### JOURNAL OF THE BOSTON SOCIETY OF CIVIL ENGINEERS SECTION

# **Proceedings**

### **AMERICAN SOCIETY OF CIVIL ENGINEERS**:

### REPORT OF THE BOARD OF GOVERNMENT, 1978-1979

To the Boston Society of Civil Engineers Section, American Society of Civil Engineers

Pursuant to the requirements of the Bylaws, the Board of Government presents its report of the year ending April 25, 1979.

The following is a statement of membership in the Section:

Honorary Members	5
Assigned ASCE Members	2020
Subscribers:	-0-0
Members	1040
Associate Members	433
Affiliate Members	45
Student Chapters	9
Summary of Additions New Members New Associate Members	26 78
Summary of Loss of Members	
Deaths	7
Resignations	12
Dropped	110
Бюррец	110
Life Memberships	
Life Members	196
Members becoming eligible,	
April 25, 1979	9
•	

### Honorary Membership in the Section

John B. Babcock 3rd.	elected	January 2, 1969
Charles O. Baird, Jr.	elected	January 2, 1969
Arthur Cassagrande	elected	February 1, 1975
Ralph W. Horne	elected	February 1, 1965
John A. Volpe	elected	January 29, 1968

Members lost through death

Harold Bateson January 1978
Henry Brask February 1979
Ovidio Chiesa January 1978
Edouard N. Dube June 1978
Fritz F. Hampe July 1978
Joseph' A. McCarthy June 1978
Darrell A. Root August 1978

### **MEETINGS OF THE SECTION**

September 27, 1978	Joint Meeting with Hydraulics Group
October 25, 1978	Joint Meeting with Geotechnical Group
November 29, 1978	Joint Meeting with Computer Group
December 13, 1978	Joint Meeting with Structural Group
January 24, 1979	Joint Meeting with Transportation Group
February 28, 1979	Joint Meeting with Structural Group
March 14, 1979	Joint Meeting with Construction Group
April 16 and 25 1070	PSCES Annual Masting to be held in two

April 16 and 25, 1979 BSCES Annual Meeting, to be held in two parts: business meeting on April 16, 1979 and awards dinner on April 25,

1979.

For detailed reports of these meetings, refer to Annual Reports of the respective Technical Groups. These were presented at the April 16 meeting of the Section and are published in this issue of the Journal.

### **PERMANENT FUND\***

The Permanent Fund was established under the Bylaws, Article 10, and is the recipient of all money received as entrance fees. Under certain circumstances income from the Permanent Fund may be transferred to the Current Fund. The Treasurer's report gives details of the year's transactions.

### FUNDS ESTABLISHED BY GIFT OR BEQUEST TO THE BOSTON SOCIETY OF CIVIL ENGINEERS\*

JOHN R. FREEMAN FUND. In 1925 the late John R. Freeman, a Past President and Honorary Member of the Boston Society of Civil Engineers, made a gift to the Society of securities which were established as the "John R. Freeman Fund." The income from the 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 for visiting engineering works, a report of which would be presented to the Society.

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

<sup>\*</sup>Details regarding the value and income of these funds are given in the Treasurer's Report.

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 from the Fund is "to be devoted to the Library of the Society."

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 BSCE. The income from this fund "is to be used for the presentation of prizes for papers which have been particularly useful and commendable and worthy of grateful acknowledgement."

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 BSCE, 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.

Subsequent to September 30, 1978, it was voted to accept the recommendation of the Committee at Northeastern University, that the current scholarship award of \$200 be given to Carl Dumas. Presentation was made at the 1979 Student Chapter Night meeting of the Society held at Tufts University on March 1, 1979.

HOWE-WALKER FUND. This Fund was created by a vote of the Board of Government and combines the Edward R. Howe Fund and the Frank B. Walker Fund. Income from this joint Fund is used to help defray costs of student awards.

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 and 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."

Subsequent to September 30, 1978, it was voted to accept the recommendation of the Committee at Tufts University, that the scholarship award of \$200 be given to Margot E. Malin. Presentation was made at the 1979 Student Chapter Night meeting of the Society held at Tufts University on March 1, 1979.

RALPH W. HORNE FUND. This Fund, a bequest of \$3,000, was received June 29, 1964, from the Directors of Fay, Spofford and Thorndike, Inc., the income from which shall be devoted to a prize or certificate to be awarded annually to a BSCE member designated by the Board of Government to have been outstanding in unpaid public service in municipal, state or federal elective or appointed posts; or in philanthropic activity in the public interest.

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 Section of the American Society of Civil Engineers.

LECTURE FUND. The Lecture Fund was established in 1969 for the purpose of providing money for special lectures sponsored by the Society.

KARL R. KENNISON FUND. This Fund comprised two irrevocable trusts established on behalf of the Society by Karl R. Kennison. These trusts consist of shares of the Massachusetts Fund, The Massachusetts Company, Inc., trustees. Since Mr. Kennison's death net income is paid to the Society for a Hydraulics Lecture Fund to be used for various public lectures on this subject, or the Board may withdraw the principal on written demand or make changes in the use of the Fund as it may determine are warranted. The Investment Committee has recommended to the Board of Government that the funds be consolidated with the principal funds in one location.

### **PRIZES**

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

### **COMMITTEES**

The usual special committees dealing with the activities and conduct of the Society were appointed. The reports of the committees were presented at that portion of the Annual Meeting held April 16, 1979.

The Board wishes to express its appreciation of the excellent work done by the officers of the Groups and by the Committees of the Section.

For the Board of Government

Howard Simpson, President Leo F. Peters, Secretary

### MINUTES OF THE ANNUAL MEETING OF THE SECTION

### PART I

April 17, 1979 — Part I of the 131st Annual Meeting of the Boston Society of Civil Engineers (the fifth meeting of the Boston Society of Civil Engineers Section following the merger of the BSCE with the Massachusetts Section of ASCE) was held at the offices of Camp, Dresser & McKee in Boston. The meeting was called to order at 3:00 p.m. by President Howard Simpson.

Secretary Leo F. Peters summarized the Annual Report of the Board of Government.

In the absence of Treasurer Namyet the written Annual Report of the Treasurer was distributed to those present.

Secretary Peters called for reports from the following Committees and Technical Groups: Action Program-Professional Practice, Advertising, Annual Meeting, ASCE-AGC Liaison, Auditing, Awards, Constitution and Bylaws, Thomas R. Camp Fund, Continuing Education, Disadvantaged Youth, Employment Conditions, John R. Freeman Fund, History and Heritage, Ralph W. Horne Award, Investment, Key Man, Membership, Nominating, Operations Manual, Program, Public Relations, Publications, Social Affairs, Student Chapter, Task Force for 1979 ASCE Convention; also Technical Groups: Computer, Construction, Environmental, Geotechnical, Hydraulics, Structural, Transportation.

Secretary Peters read the reports of those Committee Chairman unable to be present.

Secretary Peters moved that all Committee and Technical Group reports be accepted and placed on file. It was seconded and so VOTED.

President Simpson concluded the meeting's program by presenting his retiring address, which is to be printed in the Journal.

### PART II

April 25, 1979 — Part II of the 1979 BSCES Annual Meeting was held at the Parker House Roof in Boston. President Simpson reconvened the meeting at 7:30 p.m. Following the introduction of the head table guests, Pres. Simpson called upon Secretary Peters to assist in the awarding of prizes and certificates of Life Membership, which were in turn presented by the President.

The Ralph W. Horne Award for outstanding community service was presented to Dr. Othar Zaldastani.

Other awards presented were as follows (these were the only awards for technical papers voted this year by the Board of Government):

Clemens Herschel Award

Recipient: David C. Willett

Paper: "The Use of Underground Space"

Geotechnical Group Award

Recipients: Francis C. Pierce and Victor Calabretta

Paper: "Unique Challenges Associated with Marine Structures in New England"

The following persons were awarded Certificates of Appreciation for their services to the Section:

Bertram Berger - Chairman of the 1979 ASCE National Convention Committee Edward C. Keane - Editor of the BSCES Journal Saul Namyet - Treasurer Estelle S. Shuman - for her many contributions of graphic art for Section projects

The Secretary read the names and brief biographies of those who attained ASCE Life Membership this year and President Simpson presented certificates to those present. Recipients were as follows: G. Standish Beebe, Albert A. Goldberg, Alfred Karp, George M. Reece, George E. Rocheford, Benjamin S. Sheinwald, Richard L. Woodward. He also read the names and biographies of those who had attained BSCES Life Membership and President Simpson presented certificates to those present. They were as follows: Richard G. Bergstrom and Fred M. Dodge.

The Secretary also read the names of those members who had died during 1978-79: Harold Bateson, Henry Brask, Ovidio D. Chiesa, Edouard N. Dube, Fritz F. Hampe, Joseph A. McCarthy, Darrell A. Root. A moment of silence was observed.

President Simpson introduced Student Chapter Presidents and their guests.

Teller, Richard J. Scranton, reported the results of the election of Nominating Committee Members. Franklin B. Davis, Richard J. DiBuono and Warren H. Ringer were elected.

President Simpson then presented the gavel to the incoming President, William S. Zoino, who then presented a plaque to retiring President Simpson commemorating his year as president, and briefly outlined his goals for his term in office.

President Zoino then turned the meeting over to the Program Chairman, Frank E. Perkins, who introduced Dick Flavin, reporter-at-large for WBZ-TV. Mr. Flavin's topic was "I don't make jokes. I just watch the Government and report the facts."

One hundred and twelve members and guests attended the dinner and evening meeting.

### REPORT OF THE TREASURER

For the Fiscal Year October 1, 1977 to September 30, 1978

### FISCAL STANDING

The financial standing of the Section is summarized in the four tables which accompany this report:

Table I - Condensed Statement of Condition

Table II - Condensed Statement of Income and Expenditures

Table III - Detailed Statement of Income and Expenditures

Table IV - Portfolio of Investments and Projected Yield

### SECTION INVESTMENTS

The Boston Safe Deposit and Trust Company continues as custodian of our portfolio of securities and has furnished us with an annual summary account. The custodian is authorized to make portfolio changes, and reports quarterly on the portfolio performance. During this year the Invested Income Account which had been maintained separately was merged with the principal account and the custodian was authorized to reinvest investment income.

### SECTION BANK DEPOSITS

All non-invested cash is deposited in a Suffolk Franklin NOW Account. The NOW account is an interest bearing checking account. The fiscal year record was:

	Debit	Credit	Balance
Balance 10/1/77	•	-	\$ 10,688.89
Deposits 10/1/77 to 9/30/78	-	\$103,032.76	-
Interest	-	1,299.16	-
Checks Drawn	\$ 96,090.40	· ·	<u> </u>
Totals	\$ 96,090.40	\$104,331.92	\$ 18,930.41

### PERMANENT FUND

The Permanent Fund receives its prorated portion of investment income and all entrance fees for the local Section membership. A prorated portion of custodial service charge is debited.

	Debit	Credit	Balance
Book Value 10/1/77		-	\$ 85,673.49
Custodian Service	\$ 622.53	-	
Interest, Dividends,			
Transactions	-	\$ 7,381.85	· -
Entrance Fees	=	500.00	-
Transfer to Current Fund		<del></del>	
Totals	\$ 622.53	\$ 7,881.35	\$ 92,932.81

### TECHNICAL GROUP LECTURE SERIES FUNDS 1975-76-77-78

Structural Group-Earthquake Lecture Series (1975-76)

Income \$ 12,459 Expenses \$ 6,544 Surplus \$ 5,915

50% Available for Approved Expenditures	\$ 2,957
Expended by Structural Group in 1977-78	990+
Surplus Returned to Current Fund	\$ 1.967

### Environmental Group-Camp Lecture Series (1975-76)

Income \$ 7,081 Expenses 4,940 Surplus \$ 2,141

50% Available for Approved Expenditures \$ 1,070
Expended by Environmental Group in 1976-77
Expended by Environmental Group in 1977-78
Surplus Returned to Current Fund \$ 739

### Geotechnical Group-Lateral Earth Pressure Lecture Series (1975-76)

Income \$ 15,387 Expenses 9,435 Surplus \$ 5,952

50% Available for Approved Expenditures
Expended by Geotechnical Group in 1976-77
Expended by Geotechnical Group in 1977-78
Surplus Returned to Current Fund

\$ 3,159
1,379
1,379
2,355\*

\$ 425

### Geotechnical Group-Deep Foundations Lecture Series (1976-77)

 Income
 \$ 2,254

 Expenses
 1,888

 Surplus
 \$ 366

50% Available for Approved Expenditures \$ 183

### Structural Group-Welding Lecture Series (1977-78)

Income \$ 13,842 Expenses 1,999 Surplus \$ 11,843

50% Available for Approved Expenditures \$ 5,922

### Geotechnical Group-Soil Dynamics Lecture Series (1977-78)

 Income
 \$ 16,088

 Expenses
 13,246

 Surplus
 \$ 2,842

50% Available for Approved Expenditures \$ 1,421

### TECHNICAL GROUP FISCAL OPERATIONS 1977-78

	Income	Expenses	Surplus	Deficit
Computer	\$ 0	\$ 0	\$ 0	<b>\$</b> 0
Construction	862	369	493	-
Environmental	286	459	-	173+
Hydraulics	-	115	-	115
Structural	200	1,190	-	990+
Transportation	83	15	68	-
Geotechnical	2,647	4,002	-	1,355*
Total	\$4,087	\$6,150		

Respectfully submitted, Saul Namyet, Treasurer

TABLE I

## CONDENSED STATEMENT OF CONDITION Assets, Liabilities and Funds

ASSETS	BOO1 9-30-78	X VALUE 10-1-77	MARKE 9-30-78	T VALUE 10-1-77
Suffolk Franklin NOW	\$ 18,930.41	\$ 10,688.89	\$ 18,930.00	\$ 10,689.00
Boston Safe Deposit:				
Bonds	92,653.34	67,759.69	81,488.00	59,166.00
Stocks	65,217.30	76,930.11	90,499.00	103,167.00
Cash	61,161.46	49,364.45	61,161.00	49,364.00
Invested Income Cash	10,992.88	14,608.83	10,993.00	14,609.00
Boston Safe Deposit Total	\$230,024.98	\$208,663.08	\$244,141.00	\$226,306.00
Total Assets	\$248,955.39	\$219,351.97	\$263,071.00	\$236,995.00
LIABILITIES AND FUN	IDS			
Permanent Fund	\$ 92,932.81	\$ 85,673.49	\$ 98,635.84	\$ 92,918.00
Freeman Fund	72,336.94	67,047.17	76,776.06	72,716.00
Turner Fund	4,055.24	3,758.69	4,304.10	4,076.00
Fitzgerald Fund	6,516.95	6,225.76	6,916.88	6,752.00
French Fund	4,011.01	3,717.69	4,257.16	4,032.00
Herschel Fund	2,590.73	2,401.28	2,749.72	2,604.00
Howe Fund	4,407.16	4,107.86	4,677.62	4,455.00
Morse Fund	6,010.20	5,756.07	6,379.03	6,243.00
Walker Fund	1,975.89	1,854.38	2,097.15	2,011.00
Horne Fund	5,735.77	5,501.71	6,087.76	5,967.00
Lectures Fund	6,169.69	6,169.69	6,548.31	6,691.00
Camp Fund	14,635.87	13,565.59	15,534.02	14,713.00
Brackett Fund	300.00	•	318.41	-
Kennison Fund	4,899.16	-	5,199.81	-
Invested Current Fund	3,447.56	2,883.70	3,659.13	3,128.00
Total Invested Funds	\$230,024.98	\$208,663.08	\$244,141.00	\$226,306.00
Continuing Education Fund	\$ 5,156.33	\$ 3,866.84	\$ 5,156.00	\$ 3,867.00
Boring Data Fund	1,595.81	1,595.81	1,596.00	1,596.00
Student Loan Fund	1,414.24	1,404.24	1,414.00	1,404.00
Current Fund	0	0	0	0
Group Lectures	9,759.32	12,776.38	9,759.00	12,776.00
Corpus	(3,675.61)	(8,954.38)	(3,675.00)	(8,954.00)
Uninvested Kennison Fund	4,680.32	0	4,680.00	0
Total Liabilities	\$ 18,930.41	\$ 10,688.89	\$ 18,930.00	\$ 10,689.00
Total Liabilities and Fund	ds \$248,955.39	\$219,351.97	\$263,071.00	\$236,995.00

# TABLE II — CONDENSED STATEMENT OF INCOME AND EXPENDITURES — DISTRIBUTION OF INVESTED FUNDS

1978
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1, 1977 - S
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		Change in Book Value						
FUND NAME	Book Value 10-1-77	from Transactions, Interest. Dividends	Receibts	Tran TO	ransfer FROM	Custodian Charges	Expen- ditures	Book Value 9-30-78
Dermanent	R 85 673 49	\$ 738185	\$ 500.00	<b>¥</b>	4	\$ 622.53	69	\$ 92.932.81
Freeman	67.047.17	5,776.96		•	•	487.19		72,336.94
Turner	3,758.69	323.86				27.31		4,055.24
Fitzgerald	6,225.76	536.43				45.24	200.00	6,516.95
French	3,717.69	320.33				27.01		4,011.01
Herschel	2,401.28	206.90				17.45		2,590.73
Howe	4,107.86	353.94				29.85	24.79	4,407.16
Morse	5,756.07	495.96				41.83	200.00	6,010.20
Walker	1,854.38	159.78				13.48	24.79	1,975.89
Horne	5,501.71	474.04				39.98	200.00	5,735.77
Lectures	6,169.69	531.60				44.83	486.77	6,169.69
Camp	13,565.59	1,168.85				98.57		14,635.87
Brackett			300.00					300.00
Kennison			4,899.16					4,899.16
Inv. Current	2,883.70	248.46		1,136.35	( 800.00)	20.95		3,447.56
Totals	\$208,663.08	\$17,978.96	\$5,699.16	\$1,136.35	(\$800.00)	\$1,516.22	(\$1,136.35)	\$230,024.98

# DISTRIBUTION OF MISCELLANEOUS FUNDS

				Book Value		
	Book Value	Receipts	Expenditures	Before		Book Value
	10-1-77	Fiscal Yr.	Fiscal Yr.	Transfers	Transfers	9-30-78
Continuing Education Fund	\$ 3,866.84	\$ 3,675.00	\$ 2,385.51	\$ 5,156.33	s,	\$ 5,156.33
Boring Data Fund	1,595.81			1,595.81		1,595.81
Student Loan Fund	1,404.24	2,010.00	2,000.00	1,414.24		1,414.24
Group Lecture Series*	12,776.38	30,675.48	15,849.54	27,602.32	(17,843.00)	9,759.32
Dinner Dance	0	1,694.00	1,784.64	(90.64)	90.64	
Clambake	0	2,704.50	2,812.55	(108.05)	108.05	
Technical Group Meetings	0	4,078.00	6,150.00	(2,072.00)	2,072.00	,
Entrance Fees	0	200.00		200.00	(200:00)	0
Current Fund	0	54,314.62	65,108.16	(10,793.54)	10,793.54	0
Uninvested Kennison Fund		4,680.32	•			4,680.32
Corpus	(8,954.38)				5,278.77	(3,675.61)
Totals	\$10,688.89	\$104,331.92	\$96,090.40		0	\$18,930.41

# TABLE III DETAILED STATEMENT OF INCOME AND EXPENDITURES

Fiscal Year 10-1-77 to 9-30-78

	Expenditures	Income
Prizes, Awards	\$ 1,335.78	\$
Scholarships, Loans	2,000.00	2,010.00
Dues		20,630.00
Allotment		3,403.00
Bank Interest		1,299.16
Contributions		9,712.47
Entrance Fees		500.00
Publication Sales		5,877.59
Advertising		2,115.00
CECNE Reimbursement		11,532.24
Local Societies	200.00	-
ASCE Conference	30.00	-
Continuing Education	2,385.51	3,675.00
Lateral Earth Pressure L.S.	494.56	745.00
Earthquake L.S.	-	-
Deep Foundations L.S.	110.00	-
Miscellaneous	290.88	1,329.43
Office Services	280.63	-
Welding L.S.	1,998.81	13,842.00
Soil Dynamics L.S.	13,246.17	16,088.48
Office Supplies	1,071.95	<u>.</u>
Postage	. 2,870.96	-
Telephone	570.45	-
Forum Printing-Newsletter	1,629.05	-
Journal Printing	12,608.64	-
General Printing	4,459.32	
Annual Meeting & Student Night	3,423.38	1,931.05
Branch Activities	500.00	-
Transfer from Investments	4,899.16	-
Secretarial	1,584.00	
Travel	355.50	
Committee Expense	69.50	
New England Council	329.95	
Insurance	1,981.00	
Salaries, net	13,634.18	
Taxes, State & Federal	7,467.36	
Rent	1,653.55	
Construction Group	369.24	861.75
Environmental Group	459.21	285.55
Geotechnical Group	4,001.97	2,646.58
Hydraulics Group	115.00	•
Structural Group	1,190.13	200.00
Transportation Group	15.00	83.15
Dinner Dance	1,784.64	1,694.00
Clambake	2,812.55	2,704.50
Reprints	725.14	842.81
N.U. Student Chapter Project	1,502.76	-
Bank Charges	-	323.16
Legislative Affairs	1,120.00	
1979 National Convention	514.47	
	\$96,090.40	\$104,331.92

TABLE IV  $\label{eq:portfolio} {\tt PORTFOLIO\ OF\ INVESTMENTS} \ \ - \ \ {\tt SEPTEMBER\ 30,\ 1978}$ 

Description	Book Value	Market Value	Estimated Income
CASH			
Cash	\$11,381.84	\$11,381.84	\$
Savings Account	11,700.00	11,700.00	840.06
U.S. Treasury Bills	49,072.50	49,072.50	3,430.00
Total Cash	\$72,154.34	\$72,154.34	\$4,270.06
BONDS			,
	#00 007 00	#10 C47 00	#1 FC0 F0
U.S. Government Notes	\$20,037.38	\$19,647.00	\$1,562.50
Federal Agencies	25,085.87	23,850.00	1,970.00
Utility Industrial	16,005.09	11,969.97	875.00
Financial	10,450.00	8,700.00	462.50
	11,000.00	9,202.47	557.50
Foreign Bonds	10,075.00	8,118.70	600.00
Total Bonds	\$92,653.34	\$81,488.14	\$6,027.50
COMMON STOCKS			
Chemical	\$ 4,222.50	\$ 3,487.50	\$ 200.00
Manufacturing	8,629.23	12,150.00	700.00
Drug, Medical	4,968.62	5,525.00	240.00
Food, Beverage	9,592.00	9,000.00	348.00
Machinery, Tools	8,180.00	8,600.00	200.00
Office Equipment	8,431.24	12,465.00	518.40
Oil and Gas	6,983.63	16,275.00	960.00
Tobacco	7,240.63	8,953.13	256.25
Utilities	6,969.45	14,043.75	1,082.00
Total Common Stocks	\$65,217.30	\$90,499.38	\$4,504.65

### ANNUAL REPORTS OF COMMITTEES

### Report of Action Program-Professional Practice Committee, 1978-1979

This year the Committee consisted of the following members:

Rodney Plourde, Chairman Dominic D'Eramo, Vice Chairman Frank Killilea, Clerk David Gardner' Howard Perkins Ara Shrestinian David Thompson John Quinn

Transportation Group
At-Large/Structural Group
Construction Group
Environmental Group
At-Large
At-Large/Construction Group
Geotechnical Group
Construction Group

The Committee's most active function this year was participation in the five-society Joint Governmental Affairs Service. Retitled the "Design Professionals Joint Governmental Affairs Council," and comprised of two members each from BSCES/ASCE, the Consulting Engineers Council of New England, the Massachusetts Society of Land Surveyors and Civil Engineers, the Massachusetts Society of Professional Engineers and the Massachusetts State Association of Architects, this Council has been engaged in the following activities during this past year:

Review of proposed state legislation affecting its members, and giving testimony, where appropriate, on bills which may affect the responsibilities, privileges, or practice of the engineering profession.

Establishment of closer working relationships with state boards and agencies through meetings and follow-up contacts. This year, the Council initiated dialogues with the Lieutenant Governor's office, the Massachusetts Board of Registration for Professional Engineers and Land Surveyors, the Department of Environmental Quality Engineering, and the Special Commission on State and County Buildings.

Monthly or bi-monthly publishing of a "Governmental Affairs Bulletin" which is mailed to member societies, and contains notices of proposed legislation, coming hearings, reports on meetings, and notices of future meetings.

Legislation reviewed by the Committee in the past year, and the position taken by the BSCES Board of Government, were as follows:

H.5911. (1978): Qualifications of the Director of Building Construction. (In favor.)

S1006. (1979): Establishment of a Standard Set of Wetlands Maps. (In favor.)

S1228. (1979): Registration of Governmental Employees without Examination. (Opposed.)

S1318. (1979): Four-Year Statute of Limitations for Errors, Omissions, Neglect, etc. (In opposition to 4-year limit; too short. Would favor similar legislation with 6-year limit.)

H853. (1979): Enlarging the State Building Code Commission. (In opposition to addition of another building contractor; upsets balance.)

H1430. (1979): Establishing a State Fire Prevention Code Commission. (In favor, with one qualification: addition of one structural-civil engineer.)

H.1994. (1979): Prevention of Frivolous Malpractice Claims. (In favor.)

H.2690. (1979): Urban Renewal Agency Financing of Urban Redevelopment Corporations' Public Facilities Projects. (No position.)

Other major activities of the Committee during the year included the following:

Coordination of BSCES Environmental Group's review of EPA Concept Papers on Implementation of 1977 Amendments to Clean Air Act.

Recommendation of Asaf Qasilbash and Peter Taylor to serve on Soils Advisory Committee, an Advisory Committee to the State Building Code Commission. (Appointments made).

Recommendation of John McSweeney, Harold Glenzel, and Ernest Goodwin to serve on screening panel for new Director of the Bureau of Building Construction. (Glenzel appointed).

Recommendation of Richard Coughlin to serve on Blue Ribbon Commission.

Recommendation to State Building Code Commission that it adopt the language of the BOCA Basic Building Code 1978 with respect to Section 127.0 Construction Control.

Continue monitoring progress of the New England Section, Association of Engineering Geologists, toward professional registration of geologists in Massachusetts. (Still under consideration by geologists).

Recommendation of five candidates to Tufts University's search committee for a new Dean of Engineering. (Outcome not yet known.)

Renomination of Richard V. Battles to continue service on Boston Zoning Commission.

Looking ahead into 1979-1980, the Committee should continue to be quite active, especially as a participant on the Design Professionals Joint Governmental Affairs Council.

Respectfully submitted, Rodney P. Plourde, Chairman

### Report of Advertising Committee, 1978-1979.

The activities of the Advertising Committee focused mainly on the procurement of professional ads, for the special convention issue of the Journal.

A communication was sent to the chief executive officer of approximately 210 firms, nationwide, urging support of our publication by placing a professional message in the advertising section of the Journal. This was followed up by phone calls, to some of the local firms as press time approached.

The response was very gratifying, with 55 replies generating about 19 pages of ads.

Assistance of the BSCE Section office staff in compiling and coordinating the returns was a big help and is truly appreciated.

Respectfully submitted, John P. Hurney, Chairman

### Report of Auditing Committee

An audit of the Section checking account was performed for the period 1 October 1977 through 30 September 1978. The audit included the following:

- 1. An accounting of all checks written including voided, cancelled and lost checks.
- 2. Review of all bank charges for foreign exchange rates.
- 3. Review of checks which the Section received for which there was nonpayment.

An accounting of all deposits, interest and bank corrections.

The following items worthy of mention were noted. It was observed that three checks were processed by the bank for amounts differing from the stated values of the checks. The differences were small with the total discrepancy equalling \$0.57 more than the designated amounts. It was also noted that four unsigned checks had been issued and processed by the bank.

A calculation of the closing balance commencing with the starting balance and considering the above transactions checked to within \$0.02 and indicated no significant discrepancies in the recorded transactions.

Respectfully submitted
Robert L. Meserve, Director
Leo F. Peters, Secretary
Edward B. Kinner, Director

### Report of Committee on Awards, 1978-1979

The following prize awards for papers are recommended for the year 1978-1979:

Geotechnical Group Award

- Francis C. Pierce and Victor Calabretta "Unique Challenges Associated with Marine Structures in New England"

Clemens Herschel Award

- David C. Willett "The Use of Underground Space"

The Awards Committee also solicited nominations for the Horne Fund Award for persons who have been outstanding in unpaid public service. The Committee recommends that Dr. Othar Zaldastani be the 1979 recipient of this prestigious award. A summary of Dr. Zaldastani's achievements and services was furnished to the Board of Government.

Respectfully submitted Edward B. Kinner, Chairperson

### Report of Thomas R. Camp Fund Committee, 1978 - 1979

The 1979 Thomas R. Camp lecture was held on March 7, 1979 at the Northeastern University Faculty Center. Mr. Roy F. Weston, president of Roy F. Weston, Inc., was the lecturer, and the subject of his talk was "Environmental Engineer: Where Goeth Thou?" Mr. Weston wished to have his honorarium of approximately \$400 sent to the University of Wisconsin Foundation.

Respectfully submitted, Warren H. Ringer, Chairman

### Report of Constitution and Bylaws Committee, 1977-1978

In response to an April 10, 1978 Board of Government request, the Committee prepared a proposed amendment covering changes to Bylaws, ARTICLE 6—Fees and Dues.

At the two regular meetings of the Section on October 25, 1978 and November 29, 1978, the amendment was approved by the required two-thirds vote in accordance with the requirements of ARTICLE 15 — Amendments.

On April 17, 1978, the amendment became effective, having been approved by the Board of Government.

Respectfully submitted, Saul Namyet Max D. Sorota, Chairman

### Report of Continuing Education Committee, 1978-1979

The Committee sponsored a series of eleven lectures in the spring and fall of 1978 to assist practicing engineers preparing for the state registration examination. Total enrollment numbered approximately seventy five. Questionnaires were distributed and evaluated on the effectiveness of the course and recommendations incorporated into the program.

Material related to the technical aspects of the course continued to be collected and made available to students and instructors. Correspondence continues with other ASCE Sections concerning complementary endeavors and cooperation.

The chairman of the committee continues to attend meetings of the continuing education committee of the Boston Architectural Society.

Respectfully submitted, Ronald E. Sharpin, Chairman

### Report of Disadvantaged Youth Committee, 1978-79

During the past year the Committee discontinued its program of attempting to place disadvantaged youth in entry level positions with local engineering firms. The program was discontinued because of a very disappointing response to both an article in the BSCES Newsletter and proposals sent directly to firms in previous years.

This year members of the Committee were supportive of and actively involved in the 1978 Summer Institute, "What is Engineering", conducted for minority high school students by ASCE's National Committee on Minority Programs and Northeastern University. The Board of Government has approved the Committee's recommendation for an allocation of \$600 to sponsor three youngsters to the three-week 1979 Summer Institute.

The Committee has also distributed, via the BSCES Newsletter, information concerning ASCE's new policy on minority entrepreneurship in engineering and construction.

Respectfully submitted, Richard J. Scranton, Chairman

### Report of John R. Freeman Fund Committee, 1978-1979

On behalf of our Committee, I have the honor to submit the following report:

The Tenth John R. Freeman Memorial Lecture — "The Annual Water Balance" by Peter S. Eagleson, delivered in parts in April-May 1977, was received in February 1979 for publication in the Journal in summary form. With the approval of our Committee, it was also submitted at the same time for publication in the Proceedings of ASCE.

Encouragement was given the Hydraulics Group to proceed with ambitious plans for a lecture series on hydrology during the coming year, with Freeman Fund support.

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

### Report of History and Heritage Committee 1978-1979

Two National Historic Civil Engineering Landmarks in Massachusetts were dedicated during the past year, bringing our total to seven.

On April 10, 1978, the pioneer Dry Dock No. 1 at Charlestown was dedicated with appropriate ceremonies. ASCE President-Elect Walter E. Blessey presented the plaque to the National Park Service. The historic structure is within the new Boston National Historical Park. The U.S. Navy and various maritime historical interests were represented at the ceremonies.

On September 6th, the Boston Subway was dedicated as an NHCEL with ceremonies at the Park Street kiosk of the MBTA where the plaque is located. This designation is most significant since it coincides with the refurbishing of portions of the subway, not as a historical relic, but for the continuing use of this pioneer engineering achievement.

In August we submitted to ASCE's Committee on History and Heritage of American Civil Engineering the nomination for the designation of Harvard Stadium, a world pioneer massive structure of reinforced concrete, as an NHCEL. We are now awaiting the Committee's recommendation to the Board of Direction on this nomination.

In January of 1979 we were contacted by the Museum of Transportation for assistance in evaluating a large collection of early civil engineering plans relating primarily to Boston. The Board of Government has voted support to the Museum of Transportation for establishment of a place where early engineering plans of interest and value can be preserved and made available to engineers, historians and archeologists. Since the new musuem's field is being expanded to include the impact of transportation on the city's growth and development, civil engineering history will be very much involved. Our cooperation in this project should prove very interesting, and in line with the ASCE history and heritage program for greater appreciation of the engineer's contribution to this country's history and development.

Respectfully submitted, Gary S. Brierley Jerry Potamis H. Hobart Holly, Chairman

### Report of Key Man Committee, 1978-1979

The Key Man Committee acts as a line of rapid communications between the Section and its members in local firms. Their primary function is to remind members of coming Section meetings or events.

At present there are 65 firms or institutions with key men tied into the committee and the effectiveness in boosting attendance at society functions appears to be quite satisfactory.

Respectfully submitted, Robert M. Fitzgerald, Chairman

### Report of Membership Committee, 1978-1979

Committee members for the year included Philip Caruso, Arthur Franz, Owen MacDonald, and Richard McAllister.

This year the membership committee has given primary emphasis to the implementation of the membership recruitment pogram developed over the last two years and the formulation of new approaches to be used in assuring an increase in local membership for future years.

Key efforts included the sending of follow-up letters to ASCE national members who are nonsubscribing members of the Section, sending recruitment letters to non-ASCE and non-BSCES members, and canvassing graduating students at the annual Student Caucus and Student Night Dinner meetings.

New membership incentive programs considered and being prepared for future submission to the Board include imposing a surcharge on non-Section members at Section sponsored activities, modifying the bylaws to allow pofessional engineers without a Bachelor's Degree to more easily advance to a higher grade than currently permissible within the Society and the possibility of having BSCES sponsor various non-technical events at reduced rates for local members.

This committee strongly feels that both continued effort in the existing membership recruitment program and the future adoption of new approaches such as those considered above will help assure increased local Section membership and participation.

Respectfully submitted, Philip J. Caruso, Chairman

### Report of the Nominating Committee, 1978-1979

The Nominating Committee met on October 26, November 16, December 6, and December 21, 1978.

The Section's nominees for membership on ASCE national professional committees were submitted to National in January 1979, as follows:

Committee on Programs for Professional Services Committee on Curricula and Accreditation Committee on Minority Programs Committee on Employment Conditions

Bertram Berger Charles C. Ladd Michael Kupferman Howard Simpson The slate of officers of the BSCE Section for 1978-1979 is hereby submitted.

President
Vice President (Two-year term)
Secretary
Treasurer
Directors (Two-year term)
Nominating Committee (Elect three)
William S. Zoino
Edward B. Kinner
Leo F. Peters
Norman W. Bennett
Peter K. Taylor
Paul J. Trudeau
Franklin B. Davis
Richard DiBuono

Richard DiBuono Roger F. Gardner Frank Heger Warren H. Ringer Ronald E. Sharpin

All nominees were contacted and their consent to serve was obtained.

Albert G.H. Dietz of MIT was placed in nomination for Honorary Membership in ASCE.

The Committee received and acted upon Saul Namyet's request to be relieved of his Treasurer's duties. The Section is indebted to him for the services he has performed over the past several years.

Respectfully submitted, Charles A. Parthum, Chairman Nominating Committee

### Report of Operations Manual Committee, 1978-1979

The Operations Manual Committee prepared revisions to the Manual required by actions of the Board of Government during the past year. Recommended changes and additions included:

- 1. Replacement of the FORUM with a periodic Newsletter.
- 2. Addition of a Lecture Series Committee.
- Incorporation under a new Social Functions Committee of the activities of the former Annual Meeting, Clambake, and Dinner Dance Committees.
- Renaming the Student Chapter Committee as Student Affairs Committee and expanding its role to include Student Clubs.

The Committee's recommendations were approved by the Board of Government and made known to users of the Manual in December 1978.

Respectfully submitted, Edward B. Kinner Chairperson

### Report of Program Committee, 1978-1979

The Program Committee met on two occasions to plan and coordinate the schedule of Technical Group meetings for the year. A total of 33 meetings were scheduled by the seven Technical Groups; three of the meetings were conducted jointly by two Groups. The Program Committee also arranged scheduling for the Section's Annual Meeting and Student Night.

It has generally been possible to retain the tradition of scheduling technical meetings on Wednesday evenings to avoid conflict with lecture series and other special meetings of the Section. The presence of the National Convention in Boston in April made this somewhat more difficult as the Technical Groups preferred not to hold meetings in the weeks just prior to or following the Convention. Nevertheless, only seven of the 33 meetings were held on other than Wednesday dates and on only one occasion was it necessary to schedule more than one Group meeting on the same night.

At the beginning of the year, several Group chairpersons expressed concern over the format that had been adopted in recent years for meeting notices. An opinion was expressed that placing multiple notices on a single page detracted from each Group's ability to publicize its meeting, and thus led to a declining attendance. In response to this concern, Stan Rossier and Frank Perkins reviewed attendance data from the years prior to and following adoption of the new format. These data showed large variations in attendance from one meeting to another, but were inconclusive concerning the effect of the notice format. Technical Group chairpersons were also asked to poll those in attendance to get some sense of the impact of the format of the notices. These polls were also inconclusive, but certainly indicated that the format was not a major determinant of attendance. The issue was resolved by adopting a format in which not more than three meetings are publicized on a single sheet.

The Program Committee also served as the Lecture Series Committee. Unfortunately, none of the Technical Groups planned to conduct a lecture series during the past year. It is believed that the large effort directed to planning the National Convention was a significant factor in this decision. A full program is planned for the coming year with the Geotechnical and Structural Groups currently preparing Lecture Series for the fall, and the Environmental Group tentatively preparing plans for next spring.

Respectfully submitted, Frank E. Perkins, Chairman

### Report of Publications Committee, 1978-1979

The following summarizes the activity of the Publications Committee from April 1978 to March 1979.

Quarterly Journal Issues	4
Papers received	9
Papers rejected	None
Papers accepted, published or in press	7
Papers under review	2
Monthly Newsletter Issues	8

Pursuant to the recommendations of the 1978 BSCES Ad Hoc Budget Committee the Publications Committee undertook the task of upgrading and modernizing the format of the *Journal*. The January 1979 Issue is the first with the new format. This "Special" issue was also coordinated with the April 1979 ASCE National Convention and Exposition held in Boston and 7,000 copies were printed. The new style and format will be utilized in future issues. There are normally about 2,150 subscribers to the *Journal*, about 300 of them being non members, mostly libraries.

The Publications Committee acknowledges the contributions of its Editor of the *Journal*, Mr. Edward C. Keane, and the Editor of the monthly *Newsletter*, Mr. Leo Peters. Special thanks are also due to Mrs. Charlotte Dalrymple for her assistance throughout the year.

Respectfully submitted, William S. Zoino, Chairman Robert Snowber, Member Edward Wood, Member

### Report of Social Functions Committee

Establishment of Committee — In 1977 an ad hoc committee on social functions was established to review recent social function activity and make recommendations on the extent and responsibility for future affairs. Following a survey of members the establishment of a standing Social Functions Committee to handle the clambake, annual dance and annual meeting was recommended. This was formally adopted as a revision to the Operations Manual in November, 1978. In May of 1978 President Simpson appointed Robert A. Snowber as Chairman of the committee.

Committee Members — In the above mentioned survey 19 members indicated an interest in serving on the Social Functions Committee. From this list the Chairman selected 10 individuals who assisted in the two social functions summarized below. Other volunteers were also contacted and should be called upon for future activity.

Clambake — Bob Barton headed a special committee for the annual clambake; members included William Collins, Walt Toner, Dave Freed and George Brattin. The clambake was held on Tuesday, August 1 at the Concord Rod and Gun Club, with an attendance of 195. It was a financial and social success. A profit of approximately \$150 was realized. Door prizes, both donated and purchased, added a great deal to the party. It is strongly recommended that the Concord Rod and Gun Club be utilized again with the same caterer, with door prizes and the possible addition of music.

Valentine Dance — Consideration had been given to a fall dance but it was decided to defer it until after Christmas but well in advance of the national convention. Robert A. Snowber headed a committee which included John Keating, Mike Powers, Jim Stanzenberg, Van Bares, and Ed Condon. The dance was held at the Great Hall of Quincy Market on February 10 at a low-budget price of \$10 a couple; no dinner. Two hundred ten people attended; there was a financial loss of about \$50. It was, however, a definite social success and the location, orchestra and door prizes added to the success. Door prizes were donated by firms solicited by letter.

Recommendations — The Committee feels combining the responsibility under one committee is a definite improvement. The clambake should be continued and a dance established as an annual activity of the late fall or early new year. In order to attract younger members this should not be a dinner dance which might cost as much as \$40 a couple. With the national convention being in Boston in early April, 1979, with many activities of its own, it was decided to postpone the Section's annual dinner until later in April.

Respectfully sumitted, Robert A. Snowber, Chairman

### Report of Student Affairs Committee, 1978-1979

Membership — The 1978-1979 Student Affairs Committee included Roger Gardner (Chairman), Michael Kupferman, John Roma, Charles Rosselli, Richard Scranton, and Paul Trudeau.

Name Change — By vote of the Board of Government, the name of this committee was changed from the "Student Chapter Committee" to the "Student Affairs Committee." The new name more accurately reflects the purpose and function of this committee.

Summary of Activities — This years activities included the following:

- Sponsoring a student caucus held at Southeastern Mass.
- Sponsoring a Special Meeting for students, held at Tufts.
- Soliciting donations from area firms to improve the student loan fund.
- Providing additional Contact Members for local student chapters.
- Acting as a liaison between local ASCE Student Chapters/Clubs and the BSCE Section.

Student Caucus — On October 12, 1978, a student caucus was held at Southeastern Massachusetts University. Joseph Ward, President-elect of ASCE, gave a presentation on the "Role of the Student Chapter in ASCE." The SMU student chapter provided excellent facilities and refreshments. A total of 55 students and professionals attended. Schools represented at the caucus included Franklin Institute, Merrimack College, Northeastern University, SMU, Wentworth Institute, and Tufts University. Following Mr. Ward's presentation, students and professionals formed small groups to discuss various points of interest to the students, and how the professional community could be of service to the student chapters. All in attendance at this caucus agreed the caucus was interesting and worthwhile.

Special Meeting — On March 1, 1979, a special student dinner was held at Tufts University in cooperation with the BSCE Section Technical Groups, with 138 students and 54 professionals in attendance. Following the dinner, Roger Gardner and BSCE Section President Howard Simpson presented the following awards:

### AWARDS

ASCE Certificates for Outstanding Service to the Student Chapters of:

Northeastern University

University of Massachusetts

Desmond Fitzgerald Scholarship (\$200)
William P. Morse Scholarship (\$200)
BSCES Student Loan (\$1,000)
BSCES Student Loan (\$1,000)
Howe-Walker Student Awards

### RECIPIENTS

Richard Scranton, Faculty Advisor Michael Kupferman, Faculty Advisor Robert Snowber, Contact Member Allen Hatheway, Contact Member Richard Guzowski, Past Contact William W. Boyer, Faculty Advisor Lee Webster, Contact Member James A. Wesoloski, Past Contact Member Carl Dumas, Northeastern University Margot E. Malin, Tufts University Rick L. Wade, Northeastern University Daniel E. Hardin, Northeastern University John Di Bitetto, Merrimack College Luca Serdar, Mass. Inst. Tech. Heather Mackey, Northeastern Univ. Michael Bissonnette, Northeastern Univ. Daniel F. Coughlin, Southeastern Mass. Univ. Mark J. DeViney, Tufts Univ. Michael A. Trainque, Univ. of Lowell Stephanie G. Barry, Univ. of Mass. John J. Minihan, Wentworth Inst. James J. Wilbur, Worc. Poly. Inst.

Guest speaker for the Special Meeting was Dr. Patrick Malone, Director of Slater Mill Historic Society and a lecturer at Brown University, who presented a talk on the development of water power in Lowell.

Although students outnumbered practicing engineers 3 to 1, there was good interaction between students and engineers during the social hour and dinner. The turnout of professionals this year represents a marked improvement over previous years, but this committee hopes for an even greater turnout next year. In an effort to draw practicing engineers, members of this committee attended Technical Group meetings during December and January to announce the March 1 Special Meeting.

Student Loan Fund — This year, the Student Affairs Committee continued the task of soliciting funds for the interest-free student loans presented each year at the Special Student Meeting. Solicitations were made to over 600 firms in Massachusetts. Special thanks are extended to the following firms for their generous donations:

Curran Associates, Inc.
Richard J. Donovan, Inc.
Thomas K. Dyer, Inc.
Fay, Spofford & Thorndike, Inc.
Geotechnical Engineers, Inc.
Goldberg, Zoino, Dunnicliff & Associates, Inc.
Haley & Aldrich, Inc.
Harvey & Tracy Associates, Inc.

Mr. Francis H. Ledgard
CE Maguire, Inc.
Chas. T. Main, Inc.
Sippican Consultants International, Inc.
Stone & Webster Engineering Corp.
Symmes, Maini, & McKee, Inc.
Whitman & Howard, Inc.
Abraham Woolf & Associates, Inc.

Contact Members — During this past year, this committee helped place a number of contact members at various schools. The committee has maintained contact with student chapters and has made itself available to aid in chapter activities.

Student Engineer Liaison — The aforementioned activities were complemented by continued communication between Student Chapters and Student Clubs, and members of both the BSCE Section and ASCE National. In the coming year, this committee hopes to continue to act as the medium through which the Boston Society of Civil Engineers Section of ASCE and local Student Chapters or Clubs can help one another, and to bridge the communication gap between practicing engineers and students.

Respectfully submitted, John R. Roma, Secretary Roger F. Gardner, Chairman

### Final Report of Committee for ASCE National Convention & Exposition, 1979

On April 1-6, 1979, the spring convention of the American Society of Civil Engineers was held at the Sheraton-Boston Hotel. This convention was hosted by the Boston Society of Civil Engineers Section and was attended by more than 3600 members, spouses, students and exhibitors.

The convention and exposition offered the members more than ninety technical sessions, featuring a specialty conference on structural design of nuclear power plants. The program also included mini-conferences for many other technical divisions. Total sessions attendance was the second highest in ASCE history at 4876, second to San Francisco at 5544. The average attendance at sessions was 53.

Noteworthy speakers were included in the program; among them were Senator Muskie of Maine, Governor Edward King of Massachusetts and Deputy Secretary Alan Butchman of the United States Department of Transportation.

The program also included field trips to Charles River Dam, Boston Harbor, Massachusetts Institute of Technology, Greater Lawrence Sewage Treatment Facility, Seabrook Nuclear Plant and the MBTA Red Line Extension. The spouses program included trips to Newburyport, Concord, Lexington, Boston Harbor and various museums.

A record-breaking number of students (609) attended the sessions and participated in the activities offered by the convention. The students and their colleges put together theme exhibits in the exposition area. Seven colleges participated in this unusual event. The technical program also included presentations by students as finalists in the Daniel W. Mead student paper contest.

Introduced to the convention for the first time were exhibits by environmental groups. The Appalachian Mountain Club, Conservation Law Foundation of New England, Inc., Friends of the Earth, Massachusetts Audubon Society and the Sierra Club participated by meeting and discussing their programs with members of ASCE.

The BSCE Section committee raised almost \$18,000 from approximately one hundred firms, agencies and individuals. These funds were used to cover the costs for hosting many of the functions held throughout the week.

Of particular significance was the special edition of the BSCE Section Journal, containing Convention Highlights, Landmarks of Civil Engineering in New England and the History and Progress of BSCE and the BSCE Section, ASCE, from the year 1848 to the present.

Despite the many adverse factors such as the hotel fire on the day before the convention commenced, power failure in the hotel for two days, United Airlines strike, the teamster's strike preventing delivery of exhibitors' displays, the headlines in the newspapers regarding the Pennsylvania Three Mile Island nuclear power mishap, two thousand protesters milling around the hotel objecting to nuclear power, and a full week of cold and rainy weather, the members took full advantage of all the technical and social functions.

The convention offered the members and spouses a full week of social activities in which to renew acquaintances and make new friends. Included were the following:

A special reception on Saturday night; Cranston Rogers, Zone 1 Vice President and wife, Francine hosted national officers and wives, ASCE Staff, the Boston Section Officers and the Convention Committee.

President Simpson welcomed, on Sunday evening, more than 200 guests at the Boston Aquarium. Mementos were presented to ASCE President Walter E. Blessey, President-elect Joseph Ward and Chairman, Bertram Berger.

ASCE/BSCE hosted more than two thousand members and spouses at the Ice Breaker Party which featured complimentary delicacies of the New England area.

Tuesday evening was set aside for alumni dinners of the local colleges and other groups. The Universities of Rhode Island, Lowell and Massachusetts, also Worcester Polytechnic Institute, Northeastern University, Massachusetts Institute of Technology, Tufts University, Rensselaer Polytechnic Institute and Norwich University met at the hotels or on campuses, and the Civil Engineer Corps of the U.S. Navy met at the USS Constitution Museum.

More than two thousand members and guests attended the complimentary Pops Concert on Wednesday evening at Boston Symphony Hall. Guest Conductor was Newton Wayland; his wife, Jan Curtis, was guest soloist.

More than four hundred members and spouses attended a reception that was held for members and guests at the Great Dome, Quincy Market, on Thursday evening. A complimentary buffet was served.

The committee introduced many innovative features in this convention, and their impact is evident from the accomplishments listed, as compared to other conventions:

- Largest Convention Steering Committee
- Largest spring convention
- Largest student registration

- Largest (two) luncheon attendance
- Largest volume of publication sales
- Second largest convention registration ever
- Second largest total session attendance
- Second largest spring spouse registration

The success of this convention is directly attributable to more than fifty committee members who gave their time and efforts over a period of two years.

To each of them I am personally indebted.

Respectfully submitted, Bertram Berger, Chairperson

### AND

Edward B. Kinner Program, Vice Chairperson		Sandra Johnson Cointrea	u Sessions Assistants
S. Frances Berger	Ladies Programs	Anthony Di Sarcina	Sessions Assistants
Judith Nitsch Donnellan Exhibits		Prof. Frank Perkins	Speakers
Rubin M. Zallen Exhibits		Prof. Richard Scranton	Student Program
Michael T. Gruenbaum Publicity		Prof. Michael Kupferman	Student Program
Cranston R. Rogers	Speakers	Prof. Lew Edgers	Student Program
Robert B. Barton	Activities	David Deans	Student Program
Thomas K. Liu	Technical Program	Wallace Stickney	Excursions
Joseph Lavin	Social Events	David W. Gates	Excursions
Philip J. Caruso	Attendance	Morris Root	Excursions
John T. Christian	Technical Program	John B. McAleer	Excursions
Paul J. Trudeau	Attendance	Barry A. Patrie	Excursions
Bruce Campbell	Professional Program	Stanley Rossier	Professional Program
Joseph L. Ignazio	Reception	Herbert G. Spooner	Younger Members
Estelle Shuman	Graphics	Judith Kinner	Hospitality
Joseph MacDonald	Transportation	Harriet Simpson	Hospitality
Charles A. Parthum	Social Events	Marsha Weiss	Hospitality
Dalton L. Baugh	Publicity	Mary Cusack	Hospitality
Alfred Howard	Field Trips	Leo De Marsh	Transportation
Carol Hogan	Ladies Programs	H. Hobart Holly	History and Heritage
Robert D. Vanasse	<b>BSCES</b> Journal	William Zoino	BSCES Journal
John J. Cusack Pro	gram, Vice Chairperson	Edward C. Keane	BSCES Journal
Brian Hogan Act	ivities, Vice Chairperson	Edward Wood	BSCES Journal
Richard D. Bedard	Finance	Robert Snowber	BSCES Journal
Martin Weiss	Field Trips	David Weiner	Social Events

### ANNUAL REPORTS OF TECHNICAL GROUPS

### Report of the Computer Group, 1978-1979

The following served on the Executive Committee:

Salvatore G. Mazzotta

Robert A. Wells, Jr.

John D. Goodrich

Glenn Orenstein

Mukti Das

James N. Jackson

Chairman

Vice Chairman

Clerk

Member

Member

Member

The first three meetings were held at the MIT Faculty Club in Cambridge, preceded by dinner. The fourth meeting was held jointly with the Structural Group at MIT's Center for Advanced Engineering Studies. The following topics were discussed:

November 1, 1978 — Computer Graphics Applications in the Production Environment. Dr. Wayne W. Black of Chas. T. Main, Inc. addressed two major application areas of computer graphics: data capture and computer-aided drafting. The discussion touched briefly on the equipment used, but was mostly on actual accomplishments. Examples included interdisciplinary checking, material take-offs, engineering drawings, maps and map-related records. Dr. Black presented sample drawings that illustrated each aspect of his talk. Attendance 25.

November 29, 1978 — Electronic Office of the 1980's. Mr. Martin Ernst of Arthur D. Little, Inc. described the office of the future as one where capital replaces today's labor, where electronic gear is used routinely by clerical personnel and top management, and where there is a substitute for the paper medium. The reasons for this future office were stated as 1) large amounts of filed information, 2) regulatory control, 3) reduction in word-skills of clerical help, 4) amount of time spent in internal communications, and 5) anticipated shortage of workers. The components of such an office exist today in facsimile, PABX, smart copiers, computers, communications, etc., but no manufacturer has offered a system that integrates these components. Mr. Ernst estimates that within 3 to 5 years office systems will be available from major suppliers, and that within 8 to 10 years they will be used by many offices. Attendance 18. This was also an official meeting of the BSCE Section, ASCE.

February 14, 1979 — Dynamic Modeling of Water Quality in Urban Drainage Canals. Messrs. Richard E. Moore and David Bingham of Metcalf and Eddy, Inc. described the modeling of tidally-affected drainage canals near Savannah, Georgia, for the purposes of an environmental study. The analysis of the canals for both point and non-point pollution sources was described. In addition, the significant factors in the local geography and environment which impacted the study were discussed. The objective of the study was to present to the City of Savannah a program to reduce pollution in the canals.

The analysis was carried out by use of a one-dimensional finite element water quality model which was implemented on a digital computer. Use of this model pointed out the most cost-effective measures to be taken and also made obvious the effect of certain geological features, such as the storage capacity of adjacent swamp land. Attendance 12.

March 14, 1979 — A Practical Finite Element Primer. Prof. Klaus-Jürgen Bathe of the Department of Mechanical Engineering of M.I.T. first reviewed the displacement method of formulating structural analysis for trusses. He then compared this with the formulation of a two-dimensional finite element analysis problem. He went on to discuss the steps required to use finite element techniques on engineering problems, namely 1) determine if FE analysis is appropriate, 2) establish the FE model, 3) run model on computer, and 4) interpret results. Finally, Prof. Bathe showed slides of several problems he has solved using FE analysis. The meeting was held jointly with the Structural Group. Attendance 45.

The following were elected at the February 14, 1979 meeting as committee members for 1979-1980:

Robert A. Wells, Jr. Chairman
John D. Goodrich Vice Chairman
Glenn Orenstein Clerk
Mukti Das Member
David Alschuler Member
Salvatore G. Mazzotta Member

Respectfully submitted, Salvatore Mazzotta, Chairman

### Report of Construction Group, 1978-1979

The Executive Committee this year consisted of the following:

Chairman Stephen G. Walker
Vice Chairman John R. Roma
Clerk (Vacant)
Member John P. Sullivan
Member Norman Bennett
Member Laimonis Rieksts

The following meetings were held during the past year:

October 24, 1978 — Dinner meeting at Northeastern University. Mr. Marvin Gates, Principal of Gates-Scarpa and Associates, spoke on "Bidding and Estimating." Officers for 1978-1979 were elected at this meeting. Attendance 19.

January 10, 1979 — Dinner meeting at the Cottage Crest. Waltham. James J. Myers, Esq., a partner in the law firm of Gadsby & Hannah, Inc., spoke on the owner's (and general contractor's) concerns about subs and suppliers' right to payments. Attendance 17.

March 14, 1979 — Dinner heeting at the Cottage Crest, Waltham. Rudi Idzojtic, Contracts Administrator for Perini Corp., spoke on "Construction Delays and Impact on Schedule: Analyzing the contractor's request for a time extension, and impact damages." Attendance 16. This was also an official meeting of the BSCE Section, ASCE.

In May, a joint meeting will be held with the Geotechnical Group, at which time the Construction Group will elect officers for 1979-1980. The slate of the nominating committee is as follows:

Chairman John R. Roma
Vice Chairman Charles A.Rosselli
Clerk Robert D. Lignowski
Member Stephen G. Walker
Member John P. Sullivan
Member Norman W. Bennett

Respectfully submitted, John R. Roma, Vice-Chairman

### Report of Environmental Group, 1978-1979

The Executive Committee this year consisted of the following members:

Chairman Warren H. Ringer
Vice Chairman Benjamin J. Fehan
Clerk Steven H. Corr
Member Gerald C. Potamis
Member James O'Shaughnessy
Member Edward Boyajian

The following meetings were held during the past year.

October 18, 1978 — Joint meeting with Hydraulics Group included a tour of the Cohasset, Massachusetts Water Treatment Plant, Aaron River Dam and Reservoir and Second Brook Control Structure. Dinner was held at Hugo-Kimball's, Cohasset Harbor, followed by discussions by Arthur Vulgeropolous on hydrological studies concerning the project and by Frederick G. Aufiero of SEA Consultants, Inc. concerning the design and construction of the treatment facilities. Attendance 47.

January 18, 1979 — Dinner meeting at Purcell's Restaurant. John Smith, Chief, Urban Systems Management Section, EPA, Cincinnati, spoke on innovative and alternative systems for wastewater treatment facilities. Attendance 70.

March 7, 1979 — Dinner meeting at Northeastern University Faculty Center, Kerr Hall. This was the 7th Annual Thomas R. Camp Lecture. Roy F. Weston, President, Roy F. Weston, Inc. spoke on "Environmental Engineer: Where Goeth Thou?".

This was also the Environmental Group's Annual Meeting. The following officers were elected for the coming year:

Chairman
Vice Chairman
Vice Chairman
Clerk
Clerk
Member
Me

### Attendance 35.

May 23, 1979 — The annual outing of the Environmental Group will be a field trip to the Upper Blackstone Water Pollution Abatement District treatment plant near Worcester, Massachusetts. George M. Reece, Vice President and Director, Fay Spofford and Thorndike, Boston, and Emil Holland, Engineer Director of the District, will be dinner speakers.

Respectfully submitted, Warren H. Ringer, Chairman

### Report of Geotechnical Group, 1978-1979

Officers for the Geotechnical Group in 1978-1979 were:

Chairman
Vice Chairman
Clerk
Member, Executive Committee
Member, Executive Committee
Member, Executive Committee
Chairman, Forum Committee

David E. Thompson Anthony C. Barila Joseph D. Guertin, Jr. Asaf A. Qazilbach Lewis Edgers Joseph J. Rixner James W. Weaver

During the year the Group held the following meetings:

May 23, 1978—"Offshore Development". A joint presentation by Mr. Robert E. Smith and Mr. F. Pierce. Presiding was Mr. Asaf A. Qazilbach. Attendance 60.

September 26, 1978 — "Filter Fabrics". A joint presentation by Mr. Robert Barrett and Mr. J. Robert Carroll. A geotechnical forum committee meeting presided over by Mr. James W. Weaver. Attendance 50.

October 25, 1978 — "Cone Penetrometer". A lecture by Dr. John Schmertmann of the University of Florida. Presiding was Mr. David E. Thompson. Attendance 80. This was also an official meeting of the BSCE Section, ASCE.

November 30, 1978 — "Reinforced Earth". A joint presentation by Mr. David McKittrick of Reinforced Earth Company, Mr. John Aherne of the Massachusetts Department of Public Works and Mr. Thomas Tsotsi of CE Maguire. A geotechnical forum committee meeting presided over by Mr. James W. Weaver. Attendance 72.

January 17, 1979 — "Proposed Revisions to the Massachusetts Building Code". A joint presentation by Mr. Donald T. Goldberg of Goldberg, Zoino, Dunnicliff & Associates, Inc., Mr. William Hagen of LeMessurier Associates, Mr. Edmund Johnson of Haley and Aldrich, Inc. and Dr. S.J. Poulos of Geotechnical Engineers, Inc. A geotechnical forum committee meeting presided over by Mr. James W. Weaver. Attendance 30.

February 20, 1979— "Dam Inspection Program". A joint presentation by Dr. Harl P. Aldrich, Jr. of Haley and Aldrich, Inc., Mr. E. Perkins Gould of the U.S. Army Corps of Engineers, Mr. Warren Guinan of Anderson Nichols & Co., Inc., and Dr. Ronald C. Hirshfeld of Geotechnical Engineers, Inc. A geotechnical forum committee meeting presided over by Mr. James W. Weaver. Attendance 100.

March 21, 1979 — "Selection of Stabilization Measures for Shallow Underground Openings in Rock". A lecture by Dr. Tor L. Brekke of the University of California at Berkeley. Presiding, Mr. David E. Thompson. Attendance 68.

April 26, 1979 — "Lateral Loads on Piles and Caissons". A lecture by Dr. Thomas Davisson of the University of Illinois. Attendance 46.

All of the above meetings were held at Tufts University with the exception of Dr. Schmertmann's lecture which was held at Blossom's in the West End restaurant.

Lecture Series The Geotechnical Group is planning a lecture series on dams scheduled for the fall of 1979. Mr. Alton Davis, of Chas. T. Main, Inc., has accepted the position as Chairman of the Lecture Series Committee.

Officers and Executive Committee members for 1979-1980 are as follows:

Chairman
Vice Chairman
Vice Chairman
Clerk
Member, Executive Committee

Respectfully submitted, Joseph D. Guertin, Jr., Clerk

### Report of the Hydraulics Group, 1978-1979

The Executive Committee for this year consisted of the following members:

Chairman Richard DiBuono
Vice-Chairman Reynold Hokenson
Clerk Russell Peterson
Member Robert H. Taylor, Jr.
Member Prof. Antonis Koussis
Member, Past Chairman Thomas Doucette
Member, Past Chairman Edward Dunn

September 27, 1978 — John Desmond of Francis Associates, Cambridge, and Louis Garibaldi, Director of Operations at the New England Aquarium, Boston spoke about the design, construction, operation and maintenance of the water processing facilities of the Aquarium. The evening meeting was held at the Aquarium and included a tour of the hydraulic facilities. Attendance 55. This was also an official BSCE Section meeting.

October 18, 1978 — Conducted jointly with the Environmental Group, the meeting included an afternoon tour of the Cohasset, Mass. Water Treatment Plant, Aaron River Dam and Reservoir, and Second Brook Control Structure and an evening meeting at Hugo's Lighthouse Restaurant, Cohasset. Lectures were presented by Frederick G. Aufiero, Associate, SEA Consultants, Inc., Boston, who presented the environmental engineering aspects of the design and construction of the water treatment plant and Athanasios Vulgaropulos, Consulting Civil and Hydraulic Engineer who spoke about the hydrologic and hydraulic aspects of the design and construction of the dam and reservoir, and the flow control structure. Attendance 54.

December 6, 1978 — A joint presentation on the development of low head hydropower in New England was made by John J. Fairfield, Manager of Projects and Jack C. Howe, Mechanical Engineer, both of Chas. T. Main, Inc., Boston. Mr. Fairfield discussed existing and potential low head hydroelectric development in New England and Mr. Howe spoke on recent hydraulic turbine developments for low head applications. The evening meeting was held at the Ralph M. Parsons Water Resources Laboratory at MIT. Attendance 65.

January 31, 1979 — M.B. McPherson, Director of the ASCE Urban Water Resources Research Program spoke about urban runoff control planning. Mr. McPherson focused on the current status of urban runoff control planning in the United States and briefly outlined the history and progress of the ASCE UWRR Program. The evening meeting was held at the Ralph M. Parsons Laboratory at MIT. Attendance 30.

March 14, 1979 — An evening tour of WPI's Alden Research Laboratory (ARL), Holden, Mass., including the demonstration of an operating hydrothermal model of a nuclear power plant cooling water discharge structure, was followed by a lecture on the physcial and analytical modeling of the Seabrook (NH) Nuclear Power Plant cooling water system by Professor George E. Hecker, Director of ARL. Prof. Hecker summarized the various studies conducted at ARL to help evaluate the operational characteristics and environmental effects of the cooling water intake and discharge structures. Attendance 33.

May 2, 1979—"Design, Construction and Operation of Pump Test Facility" will be the topic to be presented by Jonathan W. Leavitt, Chief Test Engineer, CE-KSB Pump Co., Inc. and Edward Dunn, Asst. Vice-President, CE Maguire, Inc. at an evening meeting in Portsmouth, NH. The meeting will be preceded by an afternoon tour of the test facility in Newington, NH. Election of Hydraulic Group officers for 1979-1980 will be conducted at the meeting. The slate of the Nominating Committee is as follows:

Chairman
Vice-Chairman
Clerk
Member Executive Committee
Member Executive Committee
Member Executive Committee

Reynold Hokenson Russell Peterson Robert H. Taylor, Jr. Prof. Antonis Koussis Edward P. Dunn Richard DiBuono

> Respectfully submitted, Richard J. DiBuono, Chairman

### Report of the Structural Group, 1978-1979

The Executive Committee this year consisted of the following members:

Chairman Franklin B. Davis
Vice President Richard A. Foley
Clerk James M. Becker
Member-at-Large Kenneth B. Wiesner
Member-at-Large Maurice A. Reidy
Student Member Luka Serdar, MIT
Immediate Past Chairman Frank J. Heger

The meetings held by the Structural Group were as follows:

October 4, 1978 — Mr. Edward J. Teal, Structural Consultant, Los Angeles, presented the A.I.S.C. 1978 T.R. Higgins Lectureship Award paper entitled "Seismic Design Practice for Steel Buildings". Mr. Teal's lecture presented state-of-the-art design concepts for the aseismic design of steel buildings. His lecture was particularly relevant because of his personnal experience as a design engineer. The evening meeting was held at Northeastern University. Attendance 175.

December 13, 1978 — A panel discussion was held in regard to the problems associated with the retrofitting of bridges. The panel moderator was Robert Tierney, Chief Engineer of the Massachusetts Department of Public Works. The panel consisted of John Aherne, Bridge Engineer, Massachusetts Department of Public Works; Lawrence McCloskey, Chief Engineer, Universal Engineering Corp.; and Paul Maimoni, Project Manager, J.F. White Contracting Co. Meeting consisted of introductory remarks by Mr. Tierney in which he discussed the bridge upgrading program of the Department, and a panel discussion during which various problems associated with the bridge upgrading program were aired. The DPW's point of view was expressed by Mr. Aherne; the consultant's approach was discussed by Mr. McCloskey, and the contractor's view

was presented by Mr. Maimoni. The evening meeting was held at the Student Center of Northeastern University. Attendance 75. This was also an official meeting of the BSCE Section, ASCE.

February 28, 1979 — Mr. William LeMessurier, President, LeMessurier Associates/SCI presented a talk on design for Middle East construction. Mr. LeMessurier gave a talk based upon his firm's experiences in the Middle East. His emphasis was on the organization for design rather than on the technical aspects. The presentation was highlighted by a film about one of their major projects. The evening meeting was held at the Student Center of MIT. Attendance 65. This was also an official meeting of the BSCE Section, ASCE.

March 14, 1979 — Professor Klaus-Jürgen Bathe, Department of Mechanical Engineering, MIT, presented a talk entitled "A Practical Finite Element Primer". Prof Bathe's talk presented an overview of the finite element method for practicing engineers who had not already been exposed to it. This meeting was held jointly with the Computer Group. The evening meeting was held in Room 9-150 at MIT. Attendance 45.

Elections were held at the March 14th meeting for members of the Executive Committee for 1970-1980. Elected were:

Chairman Richard A. Foley
Vice Chairman James M. Becker
Clerk Kenneth B. Wiesner
Member-at-Large Maurice A. Reidy
Member-at-Large Thomas Tsotsi
Student Member Bruce Wile, Northeastern
Immediate Past Chairman Franklin B. Davis

During the year, meetings of the Executive Committee were held to plan regular meetings and to discuss other matters. Plans were started for a lecture series to be held during the Fall of 1979 entitled, "Structural Renovation and Rehabilitation of Existing Buildings".

Respectfully submitted, James M. Becker, Clerk

### Report of the Transportation Group 1978-1979

The Executive Committee this year consisted of the following members:

Chairman A. Russell Barnes, Jr.
Vice President Rocco A. Mancini
Clerk Edmund J. Condon
Member Robert A. Snowber
Thomas F. Humphrey
Member, Past Chairman
Representative to JRTC Marvin W. Miller

The following meetings were held during the past year:

May 24, 1978 — Federal Transportation Policy as Represented in the 1978 Federal Transportation Bill. Mr. Lester P. Lamm, Executive Director of the Federal Highway Administration, described the government's approach to funding for highway and transit projects. The various versions of the bill from the Senate and the House of Representatives were discussed. The meeting was a luncheon session held at Purcell's Restaurant. Attendance 56.

September 20, 1978 — The New Boston. Barney Frank, a Massachusetts State Representative whose district covers a portion of Boston, spoke on the recent developments in the city including Park Plaza and the Washington Street Mall. He focused on three additional topics: a) The problems faced in public impovement with the "not near me" syndrome; b) The restriction of the automobile in center city; and c) Improvement of MBTA service to Boston. The luncheon meeting was held at Nick's Restaurant, Attendanct 36.

November 16, 1978 — The Central Artery Utility Research Project. Mr. Paul Levy, Partner, Storch Engineers, spoke on the utilities inventory made in connection with the proposed project for depression of the Boston Central Artery, including data research and storage on computer cards for later retrieval. The meeting was a joint luncheon with the Boston Transportation Group. Attendance 139.

January 24, 1979 — Surface Transportation Act of 1979. Mr. George M. Joseph, Director, Capital Expenditures Program, Massachusetts Department of Public Works, spoke on the 1979 Transportation Act providing for highways, mass transit and highway safety. The meeting was a luncheon held at Nick's Restaurant. Attendance 79. This was also an official meeting of the BSCE Section, ASCE.

March 22, 1979 — Future Plans for the MBTA. Mr. Robert L. Foster, Chairman, MBTA, spoke on his thoughts about the present state of the MBTA and his five priorities for the coming year: 1) vehicle maintenance and reliability; 2) budget control and improved productivity; 3) market strategies and increased revenues; 4) communication; 5) construction management and increased accountability. This meeting was a dinner at Nick's Restaurant. Attendance 63.

This March 22, 1979 meeting was the Annual Meeting of the Transportation Group. Nominations and elections were held and the following were elected as officers for 1979-1980:

Rocco A. Mancini Edmund J. Condon Robert A. Snowber Thomas F. Humphry Paul A. Levy Martin Weiss Marvin W. Miller

Charman Vice Chairman

Clerk Member Member Member

Representative to the Joint Regional Transportation

Committee, Boston Region

Past Chairman

A. Russell Barnes, Jr.

Meetings of the Executive Committee were held on April 21, 1978, June 23, 1978, September 26, 1978, November 9, 1978 and January 18, 1979.

Respectfully submitted, Edmund J. Condon, Clerk