Journal of the BOSTON SOCIETY of CIVIL ENGINEERS SECTION

AMERICAN SOCIETY of CIVIL ENGINEERS





VOLUME 61

APRIL — 1974

NUMBER 2

FLETCHER granite

Bridges and Buildings Street and Highway Curbing

ASHLAR VENEER

for

Bridge Facing

Walls

Landscaping

* * 4

Brochure will be mailed on request

* * *

H. E. FLETCHER CO.

Quarry and Office

WEST CHELMSFORD, MASSACHUSETTS 01863

Phone 617-251-4031

JOURNAL OF THE BOSTON SOCIETY

OF

CIVIL ENGINEERS SECTION ASCE

Volume 61

APRIL 1974

Number 2

CONTENTS

PAPERS

A Challenge to Our Profession		
Presidential Address by Max	D. Sorota	

ASCE and Civil Engineering Education Presidential Address by Ronald C. Hirschfeld40

MEMORIAL

Arthur Thoma	s Ippen					43
--------------	---------	--	--	--	--	----

PROCEEDINGS

ANNUAL REPORTS

Board of Government	
Secretary	
Treasurer	
Accountant	
Secretary, Mass. Section	
Committees	
Sections	

Copyright, 1974, by the Boston Society of Civil Engineers Section, ASCE Second-Class postage paid at Boston, Massachusetts

Published four times a year, January, April, July and October, by the Society 230 Boylston Street, Boston, Massachusetts 02116

> Subscription Price \$10.00 a Year (4 Copies) \$2.50 a Copy All orders must be accompanied by check

BOSTON SOCIETY OF CIVIL ENGINEERS SECTION AMERICAN SOCIETY OF CIVIL ENGINEERS OFFICERS, 1974 - 1975

President THOMAS K. LIU

Vice Presidents

CHARLES A. PARTHUM (Term expires 1975) BERTRAM BERGER (Term expires 1976)

Secretary HAROLD S. GLENZEL Treasurer JOSEPH F. WILLARD

ROBERT BARTON

BRIAN R. HOGAN

(MS/ASCE)

Directors

CHARLES C. LADD N. LEE WORTH (Term expires 1975) ANTHONY J. DISARCINA CHARLES H. FLAVIN (Term expires 1976)

Past Presidents

ERNEST A. HERZOG JAMES P. ARCHIBALD MAX D. SOROTA (BSCE)

SAUL COOPER, Chairman

Vice President, Western Mass. Branch JAMES WESOLOSKI ASCE Director, District 2 CRANSTON R. ROGERS, JR.

RONALD C. HIRSCHFELD

Technical Groups Computer JOHN T. CHRISTIAN, Chairman

LEWIS HOLZMAN, Clerk

Construction SAMUEL E. RICE, III, Chairman RENWICK CHAPMAN, Clerk

Environmental WILLIAM H. PARKER, III, Chairman PAUL TAURASI, Clerk

Geotechnical VINCENT MURPHY, Chairman RONALD E. BUCKNAM, Clerk

Hydraulics

OSCAR L. DONATI, Clerk

Structural

KENNETH M. LEET, Chairman LAWRENCE OGDEN, Clerk

Transportation RODNEY P. PLOURDE, Chairman

MARVIN MILLER, Clerk

JOURNAL EDITOR - H. HOBART HOLLY Boston Society of Civil Engineers Section, ASCE 230 Boylston Street, Room 714 Boston, Massachusetts 02116

OSCAR L. D



THOMAS K. LIU President, Boston Society of Civil Engineers Section ASCE 1974 - 1975

President's Message

The 126th year of the Boston Society of Civil Engineers marks a new era of the Society. Since 1921, numerous attempts have been made to merge the Boston Society of Civil Engineers and the Massachusetts Section of the American Society of Civil Engineers (or its predecessor, the Northeastern Section). In the past, the negotiations were inevitably terminated because the obstacles to a merger appeared to be insurmountable. The most recent merger attempt was initiated in 1968. Culminating six years of extensive efforts, all obstacles were overcome. On 17 April 1974, the merger was consummated. The merged organization will be known as the Boston Society of Civil Engineers Section of the American Society of Civil Engineers.

The long and distinguished history of the Boston Society of Civil Engineers, the oldest professional engineering organization in the United States, will be continued. Its heritage and traditions will be preserved in the new organization.

In the past, the Boston Society of Civil Engineers emphasized technical matters through its technical groups, while the Massachusetts Section organized activities relating to the professional and general interest aspects of civil engineering. Through the merger, the new organization will offer complete professional and technical services to its members.

The merger has achieved unity in the civil engineering profession. The merged organization will present a single representative voice for all civil engineers and, thus, will be more respected and effective in advancing the engineer's viewpoint.

The new organization will eliminate duplication of efforts, thus more effectively utilize the financial and human resources. The individual members will benefit accordingly.

In summary, the merger has created a more effective and viable organization, much stronger than the sum of its parts.

Thomas K. Liu

JOURNAL OF THE BOSTON SOCIETY OF CIVIL ENGINEERS SECTION ASCE

ASCE

Volume 61

APRIL 1974

Number 2

A CHALLENGE TO OUR PROFESSION

Presidential address of Max D. Sorota

(Presented before the Annual Meeting of the Boston Society of Civil Engineers, April 17, 1974)

This afternoon I would like to talk to you briefly about a matter that has been troubling me and I am sure is of particular concern to the engineering profession.

In the State of New Jersey, the Center for the Analysis of Public Issues, in its report entitled "Blueprint for Scandal", charged that recent ethics scandals "... are not the signs of a profession that needs to get rid of a few rotten apples. These are the symptoms of an overprivileged business which must go through fundamental change before it is entitled to the status of a profession."

In the State of Maryland, despite a vigorous lobbying and public relations effort on the part of the state's professional engineering societies to defeat the bill, the House by a vote of 124-0 recently passed a mandatory competitive bidding bill covering the state procurement of architectural and engineering services.

On the national scene, bills have been filed in Congress to require competitive bidding by A-E's on all federally-supported projects. If enacted, this legislation will repeal the Brooks Law which was passed just last year making it a requirement of law that A-E's on all federal projects be selected on the basis of competency and negotiation, rather than price competition.

As a result of the disclosure of the extent of the involvement of professional engineers and architects in the events that both precipitated the resignation of Vice President Spiro T. Agnew and contributed to the recent payoff convictions in several states, the professional image and integrity of all engineers has been severely tainted. It is understandable that as a result of these tragic events, there is growing disenchantment among the public and legislators with the role of the design professionals and the traditional methods of selecting A-E consultants for government projects. Unless we professional engineers provide the leadership that will bring about the changes needed to eliminate the types of abuses which have been uncovered, others will do the job for us.

In the past, many of us were under the mistaken impression that the professional engineering societies could control the unprofessional or unethical conduct of their members by utilizing the disciplinary or expulsion procedures available to the societies; however, the recent events have made it painfully evident that the professional societies do not have sufficient clout to adequately discipline and, thereby, discourage such activities on the part of their members.

I think it is particularly significant that each of the national engineering societies which recently issued public statements on this matter has called for increased involvement of the state P.E. registration boards in the policing of the engineering profession.

In an article which appeared in the March 1974 issue of *Consulting Engineer*, William N. Holway, president, American Consulting Engineers Council, pointed out that during 1972, nationally, a total of 122 attorneys were disbarred and 48 attorneys resigned with charges pending. Although I'm unaware of any national data available on disciplinary action taken against professional engineers, I doubt that in 1972 a total of more than five professional engineers had their engineers' licenses revoked. On the basis of this comparison, it is possible that some might conclude that, on the whole, professional engineers are far more ethical than attorneys. Although I am of the opinion that the premise is, in fact, a valid one, I do not believe that we can use the disciplinary action comparison to back it up. Rather, the comparison and the recent events clearly show that we engineers have not done a very good/job in policing our profession.

One of the difficulties with the problems we face, at this point in time, is that the law infractions which have come to light — namely, payoffs, bribes, and kickbacks — are all violations of law and, as such, are law enforcement problems. There is very little that we, as engineers, can do to influence the few misguided members of our profession who are willing to become involved with corrupt politicians and risk a felony conviction and a jail sentence for monetary gains.

However, there is a course of action which we and the members of the other professional engineering societies can take to help restore confidence in our profession and counteract the atmosphere which has fostered this type of activity. We can introduce and actively support legislation which has been drafted to eliminate or control many of the conditions which have in the past encouraged or contributed to the development of a corrupt political environment. I would like to present for your consideration a basic five-point legislative program which I believe can make a significant contribution towards bringing about such an end.

I propose that legislation be enacted on the state level to accomplish the following:

- 1. Increase the authority and activities of the state P.E. registration board.
- 2. Restrict activities of those who have been involved in illegal acts.
- 3. Establish designer selection boards.

- 4. Limit political contributions by those doing business with the government.
- 5. Require full public disclosure of all political contributions.

In the remainder of time available to me, I would like to briefly discuss and amplify on each of these legislative recommendations.

1. Increase the authority and activities of the state P.E. registration board. The state registration laws should be amended to require the board to adopt rules of professional conduct, the violation of which will be grounds for suspension or revocation of a professional engineer's license. The rules of professional conduct selected should be similar to those which have already been recommended by the Interprofessional Commission on Environmental Design or the National Council of Engineering Examiners.

The board should be required to initiate proceedings against any registered professional engineer who has been convicted of a felony or misdemeanor involving fraud, bribery, collusion, or kickback schemes or had his license revoked or suspended by another jurisdiction for any other cause which constitutes a violation of the local rules.

In order to be able to function efficiently, the board should be granted a quasi-judicial status and have the right to issue subpoenas. Likewise, the members of the board and all witnesses testifying before the board should, except in the case of perjury, be immune from liable or slander suits.

The fees charged by the board should be set at a level that will be adequate to provide the board with sufficient funds to permit it to employ counsel, investigators, or any other assistance needed to properly enforce the revised registration law.

There should be increased emphasis on the initiation of professional misconduct cases by the board, when warranted, instead of waiting for complaints.

2. Restrict activities of those who have been involved in illegal acts. To further discourage the giving of kickbacks and other similar illegal acts, the state, cities, and towns and all other tax-supported governmental bodies should be prohibited from doing business with any individual or firm that has been convicted of, or has admitted to, having been involved in the payment of payoffs, kickbacks, bribes, or illegal contributions in connection with the procurement of work involving public funds.

A mandatory limit, in the order of three to five years, should be set on the length of time the prohibition applies for each type or classification of offense; and it should be applicable regardless of whether or not the offense was committed in the state or political jurisdiction affected.

If the offense was committed by an individual, the prohibition should apply to both the individual and the firm in whose behalf the offense was committed.

3. Establish designer selection boards. To minimize the possibility of political influence in the awarding of A-E contracts on governmental projects, the selection procedure should involve designer selection boards. The actual selection procedure to be used should be tailored to satisfy the requirements and capabilities of the particular awarding authority. Where it is possible to do so, the board should be required to select the three firms best qualified to perform the work, and the awarding authority should rank the firms in numerical order. The authority should then negotiate with the first firm on the list and if for some reason this proves fruitless, the second firm should be contacted. It is possible that in other situations, it might be desirable to have the board handle the complete selection procedure. However, regardless of the procedure followed, in all cases the initial selection should be made on the basis of the firm's overall ability — subject to the negotiation of a mutually-satisfactory fee.

4. Limit political contributions by those doing business with the government. To minimize the possibility of political contributions being a factor in the awarding of government contracts, limits should be set on the size of a political contribution that can be made to a candidate for office or to a political party. The limits should apply to an individual, to a partnership, or the employees of a corporation that is involved, or expects to be involved, in direct business dealings with the government. Likewise, in those states which still permit corporate political contributions, the size of the contribution made by a corporation doing business with the government should be similarly limited.

In all cases, separate limits should be set that will apply to individuals, partnerships or corporations, and the employees of a firm or corporation collectively. The contribution limitation amount established for each candidate should cover the term of the particular office being contested. The limitations should apply to all elected offices at every level of state and local government and to contributions made to the candidate or his political committee. Likewise, limitations should also be established to cover contributions to political parties.

Each of the limits should apply to the total of all forms of contributions and should include the value of donations of services and equipment made in lieu of cash payments.

It is my belief that the limits should be set at nominal values and that limitations in the order of \$100 for individuals and \$500 for the employees of a firm collectively are reasonable.

5. Require full public disclosure of all political contributions. To establish procedures that will permit the monitoring of political contributions to uncover improperly solicited or contributed funds, all candidates for state and local office and all political parties should be required to publicly list all contributions and expenditures. This listing should identify every donor and the recipient of each expenditure. The candidates should be required to file the data periodically on an interim and cumulative basis. A copy of all such records should be on file at a designated state agency and, in the case of local candidates, an additional copy should be on file at the office of the town or city clerk.

The basic legislative program which I have proposed lists the types of legislation which I feel are necessary in order to control the problem. For the most part, the proposals are not new.

On January 1 of this year, a law limiting political contributions and requiring full public disclosure on all such contributions went into effect in the Commonwealth of Massachusetts. The law also provides for the establishment of a commission to appoint a Director of Campaign and Public Finance to administer and oversee the requirements of the law. The political disclosure provisions of the law appear to be adequate, but the limit set on political contributions is not sufficiently restrictive. The law sets a limit on an individual's contribution in any calendar year to \$1,000 for each candidate or political party and does not contain any other restriction on contributions. In the case of those involved in doing business directly with the state or local government, the law will not bring about the desired reform unless the limit is set at a much lower level.

For the past eight years, in the Commonwealth of Massachusetts, the Bureau of Public Construction has successully utilized an A-E selection board in the awarding of all architectural and engineering contracts which come under its jurisdiction.

Several states have recently passed laws which provide for the establishment of rules of professional conduct and increase the authority of their P.E. registration boards. Similar bills have been introduced for legislative action in other states.

As a result of the abuses which have been uncovered, we engineers have been confronted with a situation which will adversely affect the future of our profession; however, the actual extent of this adverse effect will to a large measure depend upon how we react to the challenge and the action which we take to cope with the overall problem.

ASCE AND CIVIL ENGINEERING EDUCATION

Address of President Ronald C. Hirschfeld Massachusetts Section, ASCE (Presented before Annual Meeting, April 17, 1974)

Introduction

Practicing civil engineers share with educators and researchers the responsibility for the education of civil engineers. Their joint responsibility includes not only traditional undergraduate and graduate training in universities, but also the continuing education of civil engineers throughout their careers.

It is the purpose of this address to focus on some of the critical issues which we in the Massachusetts Section and our professional colleagues throughout the country must consider in our attempts to improve civil engineering education.

We might hope to start a re-evaluation of civil engineering education with a review of its history, but such a review is unlikely to be particularly productive for three reasons. First, the degree of sophistication of civil engineering practice is much higher today than it was only a decade or two ago. Second, the climate in which the civil engineer practices today is much more demanding of his attention to social, environmental, and political issues than ever before. The third reason is best summed up in a statement made by Arthur Schesinger, Jr. — "The besetting sin of the historian is to tidy up the past, to impute pattern to accident and purpose to fortuity."

The only purpose that a historical review is likely to serve effectively is to illustrate some of the classical blunders of the past and warn us against the rigid and self-assured pursuit of our "newly discovered" goals. Who among us today would be so bold as to champion a single-minded focus on handbook engineering (post-World War II); engineering science (late 1950's and early 1960's), which would solve grand and complex problems with a few fundamentals and no experience; systems engineering (late 1960's and early 1970's), which would solve those grand and complex problems with a great deal of mathematical manipulation of poorly understood data? And what can we make today of the unstructured and undisciplined curriculum demanded by students who know nothing yet of their chosen profession, yet deem themselves competent to design their education to practice that profession?

The following paragraphs suggest in briefest outline some of the matters that deserve our serious attention.

Areas of Concern

Undergraduate and graduate curricula. Undergraduate preparation for any profession must have as its prime purposes to help students to learn new things, to exercise independence of judgment, to develop a catholicity of interest, and to view in tolerant perspective their role in a complex society. These purposes are not achieved during four undergraduate years, nor even in a lifetime. Yet, their continuing realization demands that most of the four undergraduate years be devoted to their embryonic beginnings. If this be so, it must beg the question whether any professional career can be started today from a foundation provided by less than a graduate degree — civil engineering no less than law or medicine or teaching in a university.

The shaping of both undergraduate and graduate curricula requires serious and mutually respectful consideration by practicing engineers and educators, to a degree not achieved today by visiting committees, accreditation committees, or other groups. Educators and practicing engineers must talk with each other on a continuing basis to resolve their differences of opinion about curricula and to reach a consensus as to the best directions to take in the revision of curricula to meet the future needs of the profession.

Various mechanisms might assist in promoting communication between practicing engineers and educators — for example, the use of practitioners to teach courses (a concept basic to the modern American medical school and to engineering schools in many other countries); frequent periods of engineering practice, not mere consultation in their specialties, for educators (say one year out of three or four); and credit for time spent in engineering practice toward promotion, tenure, and salary raises for professors.

Financial support of university programs. The recent decline in federal support for scholarships, loans, and research has dramatically altered the financial situation of universities at a time when the demand for civil engineers is rising in response to increasing needs for construction in the energy, transportation, and environmental areas.

Several alternate approaches may prove feasible for improving the financial picture at universities. ASCE should make Congress aware of the need for support of higher education in general and civil engineering programs in particular. Local Sections of ASCE should take similar action in state legislatures to encourage support of the state universities.

Consulting firms must realize that a steady inflow of intelligent, energetic young civil engineers into the profession is their single most important guarantee of future success. There would be no better way to ensure that success than through substantial financial support of students, universities, and research programs.

In Puerto Rico, a tax is levied on construction for the purpose of supporting professional activities, research, and education. Although this might seem a radical departure from current thinking in the continental United States, it deserves consideration as a vehicle by which the owners of new construction, who benefit from civil engineering research and education, could share in their cost.

Continuing education for practicing engineers. Continuing education has been a major focus of ASCE's activities at both the local and national levels. Apart from the traditional publication of professional journals, it has, however, been limited primarily to the sponsorship of technical meetings, specialty conferences, and short courses. Such programs serve a very valuable purpose in illuminating current research and providing stimulation for the practicing engineer. However, the rapid development of new technology in many areas of civil engineering and the need for individuals to learn in depth about specialized areas in which they have not previously practiced require that more comprehensive programs of continuing education be developed or utilized.

ASCE and the universities must work together closely to ensure the compatibility, without redundancy, of existing and new programs. They must be responsive to the real needs of the practicing engineer and the constraints imposed on him by travel, job, and family commitments in pursuing a program of continuing education. Among the many alternatives that must be evaluated are night-school, part-time day programs, in-house training programs, ASCE lecture series, and home-study courses.

Recertification of practicing engineers. The licensing of practicing engineers has been a subject of debate for many years. The need to protect the public against incompetence is obvious; the effectiveness of licensing in doing so is subject to some debate. Nonetheless, it is clear that licensing does perform a threshold screening with respect to knowledge of fundamentals of civil engineering, and that the threat of revocation of a license exerts some influence on civil engineering practice.

Serious proposals have been advanced recently in the medical and engineering professions that recertification be required of licensed professionals to ensure that they keep up-to-date with developments in their profession. Although one can find many flaws in various specific approaches to recertification, the public good certainly demands some protection in principle against the incompetence of obsolescence. It is our responsibility to provide that protection by recertification or whatever other means is likely to be most effective.

Conclusion

The preceding paragraphs highlight some of the major questions that face civil engineering education today. They are questions which the Boston Society of Civil Engineers Section will be studying in some depth during the coming year. We hope that practicing civil engineers, educators, and students will contribute their ideas and their time to helping ASCE and the profession improve the quality of civil engineering education.

42

1907 - 1974



Arthur Thomas Ippen, Institute Professor Emeritus at M.I.T. and past President of the B.S.C.E. died Friday, April 5, 1974.

Dr. Ippen was born in London, England, on July 28, 1907, and became a naturalized American citizen in 1945. In 1931 he received a Diplom-Ingeniur from the Technical University of Aachen, Germany. From 1933 to 1936 he studied at the California Institute of Technology, from which he received both his Master of Science degree and Ph.D. in 1936 in hydraulics. He held appointments as Assistant in Geodesy at Aachen; Exchange Fellow at the Institute of Hydraulic Research at the University of Iowa in 1932; and teaching and research fellow in hydraulics at Cal Tech.

He remained at Cal Tech as an instructor and research engineer until 1938. At that time Dr. Ippen became a faculty member at Lehigh University and took charge of the construction of an hydraulic laboratory.

In 1945 he came to M.I.T. as an Associate Professor of hydraulics. He became a full Professor in 1948 and was responsible for the planning and construction of the Institute's first hydrodynamics laboratory. The laboratory was formally dedicated in 1951 and Dr. Ippen served as Director until his retirement in 1973. The laboratory was enlarged and renamed the Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics in 1970. This facility houses research and teaching activities by more than 60 faculty members and graduate students. Dr. Ippen was also head of the

Department of Civil Engineering's Water Resources Division from its inception in 1961 through 1970.

Since his retirement and under an appointment as Senior Lecturer, he had continued his teaching and research work at the Institute.

Dr. Ippen was appointed Ford Professor of Engineering in November 1965, and Institute Professor in June 1970. The title of Institute Professor is bestowed on a limited number of faculty members by the administration and faculty colleagues to recognize exceptional distinction.

At the time Dr. Ippen was appointed Ford Professor, the then dean of the M.I.T. School of Engineering, Gordon S. Brown, described him as "one of our most distinguished engineering educators."

The recipient of many honors, Dr. Ippen was named a fellow of the American Academy of Arts and Sciences in 1949 and of the National Academy of Engineering in 1967. In 1962 he received an Honorary Doctorate from the University of Toulouse, France, followed by honorary doctorates from Karlsruhe, Germany, in 1967 and from the University of Manchester, England, in 1968. Among the awards he has received are the 1953 Karl Emil Hilgard prize offered by the American Society of Civil Engineers, and the 1963 Vincent Bendix Research Award for Engineering Research from the American Society of Engineering Education. He was named "Distinguished Alumnus" at California Institute of Technology in 1970. He was a member of Sigma Xi, Tau Beta Pi, and Chi Epsilon.

Dr. Ippens investigations have covered a wide range of subjects, including free surface flow, hydraulic machinery, cavitation phenomena, solidfluid flows, internal flows due to density differences, wave characteristics, turbulence, sedimentation, and environmental conditions in coastal waters.

He had served as a consultant in important engineering assignments for the United States government, foreign governments, and private firms. He was involved in work with unusual design problems for hydraulic structures, harbors, coastal improvements and environmental investigations.

Dr. Ippen has written more than 100 professional articles, engineering reports, and other papers. He was a member of numerous professional organizations, and he has held many leading offices in these. His memberships include the American Society of Civil Engineers (Life Member), the Boston Society of Civil Engineers (Honorary Member), the American Society of Mechanical Engineers, the American Geophysical Union, the International Association of Hydraulic Research (Honorary Member), Japan Society of Civil Engineers (Honorary Member).

He has held the presidency of the Boston Society of Civil Engineers (1960-61), the presidency of the International Association for Hydraulic Research (1960-64), and the chairmanship of three national committees of the American Society of Civil Engineers.

Dr. Ippen's first wife, Elizabeth A. Wagenplatz, died in 1953. He is survived by his widow, the former Ruth M. Calvert; two children of his first

44

marriage, Dr. Erich P. Ippen of Red Bank, N.J., an M.I.T. graduate in 1962 and now employed by the Bell Telephone Laboratories in Holmdel, N.J., and Dr. Karin E. Ihler of Pittsburgh, Pa., a faculty member at the University of Pittsburgh; a step-daughter, Julie J. Webb of Santa Monica, Calif., three grandchildren, and a brother, Joseph P. Ippen of Lindau, Germany.

M.I.T. President Jerome B. Wiesner said, "Art Ippen's many friends and colleages are saddened by his death. His loss will be deeply felt at M.I.T., in this country and abroad for his pioneering work in water resource engineering has benefited all our lives. Art will be deeply missed by his colleages and students who were lucky enough to know the warmth of a personal relationship with him."

Alfred H. Keil, Dean of the M.I.T. School of Engineering said, "Arthur Ippen was a truly great man. From a base of towering professional strength and great personal warmth he exerted most effective leadership whenever required and was also an outstanding contributor to any team effort he joined. He was throughout his long, distinguished career, devoted to the development of the whole man: to his students who now practice and teach all over the world, to his junior colleages and to all who know him, he was always a personal friend, setting an example of true professionalism and deep personal commitment."

Friends and relatives of Dr. Ippen are contributing to the Arthur T. Ippen Memorial Scholarship Fund, in the Department of Civil Engineering at M.I.T., to perpetuate Dr. Ippen's work in the area of water resources.

PROCEEDINGS OF THE SOCIETY BOSTON SOCIETY OF CIVIL ENGINEERS

MINUTES OF MEETINGS

February 27, 1974 — A joint meeting of the Boston Society of Civil Engineers was held with the Massachusetts Section, American Society of Civil Engineers and the Boston Post, Society of American Military Engineers at noon, in the Branding Iron Restaurant, 75 Blossom Court, Boston, Mass.

This being a luncheon meeting, the Program Chairman, Bob Barton, called the meeting to order at 12:25 p.m. After introducing the head table, Mr. Barton turned the meeting over to Pres. Hirschfeld, Mass. Section, A.S.C.E. for a brief business meeting and announcements. The Chairman then called upon Vice President Charles Parthum, B.S.C.E. to conduct any Society business. Mr. Parthum asked the Secretary to come forward. The Secretary announced that the following had been elected to membership by the Board of Government on February 19, 1974:

Member: David Lawrence Freed, Robert J. Ovagimian, J. Elliott Thomas, Jr.

Applications for membership were read by the Secretary as follows:

Bonneau H. Dickson, Jr., Victor Impemba, Thomas J. Lamb.

The Secretary then made the following MOTION: "That the Society be solicited to approve the transfer of up to \$10,000.00 from the principal of the Permanent Fund to the Current Fund to meet the Current Expenses." The MO-TION was SECONDED AND VOTED. Note: This was the second of two votes required, the first being at the January Meeting of the Society.

B.S.C.E. having no further business to conduct, the Chairman introduced Art Mosher, who conducted a brief meeting for the Society of Military Engineers.

Following the luncheon, the Chairman introduced Mr. Robert Pompeo, Attorney for the Massachusetts Construction Industry Council. After introductory remarks Mr. Pompeo moderated a panel on "Anatomy of the Massachusetts Truck Loading Study". Dr. Richard C. Norris, Arthur D. Little, Inc. and Mr. Cranston Rogers, Vice President, C.E. Maguire, Inc. made presentations on the study, outlining the purpose and the information gathered. A question and answer period indicated that there was considerable interest in the problem and in the results of the study.

The meeting was adjourned at 2:45 p.m. One hundred and thirty-five members and guests attended the meeting.

Joseph F. Willard Secretary

March 20, 1974 — A joint meeting of the Boston Society of Civil Engineers with the Massachusetts Section, American Society of Civil Engineers and the Computer Section was held on March 20, 1974 at the Red Coach Grill, Boston, Massachusetts.

Following dinner, the meeting was called to order at 7:30 p.m. by Mr. Lew Holzman, who asked President Sorota to conduct any Society business. The President called upon the Secretary to announce names of new members. The Secretary stated that on March 19 the Board of Government had elected the following to the grade of Member;

Michael Richard Mooers, N. Gordon O'Reilly, Jr.

The Secretary announced that an application for membership had been received from Renwick Bryant Chapman.

The President asked the members to stand for a moment of silence for deceased member Horace T. Almy.

Notice of the Freeman Fund Lecture to be given by Prof. Donald Harleman on April 3, 1974 concluded the Society's business. Following a brief meeting of the Massachusetts Section, A.S.C.E. Mr. Holzman introduced the speaker of the evening, Dr. David C. Major, M.I.T. Associate Professor of Civil Engineering, whose subject was "Systems Analysis and its Applications to Civil Engineering Problems — Economics." Dr. Major, an Economist, described input-output models for economic forecasting, especially as applied to water resources. A question and answer period followed the presentation.

The meeting was adjourned at 8:45 p.m. Twenty-one members and guests attended.

Joseph F. Willard Secretary

April 17, 1974 — The 126th Annual Meeting of the Boston Society of Civil Engineers was held jointly with the Massachusetts Section of the American Society of Civil Engineers at the 57 Restaurant in Boston. The meeting was called to order at 4:00 p.m. by President Max Sorota.

The reading of minutes of previous meetings was waived, the President noting that these minutes would be published in the Journal.

The Secretary announced that at the Board of Government meeting held April 11, 1974 the following were elected to membership:

- Grade Member: Mordecai Bennett, Bonneau H. Dickson, Jr. and Thomas James Lamb.
- Transfer Junior to Member: Thomas Daniel Hurley
- Grade of Junior: Kenneth James Deardon, James Edward Flagg, and Harry Jue.

The Secretary also announced that applications for the Grade of Member had been received from John E. Ayres and Richard Kimball.

Becoming eligible for Life Membership today are Ovidio D. Chiesa, Leo E. Gaudette and Clarence R. Wickerson.

The annual reports of the Board of Government, Treasurer, Secretary and Auditors were presented. Reports were also made by the following committees: Publications, Library, John R. Freeman Fund, Ralph W. Horne Fund, Membership, Advertising, Joint Legislative, Merger, Program, and Quarters.

It was VOTED "that these reports be accepted and placed on file".

The annual reports of the sections were read and it was VOTED "that the annual reports of the sections be accepted and placed on file".

The President stated that the reports of the committees and sections will be published in the April 1974 Journal.

The members stood and observed a moment of silence when it was announced that Dr. Arthur T. Ippen recently passed away.

President Ronald Hirschfeld then conducted the business meeting for the Massachusetts Section, A.S.C.E.

The Tellers of Election, Bruce MacIver and Paul J. Trudeau, made their report on the results of the ballots, and, in accordance therewith, the following were declared to have been elected officers of the merged BSCES/ASCE for the coming year:

President	Thomas K. Liu
Vice-President —	
One Year	Charles A. Parthum
Vice-President	
Two Years	Bertram Berger
Secretary	Harold S. Glenzel
Treasurer	Joseph F. Willard
Directors —	
One Year	Charles C. Ladd
	N. Lee Worth
Directors —	
Two Years	Charles H. Flavin
	Anthony J. DiSarcina
Nominating Comm	ittee —
One Year	David A. Duncan
	Donald T. Goldberg
	Edmund G. Johnson
Nominating Comm	ittee —
Two Years	John J. Cusack
	Jurgis Gimbutas
	Joseph D. Guertin, Jr.
After a five-mir	ute recess. President

After a five-minute recess, President Hirschfeld presented his address entitled "Engineering Education". This was followed by President Sorota's address, "The Challenge of Our Profession".

The meeting was adjourned at 5:55 p.m. to reconvene following dinner.

BOSTON SOCIETY OF CIVIL ENGINEERS SECTION, ASCE

48

President Sorota called the meeting to order again at 8:20 p.m. Following announcements and general remarks, the President introduced the guests and officers at the head table and then turned to the awarding of prizes and scholarships.

The Secretary then announced the following prize awards, which were presented in turn by the President:

Ralph W. Horne Fund, established in 1964 by a gift from the Directors of Fay, Spofford and Thorndike, Inc. the income to be devoted to a prize or certificate to a member designated by the Board of Government as having been outstanding in unpaid public service or in philanthropic activity in the public interest. The ninth recipient, this year, is Mr. Edward K. True.

Award: Clemens Herschel

Recipient: Edmund G. Johnson

Paper: "Unique Foundation Features — the Boston Company Building, Boston, Mass."

Award: Geotechnical Section

Recipient: David E. Thompson, Gary S. Brierly

Paper: "Load Transfers for Long Pipe Piles in Clay"

Award: William P. Morse Scholarship Recipient: Miss Meredith Sears Auclair

Award: Desmond FitzGerald Scholarship

Recipient: Daniel A. Maciborski

President Sorota then called upon Mr. Robert T. Colburn to step forward, and presented him with a special certificate of appreciation for his services as Treasurer for the past five years.

President Sorota then turned the meeting over to President Hirschfeld to conduct A.S.C.E. business. Following this, President Hirschfeld introduced the guest speaker, Mrs. Florence R. Rubin, President of the League of Women Voters. She chose for her subject, "Citizen Participation and the Engineer".

Following the guest speaker, President Hirschfeld called in turn on C.R. Rogers, Director, District 2; Ivan Viest, V.P., Zone I; Oscar Bray representing President Yoder, and William Sangster, Presidentelect, all A.S.C.E. for a few remarks. After a statement of appreciation to the Members of the Merger Committee, Presidents Hirschfeld and Sorota jointly presented a special award to Professor Saul Namyet for outstanding service as Chairman of the Merger Committee.

The newly-elected officers were introduced by the two Presidents, who then turned the meeting over to the new President of the Boston Society of Civil Engineers Section, American Society of Civil Engineers, Dr. Thomas K. Liu. President Liu then presented certificates of appreciation to the retiring Presidents.

The meeting was adjourned at 9:35 p.m. One hundred and sixty-five members and guests attended the dinner and meeting.

Joseph F. Willard Secretary

COMPUTER SECTION

February 20, 1974 --- The Computer Section held its annual meeting at the Red Coach Grill, Stanhope Street, Boston, on February 20, 1974. Fifteen persons attended the dinner preceding the meeting, and twenty were present for the meeting and presentation. The meeting was called to order at 7:30 p.m. by David I. Hellstrom, Chairman, An informal discussion was held concerning problems of attending evening meetings due to the current gasoline shortage. Luncheon meetings were considered, but no conclusions were reached. Mr. Hellstrom gave an informal annual report, following which the business of electing new section officers was conducted. Professor Robert Logcher, Chairman of the Nominating Committee, presented the following nominations:

Chairman: Dr. John T. Christian Vice-

Chairman: Mr. Jekabs P. Vittands Clerk: Mr. Lewis Holzman

Members, Executive Committee:

Mr. James N. Jackson

Mr. Sal Mazzotta

Mr. Robert A. Wells, Jr.

There were no other nominations, and it was moved, seconded and unanimously passed that the Clerk cast a single ballot for the above slate.

There being no other business, Professor Logcher introduced the speaker for the evening, Dr. John C. Schaake, Associate Professor of Civil Engineering, MIT. His talk was the third in a series of coordinated sessions dealing with systems analysis and its application to civil engineering problems. Professor Schaake's talk concerned the use of optimization techniques. He began by discussing some of the basic concepts, and tied optimization into economic considerations. He then gave a simple example concerning a water resource system, and developed this in discussing a complex applied study for a river system in Argentina. A discussion period followed the presentation. The meeting was adjourned at 9:10 p.m.

> David I. Hellstrom Chairman

CONSTRUCTION SECTION

March 6, 1974 — The Annual Construction Section Meeting was held at the Red Coach Grill, 43 Stanhope Street, Boston. The meeting was called to order at 12:30 p.m.

The subject was "Design and Use of the Franki Pile".

The guest speaker was Mr. P. A. O'Neill, President, Franki Foundation Company.

There were 45 members and guests in attendance.

The following members were nominated and elected to the Executive Committee of the Construction Section for the year 1974-75:

Chairman:	Samuel E. Rice, 3rd
Vice-Chairman:	Laimonis Rieksts
Clerk:	Renwick Chapman
Members:	Joseph B. Kerrissey, Jr.
	Frank J. Killilea, Jr.
	John T. Quinn, Jr.
The meeting a	adjourned at 2:00 p.m.

Samuel E. Rice, 3rd Vice-Chairman

HYDRAULICS SECTION

April 3, 1974 — The Hydraulics Section of the Boston Society of Civil Engineers held its Annual meeting at the Boston Public Library in Boston. The meeting was called to order at 7:10 p.m. by Chairman Frank Perkins.

The Chairman presented the nominating committee's report which recommended the following slate of officers for the coming year:

Chairman:	Saul Cooper
	Thomas Baron
Vice-Chairman:	
Clerk:	Oscar Donati
Executive Committee:	Lee Wolman
	Edward Dunn
	Frank Perkins

The above slate was elected unanimously by voice vote.

Saul Cooper assumed his duties as Chairman following brief introductory remarks by the Past-Chairman Frank Perkins. Chairman Cooper invited the membership to submit ideas for the years program.

This meeting having been designated a joint meeting with both the Boston Society of Civil Engineers and the Massachusetts Section of the American Society of Civil Engineers, Chairman Cooper extended the opportunity to conduct pertinant business or to make announcements to Max Sorota, President of the B.S.C.E., Joseph Willard, Secretary of the B.S.C.E., and Ronald Hirschfeld, President of the Massachusetts Section of the A.S.C.E. No business items were discussed and no announcements were made.

Lee Wolman, a member of the Hydraulic Section's Executive Committee and also Chairman of the Society's Freeman Fund Lecture Committee presented a brief capsule history of the 8 preceding Freeman Fund Lecturers and their respective topics. Mr. Wolman then presented a biographical sketch of the 9th Freeman Lecturer, Professor Donald R. Harlemann, Director of the Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics, Massachusetts Institute of Technology, Cambridge, Massachusetts. Dr. Harlemann recently was 50

awarded the Norman Medal by the American Society of Civil Engineers.

Mr. Wolman introduced Professor Harlemann whose topic for discussion was "Heat Disposal in the Water Environment." The speaker discussed the development of efficient means for transferring heat to natural and artificial cooling water bodies. Specific examples of heated discharges into fresh water lakes and streams, some influenced by the complex flow patterns of Pumped Storage Hydroelectric developments, along with ocean discharges were shown and described through the aid of the speaker's accompanying slide presentation. An intriguing proposal for floating, offshore Nuclear Power Plants using the complex offshore currents for all cooling was shown by Dr. Harlemann.

A question and answer period followed the talk.

The meeting adjourned at 9:00 p.m. Attendance at the meeting was 55. The lists attached hereto contains only 43 attendees, however.

Thomas S. Baron Clerk

STRUCTURAL SECTION

February 12, 1974 — The meeting of the Structural Section, held in the Mezzanine Lounge, M.I.T. Student Center, was opened by Chairman R. Zallen at 7:00 p.m.

As the first order of business, Jurgis Gimbutas, Chairman of the Nominating Committee, announced the following slate of members for the Executive Committee of the coming year.

Chairman:	Dr. Kenneth M. Leet
Vice Chairman:	Dr. Hans W. Hagen
Clerk:	Dr. Lawrence Ogden
Members:	Dr. Frank Heger
	Mr. Frank Davis
	Mr. Richard Foley

Since no additional nominations were proposed from the floor, Chairman Zallen requested the clerk be empowered to record the election of the above members as the Structural Section Executive Committee.

Next Dr. Leet made a brief report on the progress of the BSCE-ASCE Seismic Committee, which is currently preparing the specifications on earthquake design for the new State of Massachusetts Building Code. The report indicated an updated version of the BOCA Code, adjusted for soil and seismic conditions peculiar to the state, was being developed by two sub-committees. Except for buildings on soft ground or buildings whose failure would produce a high possibility of loss of life, provisions will probably be similar to those presently required for Zone 1 seismic design. Specifications will also include provisions to improve the seismic response of structures which typically have weak joints or low ductility.

After Chairman Zallen announced Prof. R. Hanson of the M.I.T. Civil Engineering Department would speak on "Motion Problems in Tall Buildings" at the April 10, 1974 meeting, the speakers for the Panel Discussion on "Current Factors Effecting the Economics of Steel, Concrete, and Prestressed Concrete Systems," were introduced. The speakers included Mr. Robert Lignowski — Director of Promotion — Mass. Ready Mix Concrete Institute, Mr. Frank Davis — Sales Manager — West End Iron, and Mr. John Ransome — Director of Engineering — San-Vel. Corp.

Following a ten minute presentation by each speaker on current factors — labor costs, shortages, etc. — affecting the economics of construction in his particular field, the meeting was opened for a general discussion between the panel and the floor. At 9:15 the meeting, attended by 90 members, was adjourned.

> Kenneth M. Leet Clerk, Structural Section

April 10, 1974 — The meeting of the Structural Section, held in the Mezzanine lounge, MIT Student Center, was opened by chairman Kenneth Leet at 7:00 p.m.

Chairman Leet announced that arrangements are being made with AISC for Professor J. Yurra of the University of Texas to deliver the annual T.R. Higgin's Lecture at the fall meeting of the Structural Section. Next, copies of a proposed specification for the new State Building Code were distributed to the membership. The specification, proposed by the Massachusetts AIA, requires an architect's or engineer's stamp on building plans and appears to be inconsistent with the scope of engineering and architectural practice as presently defined by the existing state registration laws.

In the technical portion of the meeting, Professor R.J. Hanson of MIT discussed a variety of motion problems which have occurred in the upper stories of tall buildings under high winds. When time and funds are available, the speaker indicated model studies can be used to gain insight into wind pressure distributions on the building surface. As part of his presentation, Professor Hanson discussed the wind tunnel studies of Davenport.

The meeting, attended by approximately 120 members, was adjourned at 9:10.

> Lawrence Ogden Clerk

ANNUAL REPORTS

REPORT OF THE BOARD OF GOVERNMENT 1973-1974

To the Boston Society of Civil Engineers:

John A. Volpe

Pursuant to the requirements of the By-Laws the Board of Government presents its report for the year ending April 17, 1974.

The following is a statement of the status of membership in the Society:

Honorary		9
Members		1086
Associates		4
Juniors		44
Students		7
Total		1150
Student Chapters		2
Summary of	f Additions	
New Members		42
New Juniors		
New Students		8 3
Summary of	f Transfers	
Juniors to Members		11
Summary of Lo	ss of Member	·s
Deaths	y	- 11
Resignations		9
Dropped		16
Life Mem	berships	
Life Members		124
Members becoming eligible	e today for	
Life Membership	•	3
Honorary Member	shin is as foll	ows:
John B. Babcock 3rd.	elected	January 2, 1969
Charles O. Baird, Jr.	elected	January 2, 1969
Arthur Casagrande	elected	February 1, 1965
Ralph W. Horne	elected	February 1, 1965
Karl R. Kennison	elected	February 7, 1951
George R. Rich	elected	March 19, 1973
Howard M. Turner	elected	February 18, 1952
Frederic N. Weaver	elected	February 1, 1965
.		

elected

952

January 29, 1968

ANNUAL REPORTS

The following members have been lost through death:

Horace T. Almy Lawrence S. Burke Carroll A. Farwell Gardner S. Gould Frank M. Gunby Arthur T. Ippen Eric L. Johnson Charles F. Joy, Jr. Benjamin A. Lekesky Percival R. Rice Willard A. Wallace March, 1974 1973 June, 1973 June 29, 1973 June 9, 1973 April, 1974 April 8, 1973 December 6, 1973 February 8, 1974 September 13, 1973 March 15, 1973

MEETINGS OF THE SOCIETY

March 21, 1973	Annual Meeting — Address of Retiring President, James P. Archibald, "The Challenge of Change".
April 25, 1973	Joint meeting with Hydraulics Section. Freeman Lecture by H. Headland, "Hydro-Electric Pumped Storage".
May 10, 1973	Joint meeting with Mass. Section, A.S.C.E. Merger Vote.
June 28, 1973	Results of the Merger Ballot.
September 12, 1973	Joint meeting with Mass. Section, A.S.C.E. Panel on Retirement and Pension Systems, Messrs. Pat Brennan, James Moynihan, and Edmund Lang.
October 24, 1973	Annual Student Night, joint meeting with Mass. Sec- tion, A.S.C.E. Debate: "Nuclear Power Plants Versus the Environment", by Dr. James McKenzie and Mr. Lawrence Minnick.
November 28, 1973	Joint with Mass. Section, A.S.C.E. "Proposed Solid Waste Management Plan for Massachusetts", by Alden Cousins.
December 5, 1973	Joint with Environmental Section and Mass. Section, A.S.C.E. "Limiting Nutrients in Surface Waters", by Dr. Archie MacDonnell.
January 30, 1974	Joint with Hydraulics Section and Mass. Section, A.S.C.E. "Charles River Project", by K.P. Devenis and E. Dunn.
February 27, 1974	Joint with Mass. Section, A.S.C.E. "Anatomy of Mass. Truck Loading Study", by Dr. R.C. Norris and C. Rogers.
March 20, 1974	Joint with Computer Section and Mass. Section, A.S.C.E. "Systems Analysis and Applications to Civil Engineering Problems — Economics", by Dr. D.C. Major.

ATTENDANCE AT MEETINGS

Date	Place	Attendance
March 21, 1973	Science Museum	163
April 25, 1973	57 Restaurant	44
May 10, 1973	MIT Student Centèr	42
June 28, 1973	Fay, Spofford & Thorndike, Inc.	30
September 12, 1973	Branding Iron	50
October 24, 1973	Northeastern University	200
November 28, 1973	Holiday Inn, Newton	120
December 5, 1973	Purcell's Restaurant	35
January 30, 1974	Parsons Lab, MIT	81
February 27, 1974	Branding Iron	135
March 20, 1974	Red Coach Grill, Boston	21

The sections of the Society also held a number of meetings during the year covering a variety of subjects of interest. Reports of the various sections will be presented at the Annual Meeting of the Society and will be published in the Journal.

FUNDS OF THE SOCIETY*

PERMANENT FUND. The Permanent Fund of the Society has a book value of \$69,745.14. The Board of Government authorized the use of as much as necessary for the current Income of this fund in payment of current expenses. By vote of the Society, as prescribed by the By-Laws, at the January 30, 1974 and February 27, 1974 meetings, the Board of Government was authorized to transfer an amount not to exceed \$10,000 from the Principal of the Permanent Fund for current expenditures. The amount transferred was \$1,913.19.

JOHN R. FREEMAN FUND. In 1925 the late John R. Freeman, a Past President and Honorary Member of the Society, made a gift to the Society of securities which was established as the 'John R. Freeman Fund'. The income from this fund is to be particularly devoted to the encouragement of young engineers. Mr. Freeman suggested several uses, such as the payment of expenses for experiments and compilations to be reported before the Society; for underwriting meritorious books or publications pertaining to the hydraulic science or art; or a portion to be devoted to a yearly prize for the most useful paper relating to hydraulics contributed to the Society; or establishing a traveling scholarship every third year open to members of the Society. The expenditures from this fund during the year were \$1,191.00.

EDMUND K. TURNER FUND. In 1916 the Society received a bequest of \$1,000 from Edmund K. Turner, a former member of the Society, the income of which is to be used for Library purposes. The Board voted that \$130 be transferred for this purpose.

ALEXIS H. FRENCH FUND. The Alexis H. French Fund, a bequest of \$1,000 was received in 1931 from the late Alexis H. French, a Past President of the Society. The income of this fund is 'to be devoted to the Library of the Society'. The Board voted that \$130 be transferred for this purpose.

*Details regarding the value and income of these funds are given in the Treasurer's Report.

CLEMENS HERSCHEL FUND. This Fund was established in 1931 by a bequest of \$1,000 from the late Clemens Herschel, a Past President and Honorary Member of the Society. The income from this fund is "to be used for presentation of prizes for papers which have been particularly useful and commendable and worthy of grateful acknowledgement." The expenditures from this fund during the year was \$69.00.

DESMOND FITZGERALD FUND. The Desmond FitzGerald Fund, established in 1910 by a bequest of \$2,000 from the late Desmond FitzGerald, a Past President and Honorary Member of the Society provided that the income from this fund shall "be used for charitable and educational purposes". The Board voted on April 13, 1964 'to use the income of this Fund to establish a Boston Society of Civil Engineers' Scholarship in Memory of Desmond FitzGerald, and that it be given to a student in Civil Engineering at Northeastern University'. It was voted 'to accept the recommendation of the Committee at Northeastern University, namely, that the scholarship of \$200 be given to Daniel Maciborski. Presentation to be made at the Annual Meeting of the Society on April 17, 1974.

EDWARD W. HOWE FUND. This fund, a bequest of \$1,000, was received in 1933 from the late Edward W. Howe, a Past President of the Society. No restrictions were placed on the use of this bequest, but the recommendations of the Board of Government was "that the fund be kept intact, and that the income be used for the benefit of the Society or its members". The Board voted that \$181.48 be transferred to Current Fund.

WILLIAM P. MORSE FUND. This Fund, a bequest of \$2,000, was received in 1949 from the late William P. Morse, a former member of the Society. No restrictions were placed on the use of this bequest, but the recommendation of the Board of Government was "that the Fund be kept intact and that the income be used for the benefit of the Society or its members". Upon recommendation of the committee appointed by the President, the Board voted on April 5, 1954 'to appropriate from the income of this Fund a Scholarship to be known as the Boston Society of Civil Engineers' Scholarship in Memory of William P. Morse, and that it be given to a Civil Engineering student at Tufts University, namely, that the Scholarship of \$200 be given to Miss Meredith Sears Auclair", presentation to be made at the Annual Meeting of the Society on April 17, 1974; also, \$85.56 be transferred to the Current Fund.

FRANK B. WALKER FUND. This Fund, a bequest of \$1,000, was received in 1961 from Mary H. Walker, wife of Frank B. Walker, a Past President of the Society. No restrictions were placed on the use of this bequest, but the recommendation of the Board of Government was "that this fund be kept intact and that the income be used for the benefit of the Society or its members". The Board voted that \$81.98 be transferred to the Current Fund.

RALPH W. HORNE FUND. This Fund, a bequest of \$3,000, was received June 29, 1964 from the Directors of Fay, Spofford & Thorndike, Inc., the income from which shall be devoted to a prize or certificate to be awarded annually to a member designated by the Board of Government as having been outstanding in unpaid public service in municipal, state or federal elective or appointive posts; or in philanthropic activity in the public interest. Members of B.S.C.E. only are eligible for the Award. The Board voted unanimously "to accept the recommendation of the Ralph W. Horne Fund Award Committee, namely, that Edward K. True be the recipient to receive the Ralph W. Horne Fund Award for the year 1973-1974. Also, \$106.08 was transferred to the Current Fund.

BOSTON SOCIETY OF CIVIL ENGINEERS SECTION, ASCE

THOMAS R. CAMP FUND. This Fund, a bequest of \$10,000, was received January 15, 1971 from the Directors of Camp Dresser & McKee, Inc., to establish the 'Thomas R. Camp Fund', the income to be used to support an annual Thomas R. Camp lecture or lectures on outstanding recent developments or proposed or completed research in the sanitary engineering field. The income from the fund, over and above that needed to support the annual lecture should be added to the fund, but could be used otherwise at the discretion of the Board of Government of the Boston Society of Civil Engineers.

PRIZES

A number of prizes and awards were recommended for presentation at the Annual Meeting. For the list of awards and recipients, refer to the minutes of the Annual Meeting.

COMMITTEES

The usual special committees dealing with the activities and conduct of the Society were appointed. The membership of these committees is published in the Journal and the reports of the Committees will be presented at the Annual Meeting April 17, 1974.

Your Board wishes to express its appreciation of the excellent work done by the officers of the sections and by the committees of the Society.

Max D. Sorota President

ANNUAL REPORTS

BOSTON SOCIETY OF CIVIL ENGINEERS

REPORT OF SECRETARY

Boston, Mass., April 17, 1974

The following is a statement of cash received by the Secretary and of the expenditures approved by the President in accordance with the budget adopted by the Board of Government.

FOR THE YEAR ENDING FEBRUARY 28, 1974

OFFICE ACCOUNT	EXPENDITURES	RECEIPTS
Rent and Services	\$ 3,169.99	
Gross Salaries	10,052.00	
Social Security, Sales, and other Taxes	968.63	\$ 6.84
Stationery and Postage	2,603,60	
Committee Expenses		
Miscellaneous	461.47	44.98
Capital Costs	20.00	
MEETINGS ACCOUNT		
Hospitality Committee (incl. 1973 Annual Mtg.)	1,992.68	1,447.50
Hall Rentals, Speakers		
Sections	2,536.54	2,759.65
JOURNAL & PUBLICATIONS ACCOUNT		
Journal, printing and postage	7,020.93	
Forum	1,839.49	
E.S.N.E.	1,445.40	
Reprints	172.99	353.40
Miscellaneous	6.00	
Soil Mechanics		528.00
Ads in Journal		1,795.00
Sale of Journals		2,943.30
MISCELLANEOUS		
Dues		17,564.95
Receipts from Sale of Furniture		5.00
Transfer Freeman Fund Income		· 792.00
Transfer Income Permanent Fund		4,020.81
Transfer Principal Permanent Fund		1,913,19
Transfer Income Turner & French Funds		260.00
Transfer Income Howe, Walker, Horne, Morse Fun	lds	455.10
	\$32,289.72	\$34,889.72
Estimated Bills Payable 1973	2,600.00	<i></i>
	\$34,889.72	\$34,889.72
	\$J7,007.72	φ54,002.72

Entrance Fees to Permanent Fund: \$392.50 39 New Members; 5 New Juniors

The above receipts have been paid to the Treasurer whose receipt the Secretary holds. The Secretary holds cash amounting to \$30.00 to be used as a fixed fund for cash on hand.

Respectfully submitted, Joseph F. Willard Secretary

REPORT OF THE TREASURER

to the

BOSTON SOCIETY OF CIVIL ENGINEERS April 17, 1974

for

Fiscal Year March 1, 1973 to February 28, 1974

FINANCIAL STANDING

The financial standing of the Society is summarized in the following four tables which accompany this report. The tables represent conditions as they existed at the close of business on February 28, 1974.

Condensed Statement of Condition
(Assets, Liabilities, and Funds).
Condensed Statement of Income and Expenditures,
Distribution of Funds.
Portfolio of Investments.
Income and Yield from Investments.

SOCIETY INVESTMENTS

The Boston Safe Deposit and Trust Company continues to provide us with investment management and custodian services for the portfolio of securities owned by the Society, and has furnished us with a certified audit of the list of securities.

The Investment Division of the Boston Safe Deposit and Trust Company reviews our portfolio of securities periodically. No recommendations for changes were made this year.

The general policy which dictates the handling of the portfolio continues to be reasonable income consistent with maintenance of principal including reasonable growth rate to offset inflation.

The following changes were made in the portfolio this fiscal year.

Purchased ½ share I.B.M. to make up even shares on a stock split	\$ 156.30
Transferred Thrift Savings Account to cash in Principal Account	3,000.00

AUDIT ·

The Auditing Committee has reviewed the Treasurer's account book, the bills paid by the Treasurer, the receipts from the Secretary, the Savings Bank passbook, the checkbook, and the certified audit of the list of securities of the Society investments. The information contained in this report has been verified.

INVESTMENT FUNDS INCOME ACCOUNT (Boston Safe Deposit & Trust Co. Custodian)

	Debit	Credit	Balance
Balance March 1, 1973			\$802.40
Custodian Service Charge	1,430.85		
Transfer to B.S.C.E.	9,500.00		
Dividends from Stock		8,077.30	
Interest from Bonds & Thrift Savings Acct.		2,739.61	
	\$10,930.85	\$10.816.91	
Balance in account Feb. 28, 1974			\$688.46

58

ANNUAL REPORTS

INVESTMENT FUNDS PRINCIPAL ACCOUNT (Boston Safe Deposit & Trust Co. Custodian)

	Debit	Credit	Balance
Balance March 1, 1973			\$ 46.89
Received as settlement of court action			
on \$5,000 par, at rate of \$1.58 per			
\$1,000-Georgia Power Co.		\$7.90	
Purchased ¹ / ₂ share I.B.M.	\$ 156.30		
Transferred Thrift Savings Acct. to			
Principal Acct.		3,000.00	
Transfer to B.S.C.E.	2,500.00		
TOTAL	\$2,656.30	\$3,007.90	
Balance February 28, 1974			\$398.49

SAVINGS ACCOUNT (First Fed. Sav. & Loan Assoc. of Boston)

This savings account is used as a temporary investment for cash available for investment and for excess balance in the checking account, thus providing additional income while being available as cash for operating purposes.

	Debit	Credit	Balance
Balance March 1, 1973			\$387.57
Transfer from Custodian Acct.		\$2,500.00	
Interest Received		77.04	
Withdrawn-Transfer to Checking Acct.	\$2,000.00		
TOTAL	\$2,000.00	\$2,577.04	
Balance February 28, 1974			\$964.61

CURRENT FUND ACCOUNT

This is the operating account of the Society. The account is provided with a balance of \$3,000 on March 1 of each year, to insure that operations can be carried on until regular income is received.

	Debit	Credit	Balance
Balance March 1, 1973			\$3,000.00
Office expense including Salaries	\$17,275.69*		
Meetings Expense including Annual Mtg.	4,529.22*		
Journal & Publications Expense	10,484.81*		
Received from Secretary		\$27,448.62*	
Transfer from Permanent Fund Income		4,020.81	
Transfer from Permanent Fund Principal		1,913.19	
Transfer from Turner & French Funds Incor	ne	260.00	
Transfer from Howe, Walker, Horne, Morse	Funds Income	455.10	
Transfer from Freeman Fund		792.00	
Reserve for 1973 Bills Payable	2,600.00		
TOTAL	\$34,889.72	\$34,889.72	
Balance Feb. 28, 1974 Current Fund	·	·	\$3,000.00

Deficit in Fiscal Year 1973-74 = \$1,913.19

*The membership and other interested persons are referred to the report of the Secretary published elsewhere in the Journal for a detailed breakdown of the income and expense of the Current Fund. By vote of the Board of Government, \$4,020.81 was transferred from the income of the Permanent Fund to the Current Fund.

By vote of the Board if Government and two votes taken at regular monthly meetings of the Society, \$1,913.19 was transferred from the principal of the Permanent Fund to the Current Fund.

By vote of the Board of Government a total of \$260.00 was transferred from the income of the Turner and French Funds to the Current Fund to be used to underwrite the operating cost of the Society's Library.

By vote of the Board of Government a total of \$455.10 was transferred from the income of the Howe, Walker, Horne, and Morse Funds to the Current Fund.

PERMANENT FUND

The Permanent Fund receives income from its prorated portion of interest and dividends from investments, and pays its portion of service charges of the Custodian Bank. Receipts from entrance fees are credited to the principal of this fund.

	Debit	Credit	Balance
Book value March 1, 1973			\$71,265.83
Custodian Service Charges	\$ 609.37		
Interest & Dividends		\$4,630.18	
Entrance Fees		392.50	
Income transferred to Current Fund	4,020.81		
Principal transferred to Current Fund	1,913.19		
TOTAL	\$6,543.37	\$5,022.68	
Book Value Feb. 28, 1974			\$69,745.14

This year the Permanent Fund received approximately 42% of the income from Interest and Dividends as its prorated share. Next year, due to the \$1,520 reduction in principal it will receive about 41% as its prorated share.

JOHN R. FREEMAN FUND

The Freeman Fund receives income from its prorated portion of interest and dividends from investments, and pays its portion of service charges of the Custodian Bank. The cost of the Freeman Memorial Lecture is paid from this fund. The Freeman Fund Committee authorized the transfer of \$792.00 from the income of the Freeman Fund to the Current Fund to cover expenses of publishing the Eighth Freeman Memorial Lecture in the April 1973 *Journal*.

		Debit	Credit	Balance
Book Value March 1, 1973 Custodian Charges		\$ 464.83		\$54,835.40
Interest and Dividends Freeman Lecture Expense Transfer to Current Fund		399.00 792.00	\$3,537.14	
Book Value Feb. 28, 1974	TOTAL	\$1,655.83	\$3,537.14	\$56,716.71

60

ANNUAL REPORTS

BORING DATA FUND

No expenditures were made from this fund this year, as no work was done on sorting and collating the Boring Data information into publishable form.

Balance March 1, 1973	\$1,548.61
Received from sale of books	17.50
Balance Feb. 28, 1974	\$1,566.11

KARL R. KENNISON FUND

On March 12, 1974 Mr. Kay of the Massachusetts Company reported to the treasurer of the Society the status of the irrevocable trusts established on behalf of the Society by Karl R. Kennison. As of Feb. 28, 1974 the two trusts involving shares in the Massachusetts Fund were as follows:

		No. Shares	Market Value
Trust No. 4315		356.650	\$3,880.35
Trust No. 4444		<u>503.928</u>	5,482.74
	TOTAL	860.578	\$9,363.09

A year ago there were 837.549 shares which had a market value of \$10,424.86

LECTURE FUND

The Lecture Fund was established in 1969, for the purpose of providing money for special lectures sponsored by the Society or the Sections.

	Debit	Credit	Book Value
Book Value March 1, 1973			\$3,852.40
Custodian Service Charges	\$32.86		
Interest and Dividends	\$	249.69	
*Received from Geotechnical Section		767.50	
TOTAL	\$32.86 \$	1,017.19	
Book Value Feb. 28, 1974			\$4,836.73

*This represents half the profit from a lecture series put on by the Geotechnical Section.

THOMAS R. CAMP FUND

The Camp Fund receives income from its prorated portion of interest and dividends from investments and pays its portion of service charges of the Custodian Bank. The costs of the Camp Memorial Lecture are paid from this Fund.

	Debit	Credit	Book Value
Book Value March 1, 1973			\$11,500.20
Custodian Service Charges	\$ 92.49		
Interest and Dividends		\$711.86	
Camp Lecture Expense	675.52		
ΤΟΤΑ	L \$768.01	\$711.86	
Book Value Feb. 28, 1974			\$11,444.05

SAMUEL TINKHAM SCHOLARSHIP FUND (behalf of B.S.C.E.)

This fund was established for scholarships to M.I.T. students and is administered by M.I.T. By letter of Dec. 18, 1973, Mrs. Dorothy Bowe, Assistant Director of student aid at M.I.T. reported that the scholarship award for the year 1973 was made to Jack Chaney of the class of 1976.

OTHER ASSETS

The Society owns no real estate, and rents its office space. It owns office furniture and the usual office equipment for a one room office. The value of this furniture and equipment is not included in this report.

OTHER FUNDS

The membership and other interested persons are referred to the Report of the Board of Government published elsewhere in this issue of the *Journal* for information concerning the remaining funds, and reasons for existence.

Table II gives a summary of Income, Receipts, and Expenditures of all Funds.

Respectfully submitted Robert T. Colburn Treasurer

ANNUAL REPORTS

TABLE I

CONDENSED STATEMENT OF CONDITION ASSETS-LIABILITIES AND FUNDS February 28, 1974

ASSETS	BOOK 2-28-74	VALUE 2-28-73	MARKET VALUE 2-28-74 2-28-7	
First National Bank Boston (Checking Acct.) Boston Safe Dep. & Tr. Co.	\$ 4,417.58	\$ 704.79	\$ 4,418	\$ 705
(Custodian Acct.)	50 (04 (0	50 (00 50	41.022	12 (84
Bonds	52,684.69	52,692.59	41,023	42,684
Stocks	118,832.23	118,675.93 3,000.00	151,605	192,970 3,000
Thrift Savings Acct. Cash Balance in		3,000.00		3,000
Custodian Acct.	1,086.95	849.29	1,087	849
First Fed. Savs. & Loan	1,060.95	049.29	1,007	049
Assoc. Bos.	964.61	387.57	965	387
Cash	30.00	30.00	30	30
TOTAL ASSETS	\$178,016.06	\$176,340.17	\$199,128	\$240,625
LIABILITIES AND FUNDS				
Permanent Fund	\$ 69,745.14	\$ 71,265.83	\$ 78,350	\$ 98,500
John R. Freeman Fund	56,716.71	54,835.40	63,800	75,500
Edmund K. Turner Fund	2.946.63	2,912.77	3.317	4,018
Desmond FitzGerald Fund	5,672.45	5,573.21	6,360	7,680
Alexis H. French Fund	2,914.51	2,882.24	3,270	3,990
Clemens Herschel Fund	1,966.85	1,927.51	2,210	2,680
Edward W. Howe Fund	3,220.34	3,220.34	3,630	4,450
William P. Morse Fund	5,222.22	5,222.22	5,860	7,200
Frank B. Walker Fund	1,453.78	1,453.78	1,630	2,020
Ralph W. Horne Fund	4,455.29	4,455.29	5,010	6,150
Lectures Fund	4,836.73	3,852.40	5,430	5,318
Thomas R. Camp Fund	11,444.05	11,500.20	12,840	15,880
INVEST. FUNDS				
SUB TOTAL	\$170,594.70	\$169,101.19	\$191,707	\$233,386
Boring Data Fund	\$ 1,566.11	\$ 1,548.61	\$ 1,566	\$ 1,549
Current Fund	3,000.00	3,000.00	3,000	3,000
Secretary's Change Fund	30.00	30.00	30	30
Taxes Withheld	225.25	60.37	225	60
Reserve for 1973 Bills Payable	2,600.00	2,600.00	2,600	2,600
TOTAL LIABILITIES AND FUNDS	\$178,016.06	\$176,340.17	\$199,128	\$240,625
			-	

		H	TABLE II					
CONDENSED STATEMENT OF INCOME AND EXPENDITURES DISTRIBUTION OF FUNDS	ENT OF IN	COME AN	VD EXPEN	DITURES	DISTRI	BUTION (DF FUNDS	
I	iscal Year l	March 1, 19	Fiscal Year March 1, 1973 through February 28, 1974	February	28, 1974			
	BOOK)	•				BOOK
FUND	VALUE	INCOM	INCOME AND RECEIPTS	EIPTS	EXPENDITURES Custodian	ITURES	Transfers	VALUE
	Mar. 1, 1973	Interest Dividends	Receipts	Transfer to Funds	Service Charges	Expend- itures	from Funds	Feb. 28, 1974
Permanent Fund	\$ 71.265.83	\$ 4.630.18	\$ 392.50	(Entrance	\$ 609.37			\$ 69.745.14
to Current Fund				Fees)			\$4,020.81	
John R. Freeman Fund to Current Fund	54,835.40	3,537.14			464.83	\$ 399.00	~1.~1 ~.4	56,716.71
Frans. to Current Fund					1		792.00	
Edmund K. Turner Fund	2,912.77	188.71			24.85		130.00	2,946.63
I rans. Irom income to Current Fund Desmond FitzGerald Fund	5.573.21	350.97			45.81	205.92	00.001	5.672.45
Alexis H. French Fund	2,882.24	186.86			24.59			2,914.51
Trans. from Income to Current Fund							130.00	
Clemens Herschel Fund Edward W. Howe Fund	1,927.51	124.76			16.42 27 51	69.00		1,966.85 3 220 34
Trans. from Income to Current Fund	10:044(0	1.004					181.48	
William P. Morse Fund	5,222.22	328.42			42.86	200.00		5,222.22
Trans. from Income to Current Fund							85.56	01 737 1
ank B. Walker Fund Prone Jucome to Current Fund	1,453.78	94.40			12.42		81 98	1,425./8
Ralph W. Horne Fund	4,455.29	281.97			36.84	139.05		4,455.29
Frans. from Income to Current Fund							106.08	
Lectures Fund	3,852.40	249.69	767.50	(From Geot. Sec. Lect. Ser.)	32.86		-	4,836.73
Thomas R. Camp Fund	11,500.20	711.86			92.49	675.52		11,444.05

64

BOSTON SOCIETY OF CIVIL ENGINEERS SECTION, ASCE

\$7,441.10 \$170,594.70	1,566.11 3,000.00		2,600.00 30.00	225.25	\$7,441.10 \$178,016.06
\$1,430.85 \$ 1,688.49 \$7,441.10 \$170,594.70	32,289.72		2,600.00	60.37	\$176,340.17 \$10,893.95 \$28,851.37 \$7,441.10 \$1,430.85 \$36,638.58 \$7,441.10 \$178,016.06
	(From Secretary)	4,020.81 1,507.10 1,913,19	÷		\$7,441.10
\$ 1,160.00	17.50 27,448.62			225.25	\$28,851.37
169,101.19 \$10,893.95 \$ 1,160.00					\$10,893.95
\$169,101.19	1,548.61 3,000.00		2,600.00	60.37	\$176,340.17
SUB TOTAL Investment Funds	Boring Data Fund Current Fund	Received Income from Perm. Fund Received Income from Other Funds Received Principal from Perm. Fund	keserve for Bills Payable Secretary's Change Fund	Taxes Withheld	TOTAL

*2,600 included in transfer from Permanent Fund shown above.

ANNUAL REPORTS

BOSTON SOCIETY OF CIVIL ENGINEERS SECTION, ASCE

TABLE IIIPORTFOLIO OF INVESTMENTS

DOOR VALUE

ADIZED

	BOOK	VALUE	MARKET	Γ VALUE
BONDS & THRIFT SAVINGS ACCT.	2-28-74	3-1-73	2-28-74	3-1-73
Assoc. Invest. Co. 5-1/8-79, Deb.	\$ 6,000	\$ 6,000	\$ 5,190	\$ 5,220
Flintkote Co. 4-5/8-81, Deb.	10,450	10,450	8,112	8,350
Florida Power Corp. 3-1/8-84, 1st Mort.	1,018	1,018	658	664
Florida Power Corp. 3-7/8-86, 1st Mort.	5.038	5,038	3,363	3,419
Georgia Power Corp. 3-3/8-77, 1st. Mort.	5,154	5,162	4,237	4,231
Marine Midland Corp. 4-1/2-89, Deb.	5,000	5,000	3,450	3,600
Montreal Quebec Imp. 6%-87, Deb.	10,075	10,075	8,125	8,625
Orange & Rockland 6-1/2-97, 1st. Mort.	9,950	9,950	7,888	8,575
Nat. Shawmut Bank Thrift Sav. Acct.		3,000		3,000
TOTAL	\$ 52,685	\$ 55,693	\$ 41,023	\$ 45,684
PREFERRED STOCK				
International Tel. & Tel.	\$ 1,534	\$ 1,534	\$ 7,490	\$ 13,134
COMMON STOCKS				
American Tel. & Tel.	\$ 4,332	\$ 4,332	\$ 13,094	\$ 12,438
Clark Equipment Co.	12,287	12,287	15,500	19,250
General Motors Corp.	9,131	9,131	8,585	12,495
Boise Cascade	9,802	9,802	3,002	1,697
Illinois Power Co.	11,591	11,591	6,393	7,562
Inter. Business Machines	11,803	11,648	14,986	21,575
McGraw Edison Co.	14,211	14,211	7,900	14,500
B.F. Saul Real Estate Investment Trust	10,500	10,500	5,563	10,000
New England Electric System	7,505	7,505	7,742	9,084
Newmont Mining Corp.	12,549	12,549	16,750	14,125
Exxon	1,977	1,977	16,725	17,875
Texaco	1,516	1,516	13,275	17,936
Warner Lambert Pharm. Co.	9,937	9,937	14,300	21,200
W.R. Grace & Co.	156	156	100	99
TOTAL	\$117,297	\$117,142	\$144,115	\$179,836
SAVINGS ACCOUNT				
First Fed. Sav. & Loan Assoc. Boston	\$ 965	\$. 387	\$ 965	\$ 387
CASH First Nat. Pank of Poston (Chasking)	¢ 4 4 1 0	¢ 705	¢ / / 10	¢ 705
First Nat. Bank of Boston (Checking) Bos. Safe Dep. & Tr. Co. (Custodian)	\$ 4,418	\$ 705 849	\$ 4,418	\$ 705
Secretary's Change Fund	1,087 30	30	1,087 30	849 30
TOTAL	\$ 5,535	\$ 1,584	\$ 5,535	\$ 1,584
GRAND TOTAL	\$178,016	\$176,340	\$199,128	\$240,625

TABLE IV

INCOME AND YIELD FROM INVESTMENTS

	Estimated	Yield On Current
	Income	Market Value
BONDS 21.2%		
Assoc. Investment Co. 5-1/8-79, Deb.	\$ 307.50	5.9%
Flintkote Co. 5-5%-81, Deb.	462.50	5.7
Florida Power Corp. 3-1/8-84, 1st Mort.	31.25	4.7
Florida Power Corp. 3-7/8-86, 1st Mort.	193.75	5.7
Georgia Power Corp. 3-3/8-77, 1st. Mort.	168.75	4.0
Marine Midland Corp. 4-1/2-89, Deb.	225.00	6.5
Montreal Quebec Imp. 6%-87, Deb.	600.00	7.3
Orange & Rockland 6-1/2 %-97, 1st Mort.	650.00	8.3
TOTAL	\$2,638.75	6.43%
PREFERRED STOCKS 3.8%		
International Tel. & Tel.	\$ 481.50	6.5%
COMMON STOCKS 74.6%		
Amer. Tel. & Tel. Co.	\$ 770.00	5.9%
Clark Equipment Co.	640.00	4.1
General Motors Corp.	833.00	9.7
Boise Cascade	43.50	1.5
Illinois Power Co.	550.00	8.4
International Business Machines	322.56	2.3
McGraw Edison Co.	600.00	7.6
B.F. Saul Real Estate Invest. Trust	780.00	13.8
New England Electric System	637.24	8.3
Newmont Mining Corp.	700.00	4.6
Exxon	910.00	5.5
Texaco	944.00	7.1
Warner Lambert Pharm. Co.	304.00	2.1
W.R. Grace Co.	6.00	6.0
TOTAL	\$8,040.30	5.58%
SAVINGS ACCOUNT .4%		
First Fed. Savings and Loan Assoc.	\$ 82.00	5.5%
TOTAL YIELD FROM INVESTMENTS EST	IMATED	5.8%

ACCOUNTANTS' REPORT

APRIL 17, 1974

To the Board of Government Boston Society of Civil Engineers Section of the American Society of Civil Engineers 230 Boylston Street - Suite 714 Boston, Massachusetts 02116

Dear Sirs:

We have prepared and submit herewith a Statement of Assets, Liabilities and Funds, as of April 17, 1974, on a cash basis, of the newly formed Boston Society of Civil Engineers Section of the American Society of Civil Engineers, which statement gives effect to the approved merger of the Boston Society of Civil Engineers with the Massachusetts Section, American Society of Civil Engineers as of that date.

Also prepared and submitted herewith are individual Statements of Cash Receipts and Disbursements of each merging entity for their respective fiscal periods to the date of merger, April 17, 1974 and a Statement of Changes in Investment Funds of the Boston Society of Civil Engineers for the period March 1, 1974 to April 17, 1974.

As the books of account are kept substantially on a cash basis, the accompanying statements do not include members' dues receivable, accrued interest receivable on securities owned, accrued salaries or other expenses payable.

Our examination of the assets, liabilities and funds of the Boston Society of Civil Engineers and the Massachusetts Section, American Society of Civil Engineers as of April 17, 1974 and the related statements of Cash Receipts and Disbursements for the periods indicated thereon and of Investment Fund changes for the period from March 1, 1974 to April 17, 1974 (all on a cash basis) was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances, except that we did not undertake to interpret the provisions of restricted purpose funds or to determine that the terms of the legacies and gifts creating these funds had been complied with.

In our opinion, the accompanying statement of assets, liabilities and funds and the related statements of cash receipts and disbursements and the statement of investment fund changes present fairly the assets, liabilities and funds of the newly formed Boston Society of Civil Engineers Section of the American Society of Civil Engineers as of April 17, 1974, on the basis stated, and the recorded cash receipts and disbursements for the periods indicated both on a consistent basis.

Respectfully submitted, Kiley, Devlin & Company

STATEMENT OF ASSETS (CASH BASIS)

April 17, 1974

ASSETS

	Boston Society	American Society	Combined
CASH:	• • • • • • • • • •		ф <u>5 407 (4</u>
The First National Bank of Boston	\$ 5,406.64	#0.007.04	\$ 5,406.64
State Street Bank and Trust Co.	004.75	\$9,827.34	9,827.34
First Federal Savings & Loan Assoc.	994.75		994.75
Secretary's Fund	30.00	20.21	30.00
Post Office Fund		38.31	38.31
	6,431.39	9,865.65	16,297.04
BOSTON SAFE DEPOSIT AND TRUST CO.		l:	
Stocks - quoted market value - \$146,710.00	118,832.23		118,832.23
Bonds - quoted market value - \$39,717.50	52,684.69		52,684.69
Income Cash	3,031.16		3,031.16
Principal Cash	398.49		398.49
TOTAL OF CUSTODIAN ACCOUNT	NT -		
(See Exhibit A)	174,946.57		174,946.57
SCHOLARSHIP LOAN ACCOUNT:		4.4 1.1	
Cash - Union Warren Savings Bank		2,827.15	2,827.15
Loan Outstanding		4,200.00	4,200.00
Check Lost - Alan Precup -			
no longer required		400.00	400.00
		7,427.15	7,427.15

TOTAL ASSETS

\$181,377.96 \$17,292.80 \$198,670.76

(continued)

STATEMENT OF LIABILITIES AND FUNDS (CASH BASIS)

April 17, 1974 (continued)

LIABILITIES AND FUNDS

INVESTMENT FUNDS:	Boston Society	American Society	Combined
Permanent	\$ 70,745.25		\$ 70,745.25
John R. Freeman	57,025.66		57,025.66
Edmund K. Turner	2,987.60		2,987.60
Desmond FitzGerald	5,551.35		5,551.35
Alexis H. French	2,955.04		2,955.04
Clemens Herschel	1,936.66		1,936.66
Edward H. Howe	3,265.12		3,265.12
William R. Morse	5.094.88		5,094.88
Frank B. Walker	1,474.00		1,474.00
Ralph W. Horne	4,373.04		4,373.04
Lectures	4,904.00		4,904.00
Thomas R. Camp	11,499.24		11,499.24
TOTAL INVESTMENT FUNDS	171,811.84		171,811.84
OTHER FUNDS:			
Boring Data Fund	1,568.61		1,568.61
Continuing Education Committee	,	6,477.25	6,477.25
Scholarship Loan Fund		7,427.15	7,427.15
Secretary's Loan Fund	30.00	,	30.00
Current Fund	7,795.59	3,188.40	10,983.99
TOTAL FUNDS	181,206.04	17,092.80	198,298.84
OVERPAYMENT ON STUDENT LOAN		200.00	200.00
TAXES WITHHELD	171.92		171.92
TOTAL LIABILITIES AND FUNDS	\$181,377.96	\$17,292.80	\$198,670.76

The accompanying notes to Statement of Assets, Liabilities and Funds are an integral part of this statement.

70

ANNUAL REPORTS

INVESTMENT BOSTON SAFE DEPOSIT AND TRUST COMPANY CUSTODIAN April 17, 1974

Exhibit A

			Book	Market
		,	Value	Value
BONDS:	*			
	Florida Power Corp. 1st Mtge. 31/8 % 7/1/84	\$		
5,000	Florida Power Corp. 1st Mtge. 37/8 % - 7/1/86		5,037.59	3,225.00
5,000	Georgia Power Co. 1st Mtge. 33/8 % - 12/1/77		5,154.60	4,200.00
10,000	Orange & Rockland Utilities Inc. 1st Mtge. 61/2 %			
	— 10/1/97 Registered		9,950.00	7,437.50
	Flintkote Co. Deb. 45/8 % 4/1/81		10,450.00	7,975.00
	Assoc. Investment Co. Deb. 51/8 % - 8/1/79		6,000.00	4,950.00
	Marine Midland Corp. Deb. 41/2 % 7/15/89		5,000.00	3,450.00
10,000	Montreal Quebec Impr. Deb. 6% – 1/15/87		10,075.00	7,850.00
	TOTAL BONDS	\$	52,684.69	\$ 39,717.50
PREFER	RED STOCK:			
	International Tel. & Tel. Corp. \$2.25 Cum.			
	Convertible Pfd. — No Par		1,534.39	6,580.50
COMM	NI STOCK			
	N STOCK:		150.00	104.00
	W. R. Grace & Co.		156.00	104.00
	General Motors Corp.		9,130.92	8,500.00
	Boise Cascade Corp.		9,801.84	3,284.25
	Warner Lambert Co.		9,937.25	14,150.00
	McGraw Edison Co.		14,211.26	8,450.00
	B. F. Saul Real Estate Investment Trust		10,500.00	5,125.00
	Clark Equipment Co.		12,286.76	15,100.00
	Newmont Mining Corp.		12,548.53	15,937.50
	International Business Machines Corp.		11,803.73	14,757.75
	Exxon Corporation		1,977.26	16,250.00
	Texaco, Inc.		1,515.72	13,039.00
	American Tel. & Tel. Co.		4,332.42	12,250.00
	Illinois Power Co.		11,591.06	6,156.25
348	New England Electric System		7,505.09	7,025.75
	TOTAL COMMON STOCK		17,297.84	140,129.50
	TOTAL SECURITIES		171,516.92	186,427.50.
PRINCI	PAL CASH		398.49	398.49
INCOM	E CASH		3,031.16	3,031.16
	TOTAL HELD BY CUSTODIAN	\$	174,946.57	\$189,857.15

NOTES TO STATEMENT OF ASSETS, LIABILITIES AND FUNDS (CASH BASIS)

April 17, 1974

1. BASIS OF STATEMENT OF ASSETS, LIABILITIES AND FUNDS— APRIL 17, 1974

The Statement of Assets, Liabilities and Funds of the newly formed Boston Society of Civil Engineers Section of the American Society of Civil Engineers as of April 17, 1974 has been prepared on a cash basis and arrived at by combining the assets, liabilities and funds arising out of recorded cash transactions on the books of account of the Boston Society of Civil Engineers and the Massachusetts Section, American Society of Civil Engineers to and including the date of April 17, 1974.

2. FINANCIAL CONDITION - APRIL 17, 1974

The accompanying Statement of Assets, Liabilities and Funds at April 17, 1974 prepared on a cash basis do not include several items of accrued income and expenses necessary to properly reflect the financial condition of the newly formed Boston Society of Civil Engineers Section of the American Society of Civil Engineers at April 17, 1974. Although we have not attempted to verify these omissions, they include such items as accrued Interest on Bonds, Members' Dues receivable and also certain unpaid liabilities including the cost of the November 1973 Journal of approximately \$2,600.00.

3. MINOR ASSETS NOT INCLUDED IN ACCOMPANYING STATEMENT

The Boston Society of Civil Engineers have three current assets which are not on the books: namely, a petty cash fund and two deposits at the Post Office for mailing. The total value of the three funds approximate \$100.00. The reimburser onts for these funds are recorded as expense when paid.

On April 17, 1974, the Massachusetts Section American Society of Civil Engineers drew a check for \$300.00, payable to Massachusetts Section American Society of Civil Engineers — West Division. This payment has been expensed and should be accounted for at a future date.

Office furniture and fixtures are not recorded as assets on the books of account.

4. DESCRIPTION OF INVESTMENT FUNDS:

PERMANENT FUND: The Permanent Fund established in 1857 has a book value of \$70,745.25 at April 17, 1974. The income from this fund is available to pay current expenses as authorized by The Board of Government. The principal may be expended as voted by the Society and authorized by The Board of Government.

JOHN R. FREEMAN FUND: The John R. Freeman Fund was established in 1925 by a gift of securities from the late John R. Freeman and has a book value of \$57,025.66 at April 17, 1974. The income from this fund is to be particularly devoted to the encouragement of young engineers.

EDMUND K. TURNER FUND: The Edmund K. Turner Fund was established in 1915 by a bequest of \$1,000.00; the fund has a book value of \$2,987.60 at April 17, 1974. The income is to be used for library purposes.

72

DESMOND FITZGERALD FUND: The Desmond FitzGerald Fund was established in 1927 by a bequest of \$2,000.00 which provided that the income from the Fund be used for charitable and educational purposes. The book value of the Fund at April 17, 1974 is \$5,551.35.

ALEXIS H. FRENCH FUND: The Alexis H. French Fund was established in 1930 by a bequest of \$1,000.00, the income to be devoted to the Library of the Society. The book value of the Fund at April 17, 1974 is \$2,955.04.

CLEMENS HERSCHEL FUND: The Clemens Herschel Fund was established in 1930 by a bequest of \$1,000.00, the income from this Fund to be used for presentation of prizes for papers worthy of acknowledgement. The book value of this Fund at April 17, 1974 is \$1,936.66.

EDWARD W. HOWE FUND: The Edward W. Howe Fund was established in 1933 by a bequest of \$1,000.00. No restrictions have been placed on the use of this Fund, but The Board of Government recommended that the principal be kept intact and the income be used for the benefit of the Society or its members. The book value of this Fund is \$3,265.12 at April 17, 1974.

WILLIAM P. MORSE FUND: The William P. Morse Fund was created in 1949 by a bequest of \$2,000.00 with no restrictions placed on its use. The Board of Government recommended that the Fund be kept intact and that the income be used for the benefit of the Society or its members. On January 24, 1955, the Board voted to appropriate from income a scholarship to a Civil Engineering student at Tufts University. The book value of this Fund is \$5,094.88 at April 17, 1974.

FRANK B. WALKER FUND: The Frank B. Walker Fund was established in 1961 by a bequest of \$1,000.00. No restrictions were placed on the Fund but the Board of Government recommended that the Fund be kept intact and the income be used for the benefit of the Society or its members. The book value of the Fund at April 17, 1974 is \$1,474.00.

RALPH W. HORNE FUND: The Ralph W. Horne Fund was established in 1964 by a bequest of \$3,000.00, the income shall be devoted to a prize or certificate to be awarded annually to a member of the Boston Society of Civil Engineers who has been outstanding in unpaid public service, or in philanthropic activity in the public interest. The book value of this Fund at April 17, 1974 is \$4,373.04.

LECTURE FUND: The Lecture Fund was established in 1969 for the purpose of providing money for special lectures sponsored by the Society. The book value of this Fund at April 17, 1974 is \$4,904.00.

THOMAS R. CAMP FUND: The Thomas R. Camp Fund was established in 1971 by a bequest in the amount of \$10,000, the income to be used to support an annual Thomas R. Camp lecture or lectures. The book value of this Fund is \$11,499.24 at April 17, 1974.

The Assets of the foregoing Funds are held by the Boston Safe Deposit and Trust Company as custodian.

74 BOSTON SOCIETY OF CIVIL ENGINEERS SECTION, ASCE

5. DESCRIPTION OF OTHER FUNDS:

BORING DATA FUND: The Boring Data Fund was established to gather data concerning the subsoils of Boston and preparing and publishing reports thereon. The Fund receives donations and income from the sale of books. The book value of this Fund at April 17, 1974 is \$1,568.61.

CONTINUING EDUCATION COMMITTEE FUND: The cash for this committee fund is commingled with current Funds in the checking account. The amount of available cash at April 17, 1974 is \$6,477.25. This account is credited with amounts received as tuition, and charged with honorariums and expenses paid.

SCHOLARSHIP LOAN FUND: This Fund is credited with profits from annual dinner dance and repayment of student loans. Charges to this account are for loans to students. At April 17, 1974 this account is represented by:

Deposits — Union Warren Savings Bank	\$2,827.15
Amount included in checking account	400.00
Student loans	4,200.00
	\$7,427.15

CURRENT FUND: The Current Fund is principally represented by cash included in the checking accounts, and is used to pay current expenditures.

6. OTHER FUNDS NOT INCLUDED IN STATEMENT:

SAMUEL E. TINKHAM FUND: The Samuel E. Tinkham Fund was established in 1921 at Massachusetts Institute of Technology by the Society to assist some worthy student of high standing to continue his studies in Civil Engineering.

The income from this Fund is awarded by Massachusetts Institute of Technology as scholarships to worthy students.

KARL R. KENNISON FUND: This Fund is comprised of two irrevocable trusts established in behalf of the Society by Karl R. Kennison. These trusts consist of shares of the Massachusetts Life Fund. On February 28, 1974 these trusts included the following:

	No. of Shares	Market Value
Trust #4315	356.650	\$3,880.35
Trust #4444	503.928	5,482.74
	860.578	\$9,363.09

After Mr. Kennison's death the net income shall be paid to the Society for a Hydraulic Lectureship Fund to be used for various public lectures on this subject, and the Board may withdraw the principal on written demand or make such changes in the use of the Fund as it may determine are warranted.

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS

For the Period from January 1, 1974 to April 17, 1974

CASH RECEIPTS:		
Dues - Members		\$ 70.00
Dues - American Society of Civil Engineers		2,452.50
Interest from Savings bank account		96.32
Meetings		47.60
Forum		728.51
Continuing education		7,991.58
New England Council		18.88
TOTAL RECEIPTS		11,405.39
CASH DISBURSEMENTS:		
"Forum" quarterly newsletter		915.83
Western branch expenses		300.00
Printing and mailing		1,415.00
Mailing list		45.50
Postage		100.00
Student chapters		47.57
Student awards		293.33
Committee expenses		1,701.33
Merger expenses		433.03
Miscellaneous		230.20
TOTAL DISBURSEMENTS		5,481.79
Excess of Receipts over Disbursements		
for the Period		5,923.60
Post Office Fund		38.31
Balance of Funds December 31, 1973		10,930.89
Balance of Funds April 17, 1974		\$16,892.80
Made up as follows:		
Continuing Education Fund		\$6,477.25
Scholarship Loan Fund	\$7,427.15	. ,
Less - Overpayment	200.00	7,227.15
Current Fund		3,188.40
Balance of Funds April 17, 1974		\$16,892.80
bulance of Funds April 17, 1974		\$10,072.00

The accompanying notes to Statement of Assets, Liabilities and Funds are an integral part of this statement.

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS

For the Period from March 1, 1974 to April 17, 1974

		Current Fund	Investment Funds
CASH RECEIPTS:			
Members' dues	\$ 503.00	\$ 503.00	
Advertisement income - Journal	3,302.50	3,302.50	
Annual meeting	906.50	906.50	
Technical group meetings	538.15	538.15	
Sales of Journal, etc.	127.12	127.12	
Entrance fees	30.00		\$ 30.00
Investment income:			
Bond interest	556.25		556.25
Stock dividends	1,786.45		1,786.45
Savings bank interest	30.14		
TOTAL RECEIPTS	7,780.11	5,377.27	2,402.84
CASH DISBURSEMENTS:			
Office rents and services	687.81	687.81	
Salaries	1,352.00	1,352.00	
Employer taxes	215.86	215.86	
Office supplies, printing, postage	704.40	704.40	
Miscellaneous	48.00	48.00	
Capital costs	15.30	15.30	
Meetings expense	158.31	158.31	
Fund expenditures:			
John R. Freeman Fund	479.95		479.95
Desmond FitzGerald Fund	200.00		200.00
Clemens Herschel Fund	57.55		57.55
William P. Morse Fund	200.00		200.00
Ralph W. Horne Fund	144.20		144.20
Thomas R. Camp Fund	104.00		104.00
TOTAL DISBURSEMENTS	4,367.38	3,181.68	1,185.70
Excess of Receipts over Disbursements			
for the Period	\$3,412.73	2,195.59	1,217.14
BALANCE - MARCH 1, 1974		3,000.00	170,594.70
Add - Reversal of bills payable -			
4-17-74	_	2,600.00	
BALANCE - APRIL 17, 1974	_	\$7,795.59	\$171,811.84
	=		

The accompanying notes to Statement of Assets, Liabilities and Funds are an integral part of this statement.

STATEMENT OF CHANGES IN INVESTMENT FUNDS

	rrom M	arcn 1, 19	14 to Apr	U II, I97	4	
		,	-	Edmund	Desmond	
			John R.	Т.	Fitz-	Alexis
		Permanent	Freeman	Turner	Gerald	French
	Total	Fund	Fund	Fund	Fund	Fund
DAL ANOD						
BALANCE -						
MARCH 1, 1974	\$170,594.70	\$69,745.14	\$56,716.71	\$2,946.63	\$5,672.45	\$2,914.51
Add:						
Investment						
income	2,372.84	970.11	788.90	40.97	78.90	40.53
Entrance fees	30.00	30.00				
	172,997.54	70,745.25	57,505.61	2,987.60	5,751.35	2,955.04
Deduct:						
Expenditures:						
Lectures	583.95		479.95			
Scholarships	400.00				200.00	
Prizes &					200100	
awards	201.75					
	1,185.70		479.95		200.00	
BALANCE -						
APRIL 17, 1974	\$171,811.84	\$70 745 25	\$57,025.66	\$2,987,60	\$5.551.35	\$2,955.04
11, 17, 17, 17, 17, 17, 17, 17, 17, 17,	φ171,011.0 4	ψι0,145.25	\$57,525.00	<i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>	<i>\$5,551,55</i>	<i><i><i>q2,755.</i>04</i></i>
						(continued)

From March 1, 1974 to April 17, 1974

STATEMENT OF CHANGES IN INVESTMENT FUNDS From March 1, 1974 to April 17, 1974

				(continu	ued)	,		
		Clemens Herschel Fund	Edward W. Howe Fund	William P. Morse Fund	Frank B. Walker Fund	Ralph W. Horne Fund	Lecture Fund	Thomas R. Camp Fund
t	BALANCE - MARCH 1, 1974 Add:	\$1,966.85	\$3,220.34	\$5,222.22	\$1,453.78	\$4,455.29	\$4,836.73	\$11,444.05
	Investment income Entrance fees	27.36	44.78	72.66	20.22	61.95	67.27	159.19
		1,994.21	3,265.12	5,294.88	1,474.00	4,517.24	4,904.00	11,603.24
	Deduct: Expenditures: Lectures Scholarships Prizes & awards	57.55		200.00		144.20		104.00
		57.55		200.00	• •	144.20		104.00
	BALANCE - APRIL 17, 1974	4 \$1,936.66	\$3,265.12	\$5,094.88	\$1,474.00	\$4,373.04	\$4,904.00	\$11,499.24
Investment Income which is prorated to funds on the basis of book value of funds at March 1, 1974 is made up of: Bond interest \$ 556.25 Dividends on stocks 1,786.45 Savings bank interest 30.14 \$2,372.84								

The accompanying notes to Statement of Assets, Liabilities and Funds are an integral part of this statement.

ANNUAL REPORTS

SUMMARY OF ASCE ACTIVITIES FOR THE YEAR 1973-74, PREPARED BY BERTRAM BERGER, SECRETARY, MASS. SECTION, ASCE

MS/ASCE Executive Committee Elected Officers for 1973-74

PRESIDENT	VICE PRESIDENT	SECRETARY	TREASURER
Ronald C. Hirschfeld	Dr. Thomas K. Liu	Bertram Berger	Anthony L. Ricci

EXECUTIVE COMMITTEE Maurice Freedman Harold S. Glenzel Anthony J. DiSarcina

ASCE - DIRECTOR - District 2 Cranston R. Rogers, Jr. PAST PRESIDENT Brian Hogan

VICE PRESIDENT (Western Branch) James A. Wesoloski (Ex Officio)

The following are highlights of this year's activities of the Executive Committee and Section Committees of the Society:

Eleven Executive Committee sessions were held.

Activities for the implementation of the merger began with the Boston Society of Civil Engineers.

A "joint committee on seismic design criteria" was established with Howard Simpson as Chairman.

Mass. Section introduced a program for a Professional Engineers Refresher Course.

A joint Goals Committee was established to evaluate the goals and objectives of the new organizations and to review the existing committees of each society.

Joint meetings with BSCE Board of Government began in October and expire on this date, April 17, 1974.

Mass. Section sent a representative, Frank Perkins, Professor at M.I.T., to attend a Civil Engineering Education Conference at Ohio State University.

A new procedure was implemented whereby section chairmen were invited to participate and report on their committee's activities.

The Executive Committee recognized and agreed to support morally and financially the activities of the Inter-Society Committee on Engineering Professionalism.

The Executive Committee nominated Edward C. Keane, Director, Fay, Spofford & Thorndike, as its nominee for the Edmund Friedman Professional Recognition Award.

President Hirschfeld established an *Ad Hoc* Committee on Civil Engineering. The Committee was asked to make recommendations for the direction that Civil Engineering Education will follow.

Mr. Maurice Freedman was selected to represent the Mass. Section/ASCE at the Land Use Policy Conference.

80

BOSTON SOCIETY OF CIVIL ENGINEERS SECTION, ASCE

The following is a summary of the major activities of the committees of the Mass. Section of ASCE:

ASCE/GC - Chairman W. W. Wilson

This committee was reactivated in October of 1973 and has had monthly meetings since that time. The committee is in the process of evaluating NSPE's General Conditions for Contracts. The committee recently passed a resolution concerning the energy and material shortages, and this resolution was presented and adopted by the Mass. Section of ASCE, Executive Board, on December 11, 1973, and is presently before National ASCE.

Associated Member Forum - Chairman Anthony J. DiSarcina

The Steering Committee held twenty meetings last year. AMF was responsible for four other group meetings and activities. In May, AMF sponsored a Program on Salary Guidelines, with 140 attendees; in July, it sponsored the Annual Clambake, with 127 attendees; in September, it sponsored a panel discussion on Pension Programs, with 60 attendees, and in October, it sponsored a program on Personal Finance Planning, with 16 attendees. The chairman of this committee is also a member of the Inter-Society Committee on Engineering Professionalism.

Continuing Education Committee - Chairman Ronald E. Sharpin

The committee this last year conducted a very successful Professional Engineers Refresher Course. The chairman also attended a Continuing Education Program at the Boston Architectural Center. The committee is in the process of planning a Continuing Education Program for the spring and fall examination period.

Annual Dinner Dance - Chairman Frank J. Cullati

The 12th Annual Dinner Dance was held at the 57 Restaurant in October of 1973. A large crowd attended and the affair was very successful. The 13th annual dinner dance has been scheduled at the same location for Saturday, October 19, 1974.

Disadvantaged Youth Committee - Chairman John Kennedy

This committee unfortunately did not make the progress anticipated. At the present time its chairman is in contact with William Layton of the National ASCE who is trying to assist the committee in establishing the necessary guidelines.

Forum Committee - Chairman David Treadwell, Jr.

The Forum has continued to publish a newsletter of high quality and has received wide-spread acceptance. Unfortunately, the Forum has had difficultires with publishing the newsletter on a regular schedule. The committee is now investigating the possibility of having a professional printing company do all phases of the publishing process.

Hospitality Committee - Chairman John J. Cusack

This is basically a one-man committee responsible for introducing new members at society functions. The chairman undertakes the task at all meetings he attends. The chairman recommends that all members of the Society consider themselves members of this Hospitality Committee and initiates this course of action.

Key Man Committee - Chairman Donald F. Dargie

The primary purpose of this committee is to communicate notices of meetings and other business activities to members through their place of business. This committee is responsible for rapid communication to insure and encourage attendance at society functions and meetings. This committee has been very successful and is responsible for the large attendance at many of the meetings.

Legislative Affairs Committee - Chairman Robert R. Cunningham

This committee was inactive this past year.

Membership Committee - Chairman Edward B. Kinner

This committee was very active and was responsible for urging members of the National ASCE to become subscribing members to the Mass. Section. Letters, telephone calls and others means of communication were made to these non-subscribing members.

The committee has also made contact with new college graduates.

The committee also participated in the National ASCE membership drive and used the Key Man Committee for making contact with non-subscribing members at local firms. The committee is looking forward to the implementation of the new computerized membership program so as to simplify the contact process.

Merger Committee - Chairman Saul Namyet

This committee was very active this past year following the responsibilities as outlined in the merger agreement. The principal tasks of the committee were the coordination of secretarial and financial matters, also the computerization of the mailing and dues billing system. The committee was fortunate in having Wentworth College of Technology provide its computer facilities.

Professional Practice Committee - Chairman Howard R. Perkins

The committee conducted an investigation regarding the harassment of Massachusetts engineers by the Architectural Registration Board. The committee is presently laying the groundwork for any hearings relative to complaints to the National by members and then referred to a local committee.

The committee is also actively engaged in developing a program to incorporate a code of conduct in the new registration law.

Student Chapter Committee - Chairman N. Lee Worth

This committee was very active this last year. On October 24, 1973, a Student Night Dinner Meeting was held at Northeastern University and was very successful. The committee is involved with Northeastern students in a program called "Employer Project". This project was conducted throughout New England where information was solicited from engineering firms regarding their needs of engineers for the upcoming year. This information will be made available to all New England ASCE Student Chapters. The committee also made arrangements for student loans to those students in need of financial assistance.

Public Relations Committee - Chairman Philip D. Giantris

The committee prepared a press release for Dr. Clair N. Sawyer, who was selected as a Thomas Camp lecturer.

A two-page historical spread was prepared for the Civil Engineering magazine on the merger and this will appear in the April issue of the Civil Engineering.

The committee is also involved with the BSCE Public Relations Committee on coverage for the upcoming annual meeting and the merger of the two societies.

MS|ASCE and BSCE Goals Committee - Chairman Dr. Thomas K. Liu

This special committee was established to review the existing committees of the Boston Society of Civil Engineers and the Mass. Section of the American Society of Civil Engineers. Each of the duties and responsibilities of the existing committees was reviewed and their final disposition with recommendations made as to its future purpose and goals. A report of the findings was prepared and submitted to the respective societies.

REPORT OF THE AUDITING COMMITTEE April 1, 1974

To the Boston Society of Civil Engineers:

We have reviewed the records and accounts of the Secretary and Treasurer of the Boston Society of Civil Engineers and we have compared the bank statement of securities held by the Boston Safe Deposit and Trust Company with the enumeration submitted by the Treasurer. We found them to be in order and to account accurately for the Society's Funds.

We are pleased to state that the recommendations made in last year's report have been implemented. We recommend that consideration be given to bonding of the Treasurer, Secretary and the office secretary.

> Respectively Submitted Charles C. Ladd A. Russell Barnes, Jr.

REPORT OF JOURNAL EDITOR March 19, 1974

To the Board of Government:

During the last fiscal year, Volume 60 was published, consisting of issues for January, April, July and October 1973; the October issue now being at the printer. It contained ten technical papers plus Society reports in approximately 200 pages of text.

Efforts continue toward keeping down production costs, and these should continue. It is felt, however, that the net cost of the Journal to the Society should and can be reduced significantly if a real effort is made to obtain more advertising, professional cards, and subscriptions.

The quality of papers published has been good, but the availability of acceptable papers continues to be a problem. Sections must make a greater effort to have their speakers present papers, and new potential sources of good professional papers explored.

The continuing purpose of the Journal is to provide the Society members and our subscribers with a publication of high standards as a medium for top quality technical papers, high grade professional advertising, and Society reports.

Respectfully submitted, H. H. Holly, Editor

ANNUAL REPORTS

REPORT OF PUBLICATIONS COMMITTEE Boston, Massachusetts April 17, 1974

To the Boston Society of Civil Engineers:

The following is the Annual Report of the Publications Committee, April 1973 to April 1974.

Papers Received	11
Papers Rejected	4
Papers Accepted, Published	
or in Press	6
Papers Under Review	1

The Journal should continue to contain only high quality papers of original work or work that would serve a useful purpose for reference. The Committee feels that a renewed effort on the part of all Sections, plus an appreciation for the fact that papers do not have to be given at a meeting in order to be eligible for publication, should result in more papers being available.

The Technical Section Chairmen in particular should strongly push for a written version of talks when arranging for speakers.

> Respectfully submitted, Charles A. Parthum, Chairman Peter S. Eagleson, Paul D. Guertin, Richard K. Guzowski, David I. Hellstrom H. Hobart Holly, Joseph B. Kerrissey, Jr., Simon Kirshen Frank E. Perkins, Steve Poulos, Rubin M. Zallen

REPORT OF THE ADVERTISING COMMITTEE

To the Boston Society of Civil Engineers:

The advertising committee met four times during the year and worked toward increasing advertising revenue in the Journal. A total of 85 local firms were contacted by telephone, 19 of which indicated a willingness to place ads in the Journal. These firms were mailed a letter with detailed instructions; and the BSCE office has been notified of their interest.

Respectfully submitted Peter Taylor, Chairman Stanley Lucks, Assistant Chairman Kenneth Briggs, Peter Dunlop, David Pang Ed Johnson, Lany Ogden

REPORT OF THE LIBRARY COMMITTEE

To the Boston Society of Civil Engineers:

At present, the BSCE library consists of back issues of the Journals plus a few periodicals. The remainder of the former BSCE library has been turned over to Northeastern University and incorporated into their library. The books are still available to BSCE members but the Society has no responsibility for maintaining them or for providing any additional books. The few periodicals received are complimentary and require no expense on the part of the Society.

The Journals should be maintained and kept up-to-date. The present policy with regard to periodicals is satisfactory and no change should be contemplated.

We do not feel that there is any necessary function for the Library Committee to perform. Therefore, we request that the Board of Government consider abolishing the Library Committee.

> Respectfully submitted, Robert L. Fuller, Chairman

REPORT OF THE MEMBERSHIP COMMITTEE March, 1974

To the Boston Society of Civil Engineers:

During the past year the members of the Committee attended meetings of the Society and attempted to contact those engineers who are actively participating in Society meetings and are not yet members. In addition, Committee members were encouraged to foster Society membership among eligible engineers in their respective firms.

The increase in membership during the current year is as follows:

New Members	42
New Juniors	8
Reinstated	10

Respectfully submitted, A. Paul LaRosa, Chairman

REPORT OF B.S.C.E. QUARTERS COMMITTEE March 29, 1974

To the Boston Society of Civil Engineers:

As the Society moved to new quarters the previous year, the duties of the Quarters Committee were involved, for the most part, in the question of additional furniture and equipment. During the past year the old typewriter was replaced with a new IBM Selectric machine (purchased, but not yet received) at a cost of \$568.90, which reflected a trade-in on the old machine.

Consideration was given to the rental of additional space immediately adjacent to our present facilities. However, as the rental of this space could not be favorably negotiated, the matter was dropped from further consideration.

> Respectfully submitted, David A. Duncan, Chairman

84

ANNUAL REPORTS

REPORT OF THE PUBLIC RELATIONS COMMITTEE April 11, 1974

To the Boston Society of Civil Engineers and American Society of Civil Engineers, Massachusetts Section:

The Public Relations Committee of BSCE became the Joint ASCE/BSCE Public Relations Committee on November 20, 1973.

The Committee held four meetings of the full membership, and there were two subcommittees headed by K.P. Devenis and P.J. Berger.

During the year the Committee

a. Reviewed public relations guides of other groups,

- b. Prepared and sent article to Forum editor on the theme that civil engineers should "Get Involved" in community affairs on a volunteer basis.
- c. Prepared publicity re the merger of BSCE and MS/ASCE intended for use in Civil Engineering magazine, the ESNE Journal and newspapers.
- d. Prepared releases for local newspapers on the new officers of the BSCES/ASCE.

Items that the Committee discussed, and that next year's Committee may want to pursue further, include

a. Regular input to the Forum,

- b. The proper relationship between the public relations committee and
 - 1. the society's technical sections and other committees,

2. other societies.

c. The engineer's image,

d. Method of selecting consultants by public bodies.

Respectfully Submitted, Public Relations Committee Charles H. Flavin, Chairman Harl P. Aldrich, Jr., James P. Archibald, Paul J. Berger John J. Cusack, Keistutis P. Devenis, Donald T. Goldberg

ANNUAL REPORT OF THE JOINT LEGISLATIVE COMMITTEE

Boston, Massachusetts April 17, 1974

To the Boston Society of Civil Engineers:

Action on the Legislative front was strong and continuous during the past year.

State Reorganization — H6090

Early in the year, as part of the State's Reorganization Plan, House Bill 6090 was introduced into the Legislature and, if passed, would have abolished the authority of the Board of Registration and placed decisions on qualifications and experience of applicants for Registration as Professional Engineers in the hands of others.

The Committee drafted and placed notices in the ESNE Journal and the Forum and wrote letters to senators and representatives pointing out the fallacies in this proposal. These efforts, as well as those from many other sources, were successful in defeating this bill.

As a result of the filing of this bill, however, the Joint Registration Law Revision Committee was revived and your committee's chairman has represented ASCE/BSCE on it. A decision has not been reached at this writing as to whether the Board of Registration of Professional Engineers and Land Surveyors will stay in the Department of Consumer Affairs or be transferred to Public Safety.

Concurrently, several bills have been filed in the 1974 "hopper" to strengthen the registration procedure. Among these are:

- H 1940 An Act Revising the Authority of the Board of Registration of Professional Engineers and of Land Surveyors
- S 1306 An Act to Provide for Appointment of Individuals to the Board of Registration of Professional Engineers and of Land Surveyors from a list of Nominees Evaluated by a Professional Delegation
- H 4967 An Act Relative to Registration of Professional Engineers and Land Surveyors

These and other similar bills bear watching during the 1974 Legislative session.

EPA Guidelines for Procurement of Professional Services

On the heels of former Vice President Spiro Agnew's involvement in kickbacks and as a result of anti-trust action against ASCE, ACEC and now NSPE, the Environmental Protection Agency is being pressured into adopting guidelines for Procurement of Professional Services. Several preliminary drafts, "leaked" last fall, were not acceptable to professional engineers. In late January 1974, your committee chairman, as a member of the ACEC Environmental Committee, met with EPA officials and drafted an acceptable guideline which requires selection first on the basis of qualifications and experience with fee negotiations later. At this writing, however, the drafted guideline has not yet been published.

State Legislative Action — 1973

Four Legislative Acts and Resolves of General Interest to BSCE/ASCE members were enacted by the Massachusetts General Court in 1973, and are as follows:

- Chapter 395 An Act Requiring the Installation of Sprinkler Systems in High Rise Buildings
- Chapter 478 An Act Providing that Engineers May Organize Professional Corporations
- Chapter 1164 An Act to Expedite Payment to General Contractors and to Sub-Contractors and to Improve the Flow of Funds in the Construction Industry
- Chapter 20 Resolve Reviving the Continuing of the Special Commission Established to Make an Investigation and Study Relative to the Awarding of Contracts for Construction and Materials by Counties, Cities, Towns and Districts.

86

Bills Filed in 1974

In addition to those 1974 bills stated above, the following will be of interest to members of BSCE/ASCE:

- S 1142 An Act Providing for Clean Coasts and Water
- H 2769 An Act Further Regulating the Protection of Wetlands
- H 2775 Resolve Providing for an Investigation and Study of the Advisability and Feasibility of Providing Common Anti-Pollution Facilities in Industrial Development Areas
- H 4572 An Act Requiring Competitive Bidding Before the Commonwealth or any Political Subdivision Thereof May Award a Contract for Architectural Services or for the Services of a Consultant
- H 4474 An Act Relative to Fees Charged by Architects
- H 4916 An Act Further Regulating the Preparation of Environmental Impact Reports
- H 4919 An Act Relative to the Maintenance of Certain Sewage Disposal Systems
- H 4966 Resolve Providing for an Investigation and Study by a Special Commission Relative to a Major Public Works Program

General Comment

There were undoubtedly many other pieces of legislation passed in 1973 or submitted for consideration in 1974 which would be of interest to special disciplines in the general field of civil engineering. No effort was made to present them here.

Engineers should not hesitate to contact and cooperate with the Committee, their Senators and their Representatives throughout the year should bills be introduced which require clarification of intent or which warrant concerted action either pro or con.

> Respectfully submitted, Charles A. Parthum, Chairman Joseph C. Knox, Ralph M. Soule

REPORT OF JOINT ASCE-BSCE MERGER COMMITTEE

During the Fiscal year 1973-1974, the Merger Committee carried out its responsibilities in accordance with the terms of the merger agreement. Principal tasks undertaken were coordination of Joint Treasurer and Secretary actions necessary to merging both office procedures into one, and organization of an Office Computer Methods Committee which has established a semi-computerized mailing system and dues-billing system which will be ready at the time of merger. Lewis Holzman, Charles Shaker, Max Sorota, Joseph Willard, Bertram Berger, and others too numerous to mention helped in this effort. The Wentworth College of Technology, through Dean Henry Poydar, has helped tremendously by making available its IBM 1130 computer at nominal cost. We received a gift from Camp Dresser & McKee of a needed disk.

Other necessary steps were handled as follows: ----

a) The legal change of name of BSCE by Mr. Ed Keane,

b) The merger audit by Mr. Charles Terenzio.

I wish to thank all the members of the committee who participated in the effort over the many years.

Very truly yours, Saul Namyet

P.S. I recommend that the Merger Committee be abandoned in favor of a By-Law Committee. I will be happy to serve on that committee next year if it is desired.

REPORT OF THE PROGRAM COMMITTEE Boston, Mass. April 17, 1974

To the Boston Society of Civil Engineers:

Following is the Annual Report of the Program Committee for the year just completed:

Twenty-seven Section meetings were held and there were five ASCE-BSCE joint meetings including a Student Night.

Respectfully submitted, Peter S. Eagleson, Chairman

REPORT OF THE JOHN R. FREEMAN FUND COMMITTEE March 29, 1974

To The Boston Society of Civil Engineers:

The Eighth Freeman Memorial Lecture was presented by Mr. Harry Headland of London, England on the subject "Hydroelectric Pumped Storage — Some Aspects of the Western European Scene". Forty-four members and guests attended the lecture which was held at the 57 Restaurant, Park Square, Boston.

Professor Leslie J. Hooper, who had been the Chairman, resigned from the Committee. The Committee chose Mr. Lee Marc G. Wolman as the new Chairman and appointed Professor Lawrence C. Neale to replace Professor Hooper. The Ninth Freeman Memorial Lecture is scheduled for April 3rd at the Main Lecture Hall, Boston Public Library. Professor Donald R. Harleman, Director of Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics at M.I.T., will lecture on the subject "Heat Disposal in the Water Environment".

The Committee will widely publicize the following announcement:

BOSTON SOCIETY of CIVIL ENGINEERS SECTION AMERICAN SOCIETY of CIVIL ENGINEERS

FREEMAN HYDRAULICS PRIZE

The Boston Society of Civil Engineers, now a section of the American Society of Civil Engineers, announces an annual prize of \$2000 for an exceptionally useful paper in the field of hydraulic engineering. To qualify for the prize, the paper submitted must be comprehensive. It must trace the historic development of a thesis, explain its theoretical basis and give detailed practical examples of, and cite pitfalls avoided by, its application. The paper must be original in its overall presentation, though it can cover the state-of-the art in a superior manner. It should be well illustrated and edited.

All papers submitted shall become the exclusive property of The Boston Society of Civil Engineers — Section of the American Society of Civil Engineers — a nonprofit, tax-exempt, professional organization. The papers or major parts thereof shall not be or have been submitted for publication to or published by any other organization — public, private, or academic. The Section will publish all prizewinning papers in its regular Journal and may also publish the papers separately or in special collections. More than one prize may be awarded in a given year, but this might necessitate deferment of future prizes. While non-prize winning papers will be given the option of withdrawing them.

The prize is available through the generosity of the late John R. Freeman, one of the great civil engineers of the early part of the century, who left a substantial sum of money to the Boston Society of Civil Engineers for purposes such as this. Papers will be judged by the Section's John R. Freeman Fund Committee. They should be submitted by registered mail to the Freeman Fund Committee, c/o Boston Society of Civil Engineers, Section of The American Society of Civil Engineers, 230 Boylston Street, Boston, Massachusetts 02116. The first prize(s) will be awarded in December 1975 and to be eligible, papers must be received by the Committee before July of 1975. Interested applicants are invited to correspond with the Committee before preparing final applications.

Respectfully submitted, The John R. Freeman Fund Committee George R. Rich, David R. Campbell, Harry L. Kinsel, Lawrence C. Neale Lee Marc G. Wolman, Chairman

ANNUAL REPORT OF THE EXECUTIVE COMMITTEE COMPUTER SECTION — 1973-1974

During the fifth year of its organization, the Computer Section conducted five meetings described herein.

April 4, 1973 - Data Acquisition Systems: Hardware and Software Problems

A meeting was held at the Playboy Club, Boston, with 32 members and guests attending. Dr. Anwar E. Z. Wissa, Research Assistant, Department of Civil Engineering, MIT, spoke about field instrumentation used to obtain data for subsequent computer analysis. Mr. Robert Mirich, Reservoir Control Center, U.S. Army Corps of Engineers, Waltham, Massachusetts discussed telemetry data from remote flood control stations for direct input to a computer for analysis and computer graphic plotting.

May 16, 1973 — State of the Art of Computer Graphics

A meeting was held at the Red Coach Grill, Stanhope Street, Boston, with 40 members and guests attending. Professor Robert D. Logcher, Department of Civil Engineering, MIT, was the guest speaker. His talk was based on the report of the ASCE Task Committee on Computer Graphics of the Structural Division Committee on Electronic Computation, which was given in San Francisco in April 1973. The presentation covered techniques, interactive applications, cost effectiveness, guidelines for selection and implementation of graphic systems, future trends and research needs.

November 14, 1973 — Systems Analysis Applications — Introduction

Thirty persons attended the presentation held at the Red Coach Grill, Stanhope Street, Boston. This meeting was the first of a series of five lectures dedicated to examining the theoretical and applied use of systems analysis techniques for solving civil engineering problems. The speaker was Dr. David Marks, Director, Civil Engineering Systems Laboratory, MIT. Professor Marks presented an overview of the subject, including the basic philosophy of dealing with large-scale systems and the analytic techniques which can be applied to their analysis.

December 11, 1973 — Systems Analysis Applications — Simulation

The second meeting of the systems analysis series was held at the Red Coach Grill, Stanhope Street, Boston, with 22 members and guests attending. The speaker was Professor Joseph Sussman, Department of Civil Engineering, MIT. His subject was the use of simulation as a technique for analysis. He discussed the advantages and limitations of using simulation, the general purpose computer programs which are available, and he described some case examples using simulation.

February 20, 1974 — Systems Analysis Applications — Optimization

The third meeting of the systems analysis series was held at the Red Coach Grill, Stanhope Street, Boston. Twenty persons attended this meeting, which was also the annual meeting of the Computer Section. The Nominating Committee consisting of Robert Logcher, Gerald Woodland and David Hellstrom presented the following slate for the Executive Committee:

John T. Christian
Jekabs P. Vittands
Lewis Holzman
James N. Jackson
Sal Mazzotta
Robert A. Wells, Jr.

There were no other nominations, and this slate was elected unanimously.

The speaker for the evening was Professor John C. Schaake, Department of Civil Engineering, MIT. In his talk, he discussed some of basic concepts for use in optimization, and tied economic considerations into the process. He developed examples of the use of optimization in the study of water resource systems, and gave case examples.

Other Comments

The last three meetings were held as joint meetings with the Massachusetts Section, ASCE. No meetings were held jointly with other BSCE technical sections. The decline in attendance during the last three meetings was probably attributable to the gasoline shortage, which caused many people to form carpools and thus not have the liberty of remaining in town for evening meetings. Consideration was given to switching to luncheon meetings, but this plan was not adopted.

The chairman would like to thank the entire Executive Committee for their support and efforts during the year. We also express our appreciation to the speakers from the Department of Civil Engineering at MIT for making the series on systems analysis possible.

> Respectfully submitted, David I. Hellstrom, Chairman for the Executive Committee of the Computer Section

ANNUAL REPORT FOR 1973-74 — CONSTRUCTION SECTION

The Executive Committee this year consisted of the following members:

Chairman Vice-Chairman Clerk Member Member Member Joseph B. Kerrissey, Jr. Samuel E. Rice, 3rd Laimonis Rieksts Frank J. Killilea, Jr. Morse H. Klubock John T. Quinn, Jr.

The following meetings, all joint with Mass. Section ASCE, were held during the past year:

October 17, 1973

A luncheon meeting was held at the Red Coach Grill, Stanhope Street, Boston with a total of 37 persons in attendance. Mr. Robert Norton, Resident Engineer for Metcalf & Eddy, spoke on the "Construction of Large Sewers in Urban Areas". Mr. Norton based his presentation on his recent experience on a large sewer project in Peabody and Salem, Mass. Representatives of two of the construction firms involved in that project participated in the question and answer period that followed.

January 9, 1974

A luncheon meeting was held at the Red Coach Grill, Stanhope Street, Boston with 23 persons in attendance. Mr. George W. Casper of Tippetts, Abbett, McCarthy-Stratton spoke on the "Design and Construction of Traffic Improvements in the Boston Area Under the Topics Program". Mr. Casper detailed the present status of the program and the expected near-term level of activity on this type work.

BOSTON SOCIETY OF CIVIL ENGINEERS SECTION, ASCE

March 6, 1974

A luncheon meeting was held at the Red Coach Grill, Stanhope Street, Boston with 45 persons in attendance. Mr. P. A. O'Neill, President, Franki Foundation Company spoke on the "Design and Use of the Franki Pile". Mr. O'Neill explained the unique installation procedures of the Franki pile and the advantages that this system produces. There were many questions from the audience concerning the cost advantages and possible problems in the use of this pile system.

This meeting was the Annual Meeting of the Section and the following members were nominated and elected to the Executive Committee of the Construction Section for the year 1974-75:

Chairman Vice-Chairman Clerk Member Member Member Samuel E. Rice, 3rd Laimonis Rieksts Renwick Chapman Joseph B. Kerrissey, Jr. Frank J. Killilea, Jr. John T. Ouinn, Jr.

> Respectfully submitted, Samuel E. Rice, 3rd for Laimonis Rieksts Clerk

ANNUAL REPORT FOR 1973-1974 ENVIRONMENTAL SECTION April 17, 1974

The Executive Committee this year consisted of the following members:

Chairman:	Paul Guertin of LEA, Inc.	
Vice-Chairman:	William H. Parker of Camp Dresser & McKee, Inc.	
Clerk:	Leo F. Peters of Weston & Sampson	
Member:	Paul Taurasi of Mass. Div. of Water Pollution Control	
Member:	Professor Frederic C. Blank of Northeastern University	
Member:	Samuel E. Rice of Metcalf & Eddy, Inc.	,

The Environmental Section held four meetings during the past year, described as follows:

May 23, 1973

The regular sanitary section meeting was held on May 23, 1973 at the recently completed Swampscott waste water disposal facility. This meeting was the annual outing of this section, and included an inspection of this facility, followed by a presentation by Mr. George Tozer, Vice President of Metcalf & Eddy, Inc., at the Preston Beach Motor Inn in Swampscott.

There were approximately fifty members and guests in attendance at the inspection and thirty-seven in attendance at the dinner meeting. Mr. Tozer presented a paper on the design and background of the Swampscott sewage treatment plant which uses the Door Oliver fluidized bed system for sludge incineration.

October 30, 1973

The Environmental Section met at the Playboy Club in Boston. There were thirty-six in attendance.

Dr. Otis Sproul of the University of Maine spoke on the Inactivation of Viruses.

92

December 5, 1973

The Environmental Section met at Purcells' Restaurant in Boston. There were thirtyone persons in attendance.

Dr. Archie MacDonnell of Penn State spoke concerning nitrogen and recent data on limiting concentrations for aquatic plants in streams.

March 13, 1974

The following officers were nominated and elected for 1974-75:

Chairman:	William H. Parker, Camp Dresser & McKee, Inc.
Vice-Chairman:	Leo F. Peters, Weston & Sampson
Clerk:	Paul Taurasi, Mass. Div. of Water Pollution Control
Member:	Professor Frederic C. Blank, Northeastern University
Member:	Samuel E. Rice, Metcalf & Eddy, Inc.

A discussion followed regarding the dates and topics for meetings during 1974/75. The following tentative dates were established subject to approval by the main society.

- 1. June meeting June 5, 1974 (This will be checked against the NEWPCA schedule for their spring meeting.)
- 2. Fall meeting October 16, 1974
- 3. Winter meeting December 11, 1974
- 4. Annual meeting June 5, 1975

The incoming chairman requested that Paul Taurasi investigate the possibility of a seminar for the Fall of 1975. This seminar will be similar to previous seminars given by the Environmental Section. A report will be given at our next meeting concerning this matter and at that time action will be taken regarding planning for the seminar.

The committee meeting was followed by a social hour and supper. There were approximately seventy people in attendance. The guest speaker was Dr. Clair Sawyer who presented the Second Annual Thomas Camp Lecture.

> Respectfully submitted, Leo F. Peters Clerk

REPORT OF THE EXECUTIVE COMMITTEE OF BSCE-MSASCE GEOTECHNICAL SECTION March 12, 1974

The Geotechnical Section of the BSCE — Massachusetts Section ASCE held the following meetings during the past year:

February 21, 1973:

Joint Meeting with BSCE Structural Section and New England Section, Association of Engineering Geologists

Dr. Robert V. Whitman discussed "Seismicity and Foundation Effects", the first of a two part series relating to "Boston Earthquake Zone — Lateral Loads and Design Provisions". The meeting was held at 57 Restaurant, Boston with an attendance of approximately 150 members and guests.

March 14, 1973

- Joint Meeting with BSCE Structural Section

Dr. Robert V. Whitman had a further discussion of the "Boston Earthquake Zone" with the second and final part entitled "Building Response and Damage". The meeting was also held at the 57 Restaurant with about 140 members and guests in attendance.

April 11, 1973

— Joint Meeting with New England Section, Association of Engineering Geologists

Dr. G. G. Meyerhof, President of the Canadian Geotechnical Society, spoke at the Harvard Faculty Club about "Geotechnical Engineering in Europe". Approximately 90 members and guests were present.

May 2, 1973:

A panel consisting of *Arthur Klem, Zoltan Stacho, David D'Appolonia* and *George Tomero* discussed the present state-of-the-art of slurry wall trench systems throughout the United States. The meeting was held at Joseph's Aquarium Restaurant with about 105 members and guests present.

October 11, 1973:

Joint Meeting with the New England Section, Association of Engineering Geologists. Dr. Don U. Deere presented a talk on "The Foliation Zone — Metamorphic Rock's Most Adverse Engineering Geologic Feature" at Joseph's Aquarium Restaurant to about 75 members and guests.

October 23 through November 13, 1973:

A formal lecture series relating to "Engineering Geology and Ground Water Hydrology". See separate report by William Zoino, moderator.

November 15, 1973:

Joint Lecture with M.I.T.

Dr. Ralph B. Peck presented the Mathis Memorial Lecture on "The Civil Engineering Mind — Nature and Nuture" at the Center for Advance Engineering Studies before about 80 members, students and guests.

January 16, 1974:

A panel moderated by Dr. Stan Lucks and including *Messrs. Herman Snyder, Robert Blakeney, Edward Langenback* and *Frank Matera* was held at The Branding Iron before 75 members and guests. The panel, all lawyers well-versed in legal aspects of design and construction, discussed "Subsurface Information in Contract Documents — The Rights and Responsibilities of Owners, Engineers and Contractors".

February 6, 1974:

Dr. Charles C. Ladd presented a talk at Harkness Commons/Pierce Hall at Harvard University titled "Embankments on Varved Clays" to 70 members and guests.

In addition, the Chairman reported the slate of nominees recommended for consideration of the members at the Annual Meeting of the Section to be held on March 27, 1974.

March 27, 1974

The Annual Meeting of the Geotechnical Section was held on March 27, 1974 at the Harkness Commons/Pierce Hall at Harvard University. No additional nominees for the section offices were petitioned, and the Chairman asked the Clerk to cast one vote for the previously announced slate of nominees. The new members for 1974-1975 season are as follows:

94

Chairman: Vice-Chairman: Clerk: Member: Member: Member: V. Murphy S. Stevens R. Bucknam W. Zoino P. Taylor D. Thompson

At the conclusion of the business portion of the meeting, Bob McPhail moderated a panel discussion comparing 3 types of bulb-piles. The discussion was presented by Eric O'Neil of Franki Foundation Corporation; Captain Custer Krickenberger of Raymond International; and Stan Merchan of Underpinning and Foundation Corporation, New York City. About 90 members and quests were present for the dinner and 140 for the panel discussion.

Respectfully submitted, Stiles F. Stevens, Clerk

ANNUAL REPORT FOR 1973-1974 HYDRAULICS SECTION

The following meetings were held during the past year:

September 25, 1973:

Mr. Joseph Finegan, Chief, Reservoir Control Center, Corps of Engineers, spoke at a joint meeting of the Hydraulics Section and the officers of the Society. The subject of the presentation, held at the Ralph M. Parsons Water Resources Laboratory of MIT, was the New England Floods of June and July 1973. Highlights of the talk included a hydrologic description of the summer storms and management criteria required in the operation of the flood control reservoirs.

Attendance: 47

December 12, 1973:

Dr. Paul Bock of the University of Connecticut spoke on his work with and the capabilities of the Earth Resources Satellite (ERTS) in relation to data acquisition and monitoring of hydrologic and hydraulic data. The meeting was held at the Reservoir Control Center of the Corps of Engineers in Waltham, Massachusetts.

Attendance: 24

January 30, 1974:

Guest speakers, Mr. K. Peter Devinis and Mr. Edward Dunn, both of C.E. Maguire, made a joint presentation on "The Charles River Project." The subject dealt with the historical background, site selection criteria and the unique parameters of the new Charles River dam.

Attendance: 81

April 4, 1974:

The 9th Annual Freeman Memorial Lecture was held at the Boston Public Library. The lecturer, Professor Donald R. Harlemann, Director of the Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics, MIT, whose topic for discussion was "Heat Disposal in the Water Environment." This annual meeting was held jointly with both the Boston Society of Civil Engineers and the Massachusetts Section of The American Society of Civil Engineers. The following slate of officers of the Hydraulics Group for the year 1974-1975 was elected unanimously by voice vote:

Chairman: Vice Chairman: Clerk: Executive Committee Saul Cooper Thomas Baron Oscar L. Donati Lee Wolnan Edward Dunn Frank Perkins

Attendance: 43

Respectfully submitted, Thomas Baron, Clerk

ANNUAL REPORT OF EXECUTIVE COMMITTEE STRUCTURAL SECTION 1973-1974

The Executive Committee this year consisted of the following members:

Chairman:Rubin M. ZallenVice Chairman:Harold V. McKittrickClerk:Kenneth M. LeetMembers:William HagenFrank Heger

Lawrence Ogden

The 3 meetings held by the Structural Section are briefly described below:

October 3, 1973

Professor Lynn Beedle, director of the Fritz Engineering Laboratory at Lehigh University, gave the 1973 T.R. Higgins Lecture of the AISC. Professor Beedle's lecture covered results of recent research on steel beam-columns and connection behavior.

In addition, W.J. Le Messurier, structural engineer, was presented a special citation by the AISC for his contributions to the design of steel frame structures.

The meeting, held in the auditorium of the Boston Public Library in Copley Square, was attended by over 100.

December 12, 1973

Harold Cutler and Donald Belles made a presentation on the characteristics of fire and critically discussed building Code and ASTM provisions covering fire protection for buildings. Following the talk, an open discussion was held on various types of fire protection systems.

The meeting, held at the M.I.T. Student Center, was attended by 30.

February 13, 1974

Following the election of officers for the coming year, a panel discussion on design economics in structures for buildings was made by Robert Lignowski — Director of Promotion — Mass. Ready Mix Concrete Institute, Frank Davis — Sales manager — West End Iron Works, and John Ransome — Director of engineering — San Vel Corp. The presentations covered factors which influence the economics of concrete, steel, and precast building systems. The meeting, attended by approximately 100, was held at the M.I.T. Student Center. In addition to organizing the year's technical program, members of the Executive Committee were asked to participate in three committees concerned with the preparation of sections of the New Massachusetts State Building Code.

Rubin Zallen chaired the Mass. Concrete Industry Board's Job Control Committee which prepared a report defining responsibilities for the contractor and for the professional engineer in the construction phase of the structural system.

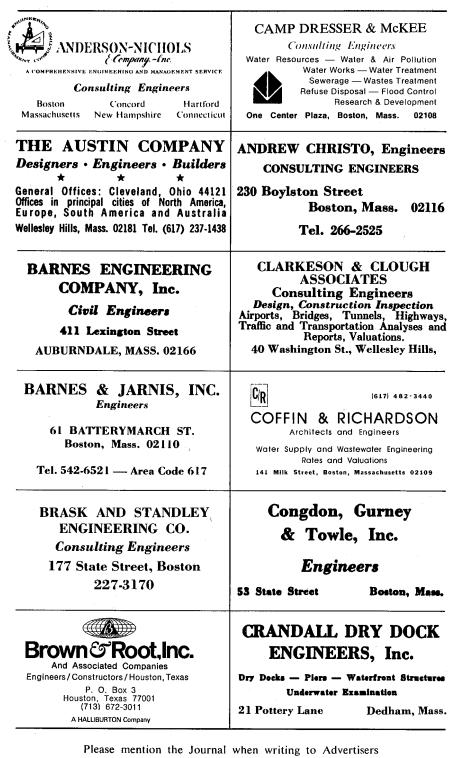
Kenneth Leet was appointed a member of the ASCE-BSCE Seismic Committee which is preparing the earthquake specifications for the State Building Code.

Frank Heger represented the BSCE Structural Section on a joint advisory committee on building loadings for the new code.

For the coming year the Executive Committee will consist of the following members:

Chairman: Vice Chairman: Clerk: Members: Kenneth M. Leet Hans W. Hagen Lawrence Ogden Frank Heger Frank Davis Richard Foley

> Respectfully submitted, Kenneth M. Leet, Clerk



William S. Crocker, Inc. (Formorly Arpinwall & Lincoln) Registered Professional Engineers Registered Land Surveyors 35 Wm. T. Morrissey Blvd., Boston, Mass. 02125	EUSTIS ENGIN Soil and Foundati Soil Borings Foundation Analy 3011 28th ST. METAIRIE, LOU
E. D'APPOLONIA Consulting Engineers, Inc. Foundation Engineering Vibrations & Soit Dynamics Applied Mechanics ENGINEERING OFFICES 10 Duff Road M. R. 522B Pittsburgh, Pa. 15235 Chesterion, Ind. 46304 (412 - 242-5107) (219 - 926-3814) CORPORATE OFFICE 1177 McCully Drive, Pittsburgh, Pa. 15235	FAY, SPO THORND Engine fo Public Works One Beacon Street, E
De Leuw, Cather & Company Engineers Public Transit — Traffic — Parking Highways — Subways — Railroads Community Planning — Urban Renewal Municipal Works — Port Development 24 SCHOOL STREET BOSTON, MASS. 02108	HARRY R. FEL Civil Engineers and Engineering and S Consulting Enginee Contractors - Municip Accolon Way Bo
RICHARD J. DONOVAN, INC. ENGINEERS: Design & Construction Management 540 MAIN ST., WINCHESTER, MASS. 01890	Ganteaume & Engin 99 Chaunc BOST
Clinton Bogert Associates	GERAGHTY &

Consulting Engineers Water Supply, Treatment and Distribution Sewerage, Sewage and Industrial Waste Treatment Drainage, Flood Control and Dams Refuse Disposal and Incineration

2125 Center Ave., Fort Lee, New Jersey 07024



Engineers and Consultants

470 Atlantic Ave., Boston, Mass.

NEERING CO. ion Consultants

Laboratory Tests yses and Reports

P. O. BOX 125 UISIANA 70004

FFORD & IKE, INC.

eering or

and Industry

Boston, Mass. 02108

LDMAN, INC.

d Land Surveyors

Survey Service for Architects 878 Appraisers **palities**

oston, Mass. 02114

& McMullen

eers

cy Street

ION

MILLER, INC.

Consulting Ground-Water Hydrologists Water Supply-Quality and Pollution Problems **Regional Ground-Water Studies** Recharge-Well Design 44 Sintsink Drive East Port Washington, N.Y. 11050 516-883-6760 Jacksonville, Fla. Hartford, Conn.

Ponce, P. R.

GOLDBERG-ZOINO Associates.Inc.

CONSULTANTS IN GEOTECHNICAL ENGINEERING Foundations, Soil and Rock Mechanics.

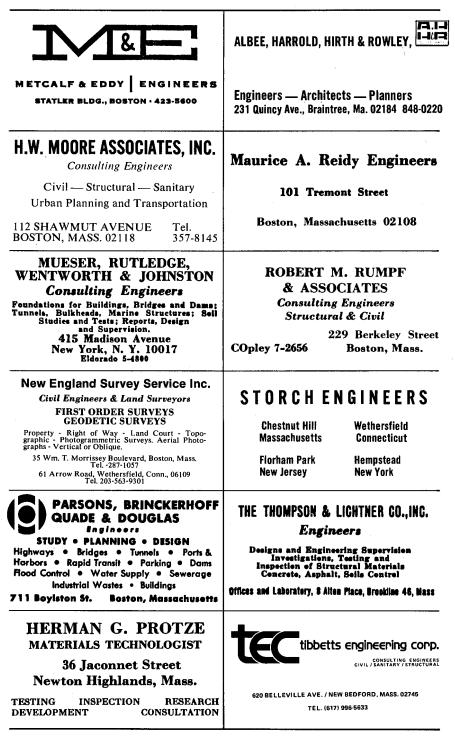
Geology, Geophysics, Seismic Evaluations and Geotechnical Instrumentation

30 TOWER ROAD NEWTON UPPER FALLS, MASSACHUSETTS 617-244-4100

Please mention the Journal when writing to Advertisers

GREELEY AND HANSEN	J. F. HENNESSY Civil Engineer	
Studies, Designs And Construction Services For Water, Wastewater And Solid Wastes	BROOKLINE, MASS. 02146	
222 S. Riverside Plaza · Chicago, IL 60606 · (312)-648-1155 New York 10007 Philadelphia 19103 Richmand 23230 Tampa 33607	4 CYPRESS STREET 566-3860	
GREEN ENGINEERING AFFILIATES Consulting Engineers Water Supply and Treatment Sewage and Industrial Waste Treatment Storm Drainage Systems and Sanitary Sewers Highways, Bridges & Structures 625 McGrath Highway Winter Hill Branch Boston, Massachusetts 617 623-2311	HINTE HOWARD NEEDLES Planning and design for: Transit Airports Highways Highways Environmental systems Bridges Public and Private Buildings Offices in 22 cities Suite 3050, Prudential Center, Boston, Mass. 02199 617 267-6710	
HALEY & ALDRICH, INC. Consulting Geotechnical Engineers and Geologists	JOHN J. KASSNER & CO., INC. Consulting Engineers	
Soll and Rock Mechanics Engineering Geology Engineering Geophysics Foundation Engineering Terrain Evaluation 238 Main Street, Cambridge, Mass. 02142 617-492-6460	475 PARK AVENUE SOUTH NEW YORK, N. Y., 10016 (212) 685-8511	
Haley and Ward	FENTON G. KEYES ASSOCIATES Consulting	
Civil and Sanitary Engineers	ARCHITECT – ENGINEERS	
25 Fox Road - Waltham, Mass. 02154		
Tel. 890-3980 Area Code 617	PROVIDENCE, R. I. 02903 WALTHAM, MASS. 02154 WETHERSFIELD, CONN. 06109 NASHUA, N. H. 03060 PUTNAM, CONN. 06260	
The Haller Testing Laboratories Inc. Testing, Inspection of Structural Materials, Concrete, Asphalt & Soils and Structural Steel. Laboratories in New York, New Jersey, Connecticut, Rhode Island and Water- town, Massachusetts 68 Laurel St., Watertown, Mass. 02172. Tel. 924-2321	REPORTS · DESIGN · SUPERVISION • WATER SUPPLIES • WATERFRONT FACILITIES • DAMS HIGHWAYS • BRIDGES • AIRPORTS • SEWERAGE • DRAINAGE • SOLID WASTES • COMMERCIAL AND INDUSTRIAL BUILDINGS CE MAGUIRE, INC. ARCHITECTS • ENGINEERS • PLANNERS PROVIDENCE • WALTHAM • WETHERSFIELD • MIAMI	
Hardesty & Hanover Consulting Engineers Bridges, Special Structures Highways & Streets Heavy Machinery, Sewers, Pipelines Electrical Controls, Lighting, Soil Mechanics & Foundations Design - Reports - Inspection 101 Park Ave. New York, N.Y. 10017	MAIN CHAS. T. MAIN, INC. Engineers Studies, Reports • Design • Construction Management Southeast Tower, Prudential Center, Boston, Mass. 0216, Tel. (617) 262-3200 1301 E. Morehead St., Charlotte, North Carolina 28204, Tel. (704) 375-3761	

Please mention the Journal when writing to Advertisers



PROFESSIONAL SERVICES

CHARLES R. VELZY ASSOCIATES, INC. Consulting Engineers Water Pollution Control Industrial Wastes - Drainage Solid Waste Disposal - Air Pollution Control - Water Supply 350 Executive Blvd. Mineola, N.Y. 11501 Elmsford, N.Y. 10523 Babylon, N.Y. 11702	
JOSEPH S. WARD and ASSOCIATES CONSULTING ENGINEERS Engineering Geology Earthworks Soils and Foundations Reclamation Retaining and Waterfront Structures Pavemeuts 91 Roseland Avenue, Caldwell, New Jersey 07006 Telephone: 201-226-9191	
WESTON & SAMPSON Sanitary-Civil Consulting Engineers Water Supply, Treatment, Distribution Sewerage, Sewage & Industrial Wastes Treatment, Supervision of Treatment Water & Air Pollution Studies-Rates Drainage Flood Control Refuse Disposal 10 High Street Boston, Mass. 02110 Kellogg Road Essex Jct. Vt. 05452	
SHANNON & WILSON, INC. Soil Mechanics and Foundation Engineers Engineering Geology and Geophysics Field Exploration • Soils Laboratory Instrumentation • Rock Mechanics Seattle • Spokane • Portland • San Francisco	
WHITMAN & HOWARD, INC. ENGINEERS & ARCHITECTS 89 BROAD STREET, BOSTON, MASS 02110 TEL. (617) 426-6400	
WOODWARD-CLYDE CONSULTANTS AFFILIATED FIRMS GEOTECHNICAL ENGINEERING CONTAGE CONTAGE AND	

ADVERTISEMENTS





environmental engineering

- Side Scar Sonar
- Uniboom[®] Seismic Profilers
- Current Meters
- Dew Point Hygrometers
- Visibility Meters
- ENVIRONMENTAL EQUIPMENT DIVISION 151 Bear Hill Road Waltham, Massachusetts 02154 Tel. (617) 890-3710



ADVERTISEMENTS

WARREN BROTHERS COMPANY

Division of ASHLAND OIL INC.

Massachusetts District Office

430 Howard Street Brockton, Mass. 02402

Tel. 588-3660

CRUSHED STONE

BITUMINOUS CONCRETE

SPENCER, WHITE & PRENTIS, INC.

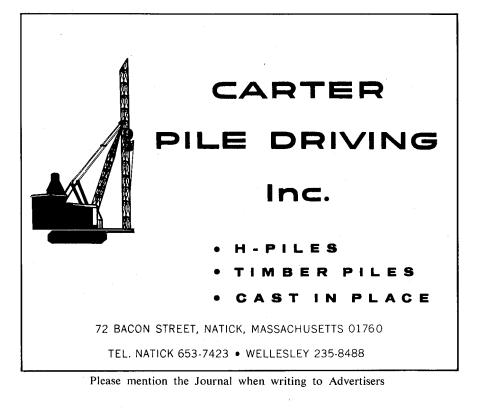
21 FRANKLIN STREET

QUINCY, MASS. 02169

TELEPHONE 773-9245

foundations underpinning drilled-in caissons heavy construction pretest tie-backs

MAIN OFFICE: NEW YORK BRANCHES: DETROIT • CHICAGO • SAN FRANCISCO • WASHINGTON, D.C.



CARR-DEE TEST BORING AND CONSTRUCTION CORP.

Complete Soil Investigation Service Anywhere in New England

37 LINDEN ST. MEDFORD, MASS. 02155 Phone: 617 - 391-4500

Telephone COlumbia 5-2600

BEACON PIPING COMPANY

Power Plant Piping - High Pressure Piping

Fabricators of Piping

205 FREEPORT STREET DORCHESTER, MASS. 02122

SOIL INVESTIGATIONS FOUNDATIONS CONSTRUCTION CENTRILINE

RAYMOND INTERNATIONAL INC.

74 Concord Street North Reading, Mass. 01864

Telephone: (617) 729-8105

HUB FOUNDATION CO., INC.

Telephone 617-237-9510

47 RIVER STREET, WELLESLEY, MASSACHUSETTS 02181

PILE DRIVERS

PIPE - SHEETING

WOOD - H-BEAMS

C. L. GUILD DRILLING & BORING CO., INC.

Complete soil investigation service

P. O. Box 108 — Bodwell Street — Avon Industrial Park AVON, MASSACHUSETTS 02322

Telephone Area Code 617 584-0510



P. Gioioso & Sons, Inc. GENERAL CONSTRUCTION

38 ROBINSON STREET

DORCHESTER

MASSACHUSETTS 02122

PIPE FOUNDERS SALES CORP. CAST IRON AND DUCTILE IRON PIPE AND FITTINGS

Representing

The American Cast Iron Pipe Company 6 PLEASANT STREET MALDEN, MASSACHUSETTS 02148 617-324-3920

NEW ENGLAND FOUNDATION CO., INC.

Foundation Contractors

376 BOYLSTON STREET

BOSTON 16, MASS.

CAISSONS

DRILLED BELL BOTTOM UNDERREAMED PIERS DRIVEN PILING WOOD COMPOSITE CONCRETE STEEL

McKIE LIGHTER COMPANY

HINGHAM STREET

ROCKLAND, MASSACHUSETTS 02370

TEL: 617 - 871-1700





BOSTON SOCIETY OF CIVIL ENGINEERS SECTION, ASCE

Committee Chairmen 1974-1975

Committees

ACTION PROGRAM COMMITTEE ADVERTISING COMMITTEE ANNUAL MEETING COMMITTEE ASCE-AGC LIAISON COMMITTEE ASSOCIATE MEMBER FORUM

AUDITING COMMITTEE

CLAMBAKE COMMITTEE CONTINUING EDUCATION COMMITTEE DINNER DANCE COMMITTEE DISADVANTAGED YOUTH COMMITTEE

HISTORY AND HERITAGE COMMITTEE INTER-SOCIETY COMMITTEE ON ENGINEERING PROFESSIONALISM INVESTMENT COMMITTEE KEY MAN COMMITTEE MEMBERSHIP COMMITTEE

MERGER COMMITTEE NOMINATING COMMITTEE PROFESSIONAL PRACTICE COMMITTEE PROGRAM COMMITTEE PUBLIC RELATIONS COMMITTEE

PUBLICATIONS COMMITTEE STUDENT CHAPTER COMMITTEE JOHN R. FREEMAN FUND RALPH W. HORNE FUND THOMAS R. CAMP FUND FITZGERALD — HERSCHEL AWARDS COMPUTER GROUP AWARD CONSTRUCTION GROUP AWARD ENVIRONMENTAL GROUP AWARD GEOTECHNICAL GROUP AWARD

HYDRAULICS GROUP AWARD STRUCTURAL GROUP AWARD TRANSPORTATION GROUP AWARD

FORUM EDITOR

Chairmen Rubin M. Zallen Robert M. Fitzgerald David D. Leahy Woodrow W. Wilson Kenneth A. Smith

Charles C. Ladd N. Lee Worth Michael Moscaritolo Ronald E. Sharpin Frank J. Cullati Richard J. Scranton

Simon Kirshen

Bertram Berger Joseph F. Willard Donald F. Dargie Anthony L. Ricci

Saul Namyet Ronald C. Hirschfeld Howard Perkins Bertram Berger Charles W. Terenzio

Charles A. Parthum Stanley C. Rossier Lee N. G. Wolman Harl P. Aldrich Saul Cooper Charles C. Ladd David I. Hellstrom Joseph B. Kerrissey Paul D. Guertin Steve J. Poulos

Frank E. Perkins Rubin M. Zallen Richard W. Guzowski

Peter J. Riordan



KNOWN ROUND THE WORLD



ACKER SOIL SAMPLING KIT Unequaled collection of tools for recovering samples from practically any materials except rock. Hand carrying case included. Write for Bulletin No. 26.



ACKER MOTORIZED CATHEAD Aluminum derrick with sheave and gasoline driven cathead hoist. Ideal for soil sampling - driving casing pipe - piezometer work standard penetration tests -Write for Bulletin No. 20.



ACKER "ACE" Core Drill

The Ace is a tried and proven core drill with unlimited versatility to perform a host of jobs. Ideal for truck, trailer or skid operation. Write for Bulletins No. 24 and 34.

THE ACKER DRILL COMPANY manufactures a co plete line of exploration drilling equipment such as D mond Core Drills - Rotary Earth Augers - Soil Sampli Tools - Diamond Bits and Core Barrels - Tie Back Dril Cassion Drills - Drilling Accessories and Supplies.



ACKER VANE SHEAR The vane shear is available in a torque head kit or hand torque kit. Assembly designed for obtaining accurate in-place shear values of cohesive soils - on the spot. Write for Bulletin No. 700.



ACKER DENNISON CORE SAMPLER (Patented - No. 2,403,002) Acker Dennison Soil Sampler - ideal for taking undisturbed quality cores from rare earths, ceramic clays, soft and difficult formations accepted by mining and soil engineers around the world. Write for Bulletin No. 1100.



ACKER "AUGER"

This AD II mechanical auger is ideal for soil sampling, earth augering, mineral prospecting and diamond core drilling -8 rotation speeds and 6,725 ft. lbs. torque.

FREE

Acker has available free of charge a complete catalog on soil and rock exploration tool and equipment. Write for Acker catalog.

ACKER DRILL CO., INC., P.O. Box 830, Scranton, Pennsylvania 18501