to another, shall be the difference between the corresponding entrance fees.

SEC. 5. Any person elected after six months of any fiscal year shall have expired, may pay only one-half of the amount of dues for that fiscal year; but in that case he shall not be entitled to a copy of the *Proceedings* for the current year.

* NOTE—Of the annual dues \$3.50 is for subscription to ASTM BULLETIN.