

PROCEEDINGS OF THE SECTION

Minutes of Meetings

BOSTON SOCIETY OF CIVIL ENGINEERS SECTION-ASCE

Minutes of the Section meetings are included as part of group meetings as follows:

November 20, 1974 — Computer
 December 11, 1974 — Structural
 January 8, 1975 — Construction
 February 19, 1975 — Transportation
 April 2, 1975 — Environmental

COMPUTER GROUP

November 20, 1974 — The regular Computer Group meeting was held at the Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics, M.I.T. Professor Charles L. Miller of M.I.T. discussed the various expectations of the early sixties for computer applications in engineering and how well they have been fulfilled to date. It was noted that the least realized of all the prognostications called for substantial changes in the structure of engineering organizations. Other expectations that have not been realized, focused on the mode of computer use and software development. However, it was pointed out that computer usage is widespread today and growing. It would appear that the expectations of the early sixties are going to take a little longer to achieve. There were approximately twenty-five members and guests in attendance.

Lewis H. Holzman, Clerk

January 22, 1975 — The Computer Group met at the Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics at MIT in Cambridge. Thirty-two people attended the meeting which was called to order at 7:15 p.m. by James N. Jackson of the Computer Group's Executive Committee.

The meeting consisted of a panel discussion on the topic "Computers — An Unfulfilled Promise for the Small Firm?" The panel consisted of Professor Dan Roos of the Department of Civil Engineering, MIT; Mr. Russell Barnes of Barnes & Jarnis, Inc., Boston; and Mr. Samuel Francis of Francis & Jackson,

Associates, Marion. Mr. Francis discussed the deliberations entered into by APEC in their attempt to expand their computer usage for the small engineering firms. Mr. Barnes discussed and documented the deliberations which his firm had undergone in their consideration of computers and various types of programable calculators. Professor Roos discussed the general problem of computers in engineering firms and the particular pressures that face the small consultant.

An extended discussion period followed the presentation of the panel and the meeting was adjourned at 9:00 p.m.

March 19, 1975 — The combined Computer Group and Transportation Group meeting was held at the Playboy Club in Boston. Mr. Kay Krekorian, Deputy Chief Engineer of the Massachusetts Department of Public Works and Mr. Alfred Howard, Transportation Planning Director of the Boston Redevelopment Authority discussed their experiences with computerized systems for determining traffic patterns and controlling them. The dissimilarities of equipment and objectives of the City and State systems were forcefully presented. Mr. Stanley Siegel, Director of Transportation of the Town of Brookline was moderator.

An election was held for offices of the Computer Group for the coming year. Outgoing Chairman, John T. Christian presented the following slate for the executive committee:

Chairman — Jekabs P. Vittands
 Vice Chairman — Lewis H. Holzman
 Clerk — James N. Jackson
 Member — Sal Mazzotta

Member — Robert A. Wells, Jr.

Member — John T. Christian

As there were no other nominations the slate was elected unanimously. Approximately 80 members and guests attended the Joint Meeting.

Lewis H. Holzman, Clerk

CONSTRUCTION GROUP

October 30, 1974 — The October meeting of the Construction Group was held at the Red Coach Grill, 43 Stanhope Street, Boston. Luncheon was served at 12:30 P.M. At 1:00 P.M. the meeting was called to order. After brief announcements by Samuel E. Rice, III, Chairman, he introduced the main speaker, Mr. Philip Whitton of San-Vel Corporation. The talk was on "The Growing Use of Precast — Prestressed Concrete Building Units". A film of construction of the "57 Building" on Stuart Street, Boston was shown. Mr. Whitton explained the various aspects of this unique construction.

The meeting, attended by 18 persons was adjourned at 2:00 P.M.

Laimonis Rieksts
Vice-Chairman

December 18, 1974 — The regular Construction Group luncheon meeting was held at the Red Coach Grill, 43 Stanhope Street. Luncheon was served at 12:30 P.M. At 1:10 P.M. after brief announcements, Chairman Rice introduced Mr. Charles Appley of MBTA and Mr. David Thompson of Haley & Aldrich. A film presentation and talk was about the recent MBTA extension North of Boston. Mr. Appley talked about the details of construction and the difficulties encountered. Mr. Thompson talked about the soil conditions and pre-loading of the soil.

A total of 24 members and guests were in attendance. The meeting adjourned at 2:10 P.M.

Laimonis Rieksts
Vice-Chairman

January 8, 1975 — The Construction Group luncheon meeting was held at the Playboy Club, Park Square, Boston.

This was also the monthly Business Meeting of BSCES-ASCE.

After social hour and dinner, the meeting was called to order at 7:30 p.m.

After brief introduction by Chairman Samuel Rice III, floor was given to President Thomas Liu.

He made a motion to vote on the proposed by-law changes as approved by the Board of Government of their November 4, 1974 meeting. Articles 6 and 8 of the by-laws are affected.

The motion was seconded and the vote was unanimous in favor of the change.

The guest speaker for the evening, Mr. Ken Parker of Gilbane Building Company talked about "CONSTRUCTION MANAGEMENT, AN EVOLVING CONCEPT".

It was a very timely and interesting subject which stimulated a lot of questions and discussion.

Total of 29 members and guests attended.

Meeting adjourned at 9:00 p.m.

Laimonis V. Rieksts
Vice Chairman for
Renwick Chapman, Clerk

February 12, 1975 — See Geotechnical Group.

ENVIRONMENTAL GROUP

November 6, 1975 — On Wednesday, November 6, 49 members of the Society met at the Playboy Club for dinner and a discussion of Wastewater Plant Startup and Operation. The discussion was initiated by Mr. Joseph Hanlon of Camp, Dresser & McKee who delivered a paper which lasted approximately 40 minutes. Mr. Hanlon was introduced by Messrs. William H. Parker, II, Chairman, Environmental Group and Clifford W. Bowers, Sub-Chairman. Following Mr. Hanlon, Mr. Hibbard Armour of the Environmental Protection Agency, Mr. Ross Crane of Metcalf & Eddy, Inc., Mr. John Hartley of the City of Marlborough and Mr. Brian Jeans of the Massachusetts Water Resources Commission each made a few comments and the floor was then opened to questions. The meeting adjourned at about 9:00.

Respectfully submitted,
Clifford W. Bowers
Sub-Chairman

January 15, 1975 — See Hydraulic Group

February 26, 1975 — The Environmental Group met at the Playboy Club of Boston for a dinner meeting.

The subject of this meeting was ozone disinfection of secondary effluents and the invited speaker was Carl Nebel of Welsbach Ozone Systems Corp. Mr. Nebel explained the state of the art on equipment for ozone production and its use in disinfection of wastewater treatment plant effluents.

April 2, 1975 — The Environmental Group met at the Playboy Club of Boston for a dinner meeting.

The lecturer for the evening was Steve Lathrop of the Environmental Protection Agency, who spoke on the Safe Drinking Water Act of 1974.

Officers for the Environmental Group were elected at this meeting, and are as follows:

Chairman,	Leo Peters
Vice Chairman,	Paul Taurasi
Clerk	Fred Blanc
Members,	Clifford Bowers
	Warren Ringer
	Peter Knowlton

GEOTECHNICAL GROUP

December 10, 1974 — The forum meeting was held at MIT using the Potpourri format in which each speaker was allocated 10 minutes for presentation and 5 minutes for question — answer — discussion. The subjects of the seven speakers ranged throughout the Geotechnical Engineering field. The program began at 6:30 p.m. with the first speaker. A break for coffee and donuts was made at 7:45 with resumption of the program at 8:20 and adjournment at 9:30. Many favorable comments were received from the approximately 103 persons who attended.

The speakers and their subjects were as follows:

- a. Jim Weaver and Dick Stulgis (Haley and Aldrich)
"Settlement Behavior of Oil Storage Tank During Hydro-Test".
A description of the settlement measuring equipment, the discovery of an area of high differential settlement, the evaluation of the observations and corrective action taken.

- b. Dave Campbell (Stone & Webster)
"Computer Approach for the Analysis of Rock Anchoring Systems".
A brief description of a computer program used to analysis rock bolt patterns in terms of geology (joints, faults, etc.) and discussion of a specific application to a powerhouse excavation.
- c. Steve Alsup (Goldberg — Zoino)
"Engineering Geophysics is not Seismic Refraction".
Discussion of two methods out of a listing of more than 30. Provided data on depth of survey using nuclear radiation type equipment and indicated range of reliability of data.
- d. John Roma (Golder — Gass & MIT)
"Caisson Dewatering at Harvard Business School".
A description of caisson — dewatering problems in a portion of the Harvard Business School apartment building complex. This job used large diameter deep wells rather than a wellpoint system. Observation of adjacent structures showed no settlement.
- e. Jean Audibert (Stone & Webster)
"Comparison of Teraprobe & Vibro — Flotation".
Comparison of effectiveness and costs of densifying sands at two sites using the above methods.
- f. Tom Turcotte (Weston Geophysical)
"Weston Geophysical seismic station".
Description of the new seismic monitoring station in Westboro. Also discussed proposal for northeastern United States grid to provide regional coordination of observations on a monthly basis.
- g. Ken Briggs (Stone & Webster)
"Zero Blow Count in Clays underlying a Nuclear Power Plant Site".
The detective work involved in finding a rational explanation for observed low blow counts at depth under a nuclear power plant site. Resolved that sensitivity of the clay was the cause.

Respectfully submitted,
Alton P. Davis Jr.,
Chairman Geot. Sect.
Forum Comm.

February 12, 1975 — A joint meeting of the Geotechnical and Construction Groups was held on February 12, 1975, at Harkness Commons, Harvard University. The program was a panel discussion on the subject of "Design and Construction of Tunnels", moderated by Stiles Stevens of C. E. Maguire. Members of the panel were:

Research: Dr. Steve Majtenyi, U.S. Dept. of Transportation, Federal Highway Administration, Washington, D.C.

Design Professionals and Consultants: Mr. Robert Jenny, Consulting Engineer, New Jersey

Contractor: Mr. George Fox, Chief Engineer Grow Tunneling Corp., New York

Project Management: Mr. Ed Plotkin, McLean-Grove Construction Co., New York

In addition, limited presentations were provided by C. John Dunicliff, Chief Engineer, Soil & Rock Instrumentation, Inc. on "Soft Ground Tunnels", and Professor Herbert Einstein, MIT, on "Hard Rock Tunnels".

Chairman for the evening and program organizer was William S. Zoino. Attendance at the meeting was curtailed because of a raging blizzard during the afternoon and early evening.

HYDRAULIC GROUP

December 4, 1974 — A meeting of the Hydraulic Group of the Boston Society of Civil Engineers Section was held on Wednesday, 4 December 1974 at the Ralph M. Parsons Water Resources Laboratory at the Massachusetts Institute of Technology in Cambridge. Attendance at the meeting was 21.

The meeting was called to order by Group Chairman, Saul Cooper, at 7:10 p.m. The Chairman gave an outline of the three remaining Hydraulics Group's meetings which include the Second Annual Thomas R. Camp Lecture to be held on January 15, 1975. Chairman Cooper appointed Frank Perkins, chair-

man of the nominating committee, with instructions to report on a slate of new officers at the March 1975 meeting.

Mr. Cooper introduced the speaker for the evening, Professor Bernard Berger, Director of the University of Massachusetts Water Resources Research Center. The speaker outlined the background, purposes and funding for the Research Center which was established in 1965 on enactment of the Water Resources Research Act of 1964. Professor Berger gave a synopsis of three on-going projects which included:

(1) Design of a Rational Sampling Network for a river

(2) Effects of Lakeshed Developments on Water Quality

(3) Impact of Nonpoint Urban Runoff on Water Quality of Receiving Streams.

A question and answer period followed the presentation. The meeting adjourned at 8:30 p.m.

Oscar L. Donati
Clerk

January 15, 1975 — A combined meeting of the Hydraulics and Environmental Groups of the Boston Society of Civil Engineers was held on Wednesday, 15 January 1975 at the Massachusetts Institute of Technology Faculty Club in Cambridge. This dinner meeting was the third annual Thomas R. Camp Lecture with 70 people in attendance for the lecture. A brief meeting of the Group's Executive Committee was held prior to the scheduled dinner meeting.

The meeting was called to order at 7:45 p.m. by Hydraulics Group Chairman Saul Cooper who gave a brief background of the Camp Lecture series and introduced Mr. William Parker, Chairman of the Environmental Group and Mr. Charles A. Parthum, Vice President of the BSCES. Also introduced were Mr. Joseph Lawler, President and Mr. Joseph Heney, Vice President of Camp Dreser & McKee Inc., engineering firm.

Chairman Cooper introduced the featured speaker of the evening, Dr. Abel Wolman, Professor Emeritus of Sanitary Engineering at the John Hopkins University. The subject of the Camp Lecture was "Regional Governmental Dilemmas". Dr. Wolman's talk dealt with the many prob-

lems associated with establishment of regional governments for the management water resource needs not only in this country but also in other parts of the world. He indicated that remoteness from governing bodies is one of the major problems of many people in the world and said that we must learn how to improve communications with the man on the street.

A question and answer period followed the presentation. The meeting adjourned at 9:30 p.m.

Oscar L. Donati
Hydraulics Group
Clerk

March 5, 1975 — A meeting of the Hydraulics Group of the Boston Society of Civil Engineers section was held on Wednesday, 5 March 1975 at the offices of C.E. Maguire, Inc. in Waltham, Massachusetts, with an attendance of 32 people.

The meeting was called to order by Group Chairman, Saul Cooper at 7:15 p.m. Chairman Cooper announced that at the next Hydraulics Group meeting in April a new slate of officers will be presented and an election will be held. Mention was also made of the upcoming annual meeting of the Society to be held at the Museum of Science on 30 April 1975.

Chairman Cooper introduced the guests speakers, Mr. Martin Weiss of the Metropolitan District Commission and Mr. David Kenyon of the Corps of Engineers. The subject of the presentation was, "Boston Harbor — Eastern Massachusetts Metropolitan Area Wastewater Management Study". The speakers discussed the various alternative plans and issues considered in arriving at the selected plan. Additionally, they outlined the remaining tasks to be completed. The study has progressed to the point where an alternative plan has been selected following a series of public meetings. Final adoption of the plan is scheduled for the latter part of September 1975.

A question and answer session followed the presentation. The meeting adjourned at 8:30 p.m.

Oscar L. Donati
Clerk

April 8, 1975 — A meeting of the Hydraulics Group of the Boston Society of Civil Engineers Section was held on Tuesday, 8 April 1975 at the Ralph M. Parsons Water Resources Laboratory at the Massachusetts Institute of Technology in Cambridge. Attendance at the meeting was 27.

The meeting was called to order by Vice Chairman Thomas Baron in the absence of Chairman Saul Cooper at 7:10 p.m. Mr. Baron introduced Mr. Frank Perkins, Chairman of the Nominating Committee who presented the following slate of officers for the 1975-1976 year:

Thomas S. Baron — Chairman
Oscar L. Donati — Vice-Chairman
Lee Wolman — Clerk
Edward Dunn — Executive Committee
William P. Darby — Executive Committee
Saul Cooper — Executive Committee
The above slate was elected unanimously by voice vote.

Tom Baron assuodALYSIS, Inc. The subject of the presentation was "Urban Storm and Wastewater Modeling." Mr. Harley gave a brief outline of the various parameters that are generally used in the modeling of urban watersheds. He explained the various simulation techniques used in modeling and gave a brief summary of 10 existing runoff models currently in use.

A question and answer session followed the presentation. The meeting adjourned at 8:30 p.m.

Oscar L. Donati
Clerk

STRUCTURAL GROUP

December 11, 1974 — The meeting of the Structural Group was called to order by Chairman Dr. Kenneth Leet at 7:00. Dr. Leet turned the meeting over to Dr. Thomas Liu, President of the Society.

Dr. Liu briefly discussed the Society's present status and its plans for the future. Dr. Leet then announced that the BSCE-ASCE Seismic Committee had finished preparing the specifications on earthquake design for the new State Building Code. These were submitted to the Code Commission and will be pub-

lished in the near future. Dr. Leet further stated that at the next section meeting a panel comprising members of the Seismic Committee would discuss the new Code provisions. The meeting was then turned over to Mr. Hans Hagen who moderated the program. A panel consisting of Mr. Kenneth Leach, Vice President of George B. H. Macomber Co.; Mr. Robert Catella, Project Manager of Harvard University; and Mr. Donald Reed of Wallace, Floyd, & Ellenzweig, Inc., who discussed the evening's topic, "Fast Track Design and Construction". The panel members discussed the pros and cons of fast track and their experience with this method of construction. An informative exchange of comments followed with the forty members present. The meeting was adjourned at 9:15.

Lawrence H. Ogden
Clerk, Structural Section

February 5, 1975 — The meeting of the Structural Group was called to order by Chairman Dr. Kenneth Leet at 7:00 PM.

The following members were nominated and elected to serve on the Executive Committee of the Structural Section for the 1975-1976 term.

Chairman: Mr. Hans William Hagen

Vice Chairman: Mr. Lawrence Ogden

Clerk: Dr. Frank Heger

Members: Mr. Frank Davis, Mr.

Richard Foley, Prof. Kenneth Tsutsumi

Dr. Leet then introduced the speakers for the evenings panel discussion. The panel consisted of members of the ASCE/BSCE.

Seismic Committee: Dr. Howard Simpson, Dr. Othar Zaldastani, Professor Myle S. Holley Jr. and Professor Robert V. Whitman.

The committee was formed to develop seismic provisions for the new State Building Code. These provisions were recommended to the building code commission and incorporated with revisions in the new code. Dr. Simpson presented the history of the committee, its objectives and it's accomplishments. Dr. Simpson expressed the committees desire to continue to review and update its recommendations on a semi-annual basis. Dr. Zaldastani presented the history of other

seismic code provisions. He explained the significant differences between these provisions and the New State Building Code. Dr. Zaldastani went on to discuss items that require further recommendations and implementations in the new code. Prof. Whitman discussed the implementation of the code provisions by the Design profession. The panel discussion was followed by a question and answer period with the 80 attending members of the society.

Dr. Thomas Liu, President of the BSCE Section was present in the audience. He expressed the Society's appreciation for the committee's year and one-half of work. He also announced that the board of Government had unanimously adopted provisions for the continual existence of the Seismic Committee.

Lawrence H. Ogden
Clerk Structural Section

April 8, 1975 — The meeting of the structural section was called to order by Chairman, Hans William Hagen at 7:15 pm.

Mr. Hagen announced the topics to be discussed in the Seismic Design Lecture series next fall. Final dates and location will be announced in September.

Lecture 1 Introduction, Fundamentals, Description of Code provisions

Lecture 2 Dynamic Analysis

Lecture 3 Cast-in-place Concrete

Lecture 4 Soils and Foundations

Lecture 5 Structural Steel

Lecture 6 Masonry

Lecture 7 Pre-fabricated Construction systems

The next order of business was the introduction of the Evenings speaker, Dr. Mark Fintel, Director of Engineering Services, Portland Cement Association.

Dr. Fintel spoke on Earthquake design of High Rise Concrete Structures. He compared the performance of shear wall structures and frame structures that he had studied in recent earthquakes. Dr. Fintel stressed that it is as important for the Buildings components to survive the earthquake as it is for the structure. He briefly presented the current theories of design and research programs being sponsored by the P.C.A.

The hundred guests participated in a

question and answer period which followed the presentation.

The meeting was held at M.I.T.'s center for Advanced Engineering Study.

Lawrence H. Ogden
Clerk Structural Section

TRANSPORTATION GROUP

February 19, 1975 — The meeting was held at Nick's Restaurant at 5:30 pm with approximately 92 members in attendance. The guest speaker was Mr. Frederick P. Salvucci, Secretary, Commonwealth of Massachusetts Executive Office of Transportation and Construction whose subject was "Future Transportation Policies of Massachusetts".

Chairman Rodney Plourde called the annual meeting to order and introduced the headtable. He then turned the meeting over to Mr. Bertram Berger to conduct general BSCES/ASCE business. Mr. Berger stated that at the November 4, 1974, meeting, the Board of Government voted to submit the Bylaw amendments to the members to be voted on at the regular Section meetings on January 8, 1975 and February 19, 1975. In accordance with Article 15, Amendments of the Bylaws and the ASCE procedures, the amendments will become effective if two-thirds of the members present and voting at each of the meetings vote in favor of the amendments, and the amendments are approved by the National Committee on Sections and District Councils.

The vote was unanimous. And, whereas the vote was unanimous at the January

8th meeting, the amendments became effective.

Mr. Plourde presented the slate for the 1975-76 officers of the Transportation Section:

Maurice Freedman — Chairman
Marvin W. Miller — Vice Chairman
Robert F. McDonagh — Clerk
Russell Barnes — Member
Leo DeMarsh — Member
Donald Graham — Member
Rodney Plourde — Member

Nominations were then opened to the floor. There were none; a vote was taken; and it was unanimous. Mr. Plourde then introduced the guest speaker for the evening, Mr. Frederick P. Salvucci, Secretary of the Executive Office of Transportation and Construction. Mr. Salvucci reviewed where the Commonwealth is headed in transportation and cited the problems of growth, economy, highway, and air.

One of the main problems his office will be dealing with is mobility of citizens. He stated that the Department of Public Works currently has a program planned for car-pooling. Another consideration is mobility for the handicapped. A major problem currently facing his office is rail access, and he went into great detail on this subject. Mr. Salvucci reiterated that there would be no major highway construction within the 128 parameter, unless perhaps depressing the Central Artery or a third harbor crossing.

The meeting was then opened to questions and answers.

Marvin W. Miller
Vice Chairman

March 19, 1975 — See Computer Group