

the news



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PHILADELPHIA SECTION

AMERICAN SOCIETY OF CIVIL ENGINEERS

P. O. Box 58186, Philadelphia, PA 19102-8186

Vol. 64-1

Our 78th Year

October 1991

OCTOBER JOINT DINNER MEETING

Philadelphia Section, American Society of Civil Engineers

Delaware Valley Chapter, American Water Works Association

WEDNESDAY, OCTOBER 9th, 1991

Location: DOWNTOWN CLUB, 11th Floor Meeting Room, Public Ledger Building
6th & Walnut Sts., PHILADELPHIA (Entrance on 6th St., between Chestnut & Sansom Sts.)

Discount parking at Phila. Life Insurance Bldg., 7th St., north of Chestnut.

Get parking ticket stamped at Meeting Room desk.

Cocktails - 5:30 p.m. Dinner - 6:30 p.m. Meeting - 7:30 p.m.

SUBJECT: CORROSION MECHANISMS AND CATHODIC PROTECTION

SPEAKER: WILLIAM R. SCHUTT, President, MATCOR, Inc., Cathodic Protection

Corrosion is a serious problem that can destroy buried and submerged metals, reinforced concrete, and all types of structures. The discussion will review how corrosion occurs and how to prevent it by design and/or cathodic protection.

All types of structures throughout the world are being protected by cathodic protection. The structures include buildings, pipelines, decks, piers, ships and industrial plants.

William R. Schutt, an engineering graduate of Drexel University, has over 23 years experience as a corrosion consultant for governments, highway departments, oil and gas companies, and private industry worldwide. He holds patents for unique developments in deep anode systems. Additionally, he has other patents for unique developments in the application of cathodic protection. He is recognized as a pioneer in the development of cathodic protection for reinforced concrete structures. Much of his work has been centered on the development of corrosion diagnostic methods and the practical application of cathodic protection to concrete structures.

Mr. Schutt is a National Association of Corrosion Engineers (NACE) Certified Corrosion Specialist No. 1554 and has written and presented technical papers at numerous technical symposia, throughout the world.

He has been a Lecturer at the University of Wisconsin Continuing Education Course on Corrosion Control of Concrete Structures.

In 1987, Mr. Schutt, representing MATCOR, was part of a select 14 company U.S. cabinet level delegation to the Soviet Union. The delegations purpose was to present the leading U.S. technologies to high level Soviet officials.

Mr. Schutt has been responsible for unique engineering projects in the USA, Costa Rica, Peru, Holland, Singapore, Alaska and the United Kingdom. He is a member of ASTM, CSI, ACI and NACE.

SPECIAL FEATURE: DREXEL UNIVERSITY & UNIV. OF PA. NIGHT

The ASCE Student Chapters, Alumni and Faculty of the Department of Civil and Architectural Engineering of Drexel University and the Systems Dept. of the University of Pennsylvania will be honored at this meeting. All Students, Alumni and Faculty are cordially invited to attend.

TECHNICAL GROUP ACTIVITIES Geotechnical and Environmental/Water Resources Groups

(Combined program for 1991-1992)

October Meeting

Date: Tuesday, October 15, 1991, 7:00 pm

Location: Hill Seminar Room, LeBow Engineering Center, Market & 31st Sts., Drexel University, Philadelphia, PA

SUBJECT: Forensic Investigation, Kettleman Hills HazWaste Treatment & Disposal Facility

SPEAKER: Michael Monteleone, GeoSyntec Consultants Corp., Inc., Downingtown, PA

This presentation describes the investigation of a slope failure in a landfill that also affected its double composite liner system.

A section of a multi-phase landfill for a Class 1 hazardous waste treatment and disposal facility in California was completed in February, 1987 and its construction was certified. In March, 1988, a large mass of the waste slid horizontally and vertically, disturbing both the underlying liner system and that of an adjacent area. Emergency measures were taken to stabilize the waste. GeoSyntec Consultants were retained to develop and implement a forensic investigation, including collecting data to allow determination of the cause of failure.

For further information, please contact: Geotechnical, **Dr. J. P. Martin**, or Environmental/Water Resources, **Mr. Raymond A. Lees** (See page 8 for addresses.)

NOVEMBER MEETING, 11/19/91

Rick Harris of Groundwater Technology, Inc. will make a presentation on subsurface petroleum spill recovery systems. Details in November issue of THE NEWS.

Transportation and Urban Development Group

October Meeting: October 23, 1991

SPEAKER: Daniel Lynch, P.E., Sr. Program Manager, SEPTA

SUBJECT: SEPTA's Railworks Program

Location: Downtown Club, Public Ledger Building, 6th & Chestnut Sts.

Time: 5:30-Cash bar; 6:30-Dinner with program following

(Continued on Page 2)

**PLEASE FILL OUT AND RETURN RESERVATION COUPON
AS DIRECTED ON PAGE 2 - FOR THE OCTOBER 9, 1991 MEETING**

RESERVATION FORM FOR PHILADELPHIA SECTION ASCE OCTOBER DINNER MEETING WEDNESDAY, OCTOBER 9, 1991 - DOWNTOWN CLUB

Please reserve _____ dinner(s) at \$25.00 each. Check enclosed \$_____.

Students - \$12.50 You are welcome to attend after Dinner, at no charge.

Name _____

Address _____

Phone _____

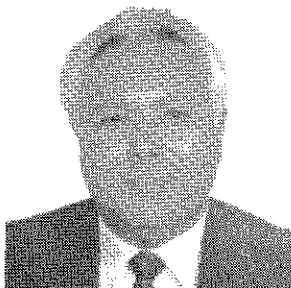
Please return with payment to:

ASCE
P.O. Box 58186
Philadelphia, PA 19102-8186

Reservations must be postmarked no later than October 5, 1991.

Tickets will be issued at the door.

IMPORTANT: Dinner Reservations for ALL Section Meetings Are Essential. Please mail in Your Reservation Coupon As Directed.



THE PRESIDENT'S MESSAGE

I hope that all of you had a pleasant summer.

Now it's time to get down to business. We are ready to kick-off our Fall/Winter program. The board members have been actively working hard throughout the summer to put together exciting plans for the 1991-1992 season. Your leadership is determined to follow-up on past accomplishments and to establish goals and strategic plans for the future.

As I commented at the dinner/dance last June, one of my objectives for this year is to encourage the civil engineer and spouse to become more involved with ASCE. Another objective of mine is to have ASCE at the forefront to help the profession and to enhance the career opportunities for the civil engineer. I personally endorse the Specialty Certificate Program of ASCE as a tool to provide more prestige and career opportunities for ASCE members. This coming February our National President, Chuck Pennoni, will address the Philadelphia Section on this most important issue.

In closing, I would like to acknowledge the accomplishments of Past President Frank Depman and the departing board members. Under their leadership, our section has become a stronger society.

I look forward to seeing you all at our meetings.

Sincerely,

Moustafa A. Gouda, President
Phila. Section, ASCE

PHILA. SECTION, ASCE OFFICERS 1991-1992

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NOVEMBER 1991 ISSUE
OCTOBER 10, 1991**

**PLACE YOUR
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IN THE NEWS.
FOR INFO, CONTACT
PRESIDENT GOUDA
OR SECRETARY MIHOCKO.**

Technical Group Activities

(Continued from Page 1)

Mr. Lynch will provide us with an overview of SEPTA's \$354 million "Railworks" project. This program will include a complete rehab of the former Reading Mainline 9th St. Branch, between Wayne Junction and Brown St. through North Philadelphia. The project involves replacement of 20 and rehab of 5 bridges, trackwork, catenary, signal, new communications, sitework and fencing. In addition a new Temple University Station will be built. The evening's discussion should prove quite interesting and informative.

For reservations contact **William T. Thomsen, P.E.**, Chairman, Transportation and Urban Development at (215) 922-8080. Reservations and meal tickets will be required for the dinner. Your reservation and payment must be received no later than **October 16, 1991.**



1991-1992 Phila. Section ASCE President Moustafa A. Gouda is installed at the Section's Annual Spring Social at Holiday Inn, City Line Ave., June 1, 1991. Left to right: John E. Durrant, ASCE National Director, District 4; Mr. Gouda; and C.R. ("Chuck") Pennoni, National ASCE President-Elect, who installed Mr. Gouda and the Section's new 1991-1992 other officers and Board of Directors, and who will himself be installed National ASCE President at the Orlando, Florida ASCE Convention in October.

SECTION'S 1991 AWARDS PRESENTED AT SPRING SOCIAL

By Bob Wright, Staff Writer

The Philadelphia Section honored six of its members for their contributions, service and leadership in the civil engineering profession in the Delaware Valley in 1991. On Saturday, June 1, at the Annual Spring Social and Dinner Dance, conducted at the Holiday In City Line, the Section's Civil Engineering Awards were presented.

Civil Engineer of the Year – James W. McPhillips

Jim is a Vice President and Project Director at Urban Engineers and has handled the design of several major highway projects such as the I-95 Center City Access and Delaware Avenue/Central Waterfront improvements. Prior to joining Urban, Jim served as Chief Engineer and Surveyor for the Philadelphia Department of Streets, where he directed the planning and design of hundreds of miles of City streets, major highways and expressways, and numerous bridge structures.

Jim received Bachelor and Master level degrees in Civil Engineering from the Drexel University. He has been continually active with the Philadelphia Section at all levels, and has served in various capacities including Section President in 1970.

Geotechnical Engineer of the Year – Charles F. Sutphen

Chuck is the Senior Engineering Geologist and Manager of the Geo-Environmental Department at Lippincott engineering Associates, a department which he was spearheaded to explore the special geotechnical details of environmental projects. He has played a lead role in over 300 projects in the tri-state area.

Chuck obtained undergraduate and graduate level degrees in geology from Temple University and a Masters in Engineering Geology from Drexel University. He has been active in the Section's Geotechnical and Water Resources Technical Groups.

Engineering Manager of the Year – Alvin Zion

Al is a Project Manager with Hill International, where he has handled project management oversight services for SEPTA's Mainline Bridge Replacement and Rehabilitation Program, a \$300 million effort, and construction management services for the Philadelphia International Airport's Capital Improvement and Expansion Program. Prior to this, he was employed by the City of Philadelphia for 25 years and held upper-level engineering positions as Director of Design in the Recreation Department and Chief Engineer in the Department of Public Property.

Al earned a Bachelor of Science degree in Civil Engineering from Pennsylvania State University and a Masters degree from the University of Pennsylvania. He has been very active in the Philadelphia Section, having served on the Board of Directors and as

current Chair of the Engineering Management Group. He is also a Director of the Delaware Valley Chapter of the American Public Works Association.

Transportation Engineer of the Year – Dr. Vukan R. Vuchic

Vukan is the UPC Foundation Professor of Transportation Engineering in the Department of Systems at the University of Pennsylvania, where he instructs courses in the design and operation of highway and transit systems at both graduate and undergraduate levels. He is a world-renowned expert on public transportation in general and light rail transit in particular and has performed consulting duties for transit agencies in major cities worldwide. Locally, he has assisted SEPTA and the City of Philadelphia on various operations and planning aspects and played a critical role in the design of the Center City Commuter Tunnel operations plan.

Vukan obtained a diploma in Transportation and Traffic Engineering from the University of Belgrade, Yugoslavia, with subsequent Master and Doctorate level degrees from the University of California, Berkeley. He joined the Penn faculty in 1967 and was granted the UPS Foundation chair last year. He is active in several international professional societies in addition to ASCE.

Educator of the Year – Dr. Frederick C. Schmitt

Fred is a Professor and Chairman of the Civil Engineering Department at Temple University and his teaching concentration is in structural design and analysis courses for both undergraduate and graduate students. Under his direction, the Civil Engineering program has broadened its emphasis to encompass technology as well as engineering science. He also provides consulting services as owner of a firm specializing in structural inspection and design, construction claim analysis, program facilitation, and project peer review.

Fred earned his Bachelors, Masters and Doctorate degrees in Civil Engineering from Drexel University. He is a member of various technical organizations in addition to ASCE. He is active in the Philadelphia Section and has served as faculty advisor of Temple's Student Chapter, which recognized him as its Most Outstanding Teacher for 1990.

Government Service Award – Alexander J. Fazzini

Alex is Vice President for Sales and Marketing for VFL Technology Corporation of Malvern, where he is responsible for the development of environmental engineering solutions for the remedial decontamination of industrial, utility and municipal wastes, air pollution control, wastewater treatment, and site remediation. In addition to his engineering duties, Alex serves his Township as a Councilman and a member of several advisory and technical boards and commissions. These duties exemplify his commitment to his community in keeping with ASCE's concept of Citizen Engineer.

Alex received a Bachelor of Science degree in Civil Engineering from Villanova University with a subsequent Masters degree from the University of

Pennsylvania. He is actively involved with several professional organizations.

Section Scholarships

After several years of planning and discussion, the Section has established a scholarship fund. The first two scholarships were awarded in 1991. The recipients, **Christiana Hodgson** of Temple University and **Robert Morrison** of Drexel University, were cited at the Spring Social as guests of the Section and were presented with Certificates of Award by outgoing President Frank Depman and incoming President Moustafa Gouda.

Ms. Hodgson and Mr. Morrison were nominated by their respective Student Chapters in accordance with the Scholarship Fund guidelines. Each received a \$2,000 grant to be used to defray the cost of tuition at their respective colleges. The Section wishes both good luck in their studies and hopes to see them return to the Section in active roles upon graduation.

Once again, the Section commends the Awards Committee for the professional and inspiring ceremony that was enjoyed by all. Special thanks go to Section Past Presidents Sue Lior and Rich Weggel, who provided expert narration of the slide presentation.

MEMBERS IN THE NEWS

WEINTRAUB WINS AWARD

Section Past President **Norman G. Weintraub** (1987-1988), Manager of Water Conveyance, Philadelphia Water Department, was honored recently as a recipient of Philadelphia Mayor W. Wilson Goode's Employee of the Month Award for June. Norm was among several City employees who were inside the burning office building at Meridian Plaza in center city, working with the Fire Department to increase the water pressure. Fire Commissioner Roger Ulshafer also sent a letter of commendation to Norm. The Phila. Section congratulates him for his notable achievement.

PLEASE PAY YOUR SECTION DUES!!!

The Phila. Section, ASCE Board of Directors was forced to increase the 1991-1992 year dues to \$18.00 (from \$13.00) because of sizable operating cost expense additions. The dues increase does not even cover these additional costs entirely. Therefore, future issues of the Phila. Section newsletter, THE NEWS, will be mailed only to those members who have been current in their dues payments or who have paid up any arrearages in 1990-1991 Section dues.

This issue (October, 1991) of THE NEWS is being mailed as a courtesy to all Section members. So, please cooperate by remitting your Section dues (\$13.00 for 1990-1991 immediately if in arrears), and \$18.00 for 1991-1992 when you receive the bill from New York National ASCE Headquarters; and become an active member in order to enjoy all the services and functions of the Philadelphia Section, ASCE.

VIGILANCE IN MASS TRANSIT AND PUBLIC WORKS INFRASTRUCTURE

Editor's Note: The following important and timely article was authored by **Susan Shapiro**, Constituent Relations Organizer, of SEPTA and was forwarded to THE NEWS by National ASCE President-Elect **Chuck Pennoni**, who writes: "The article addresses the need for reinvestment into our area's transportation system. ASCE is part of a joint effort of professionals, civic officials and business leaders to emphasize the need to finance transportation improvements. Also, the deterioration of our Public Works infrastructure is of paramount concern to the Civil Engineering profession; and we in ASCE are doing our part to educate the public and private decision makers of the necessity to reinvest in our nation's vital Public Works systems. The article helps to accomplish this goal."

Public transportation is heavily relied upon by ASCE members. It affects our mobility. It affects our business. And, it affects our environment. Yet, public transportation systems throughout Pennsylvania are in dire need of rehabilitation and, luckily, they were recently granted a reprieve.

On August 4th, the State enacted its fiscal year 1992 budget, which included, for the first time, dedicated funding provisions for Pennsylvania's mass transit systems. With dedicated funding, a known source will provide the systems with adequate funds to do what is needed to operate, renovate and then hopefully expand the systems. They will be able to undertake long-term capital projects knowing that the money to complete them will be available.

Funds will be raised through a series of taxes and fees including an increase in the Public Utility Realty Tax, a \$1 fee on the purchase of new tires, expansion of the six percent sales tax to magazines, an additional three percent tax on the lease price of car rentals, and a \$2 per day fee for each day a vehicle is rented. The package is expected to generate \$200 million per year statewide that will be used for capital programs and asset maintenance.

Success in passage of the dedicated funding legislation was a long time in coming. To assist in the effort, organizations were formed across the State to help raise public awareness about the importance of mass transit and lobby elected officials on the need to secure the future of Pennsylvania's public transportation systems. Numerous engineering firms joined the Southeastern Pennsylvania Area Coalition for Transportation (ACT) — an organization created just over two years ago to assist the Southeastern Pennsylvania Transportation Authority (SEPTA) in spreading the word about the importance of public transportation. In the western part of the State, a similar organization, the Southwestern Pennsylvania Transit Alliance, was also formed, as were others across the state.

ACT alone has more than 1,000 members representing businesses, riders, labor unions, senior citizens, environmental groups, contractors and the academic and religious communities. All of these groups represent a cross-section of our communities

1992 DANIEL W. MEAD CONTEST FOR YOUNGER MEMBERS

The Daniel W. Mead Prize for Younger Members was established in 1939 to honor the memory and accomplishments of the 67th President of the American Society of Civil Engineers. The talents of many of the leaders of the profession were first recognized in previous contests for this significant professional honor. The current contest provides another opportunity for alert young civil engineers to further their professional development and gain national attention.

Papers must be written on: "Is It Ethical To Profit From Engineering Work Arising From Natural Or Manmade Disaster?"

RULES

- Authors must be Associate Members or Members of the Society 32 years of age or less on February 1, 1992.
- Only one person can write each paper.
- Each Section or Branch can submit only one paper.
- Paper must contain no more than 2,000 words.
- One winner may be selected from each of the four Zones.
- The national winner, selected from the Zonal winners, will receive a wall plaque and a certificate.
- The national winner may be invited to present his/her paper in the ASCE National Convention, New York, October, 1992.
- The paper by the national winner will be submitted for publication in *Civil Engineering*.
- By February 1, 1992, seven copies of each paper must be submitted through the Section or Branch Secretary to: ASCE Awards Department, 345 East 47th Street, New York, NY 10017-2398.

Philadelphia Section Younger Members are urged to get to work on the Mead Competition. We are proud of our past winners and want to continue to be in the forefront.

Past Mead Competition winners from the Philadelphia Section are:

- 1974 — *John Spilko*, National Award
- 1977 — *Joseph R. Syrnick*, Zone I Award
- 1978 — *David S. Shaw*, Zone I Award
- 1979 — *Haym Bernaroya*, Zone I Award
- 1983 — *Greg Neiderer*, Zone III Award

united in the belief of mass transit's importance to the vitality of the Commonwealth and the nation.

Although the fight for dedicated funding is now over, the work of the Coalitions is not. ACT will continue working to increase awareness about public transportation's importance to our future in terms of economic development, mobility and the environment. If you are interested in joining ACT or would like more information about the organization, please write to: P.O. Box 36, Philadelphia, PA 19105.

SPACE PLANNING SEMINAR

"Open Space Planning and Management for the 21st Century", to be held at the Ambler Campus of Temple University on October 26, 1991 will provide practical information establishing and maintaining more environmentally beneficial open space. The day will include discussion of the economic, ecologic, aesthetic, legal and social considerations necessary to successfully coordinate open space design and management.

Randall Arendt, newly appointed Vice President of Conservation Projects at the Natural Lands Trust in Media is the keynote speaker. A noted lecturer on natural resource protection through community cooperation, Mr. Arendt's topic will be "Conserving Open Space Through Creative Planning."

His talk will be followed by a panel discussion of "Central Issues in Acquiring, Developing and Managing Open Space," ten workshops and case studies detailing a variety of projects that have worked in the Delaware Valley.

For further details and to obtain conference brochures, call the Office of Non-Credit and Special Programs at the Ambler Campus of Temple University: (215) 283-1304.

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APRIL JOINT DINNER MEETING

April 10, 1991

WETLANDS AND THE COURTS

By Bill Richards, Staff Writer

U.S. Naval Base, Philadelphia

Another overflow crowd capped the last of the 1990-91 technical meeting sessions for the Philadelphia Section ASCE program when a joint meeting with the Philadelphia Post, SAME was held in the Officer's Club at the Philadelphia Navy Base on April 10th. Members and guests of both organizations had a splendid evening of renewing acquaintances, meeting new friends and listening to yet another informative technical presentation. The evening featured a discussion of two recent and local court cases regarding the controversial wetlands regulations.

Wetlands Enforcement Case

The meeting was presided over by **Captain Samuel Saltoun**, President of SAME. Following the introductions of the officers and guests at the head table, **Carol R. Collier**, Vice President of BCM Engineers, Inc. took the podium as moderator of the presentation. First to speak was **James Butch**, Coordinator of the US Environmental Protection Agency Region 3 Wetlands Section. Mr. Butch presented the wetlands enforcement case concerning Mr. John Pozsgai, a mechanic from Falls Township in Bucks County, PA, who is serving a three year jail sentence and payment of fines for filling five acres of wetlands around his home. The sentence sounds extreme, and the case received national publicity because of it, but Mr. Butch described the circumstances and intransigence of Mr. Pozsgai, which led to the unusual sentence.

In the media John Pozsgai was portrayed as an innocent, a recent immigrant fleeing government tyranny in Hungary, who was jailed for placing fill in a degraded, trashed swamp on his property, and not knowledgeable of the wetlands laws or needs to obtain permits. In the fall of 1986 he wished to expand his truck repair property, and looked to a neighboring 14-acre tract. The realtor informed him that it was a wetland and would probably not be allowed to be developed. To confirm this Mr. Pozsgai obtained a similar opinion from three separate consultants. Because of this he obtained a significant price concession when he purchased the property.

Mr. Pozsgai then began to fill in the wetland area with demolition and construction debris without making any attempt to obtain a permit. In 1987 the Corps of Engineers observed this activity and informed him that he needed a permit. Over the course of the year Mr. Pozsgai continued to fill, and the Township and Corps continued to issue warnings. After four warnings and two cease and desist orders without effect, the Corps formally informed the EPA.

In August of 1988, since Pozsgai was still filling and no permit application had been filed, EPA set up hidden video cameras and filmed him in the act of filling. Based on these films, the courts issued a restraining order. Mr. Pozsgai still continued to fill. He was arrested, fined, indicted, tried and convicted. In July of 1989 he was sentenced based on new mandatory federal sentencing guidelines. Appeals were

made through the courts, all the way to the Supreme Court. All were denied.

Although severe, the Pozsgai case was not typical. EPA would normally like to use its powers to get people to follow the permit route. According to Mr. Butch the need for fines and sentences are only for those who remain defiant and obstructionist, as with Mr. Pozsgai.

Compensation Case

A second case, this one involving compensation due to being denied the value of a property declared a wetland, was described by **Barry Gale**, Esq. of the Philadelphia District of the Corps of Engineers. This was the Loveladies Harbor case in which a developer was awarded a \$2.6 million judgement after finding that denial of a Section 404 permit by the Corps resulted in an unconstitutional taking of private property without just compensation. In this case the developer was denied a permit to fill 12.5 acres of wetlands for a residential development adjacent to his 200 acre development already under construction.

Mr. Gale then described the actions that this and other takings cases have established the precedents for in seeking compensation for wetlands takings. To obtain compensation, all avenues of mitigation, i.e. alternative uses for the property, would first have to have been fully explored. Secondly, all other state permits would have to have been obtained before being able to identify the federal government as the cause of taking. This may occasionally present a Catch-22 situation, as the states may occasionally deny permits on the basis that they don't see obtaining a Corps Section 404 permit as possible. Finally a claimant must be able to demonstrate that he had a reasonable expectation to be able to develop the property. This usually means that the purchase would have to predate the legislation or its interpretations.

Question and Answer Period

Following the presentations there was a lively, and active interchange as questions from the audience and answers from the speakers centered on definitions, interpretations and precedents established under the wetlands regulations. We thank the speakers for their insightful, informative and entertaining presentations.

Moustafa Gouda, the Philadelphia Section President-Elect, then took the podium. Moustafa announced the receipt of two applications for the new ASCE scholarships, and extended the date for additional applications by one week. To close the meeting Moustafa announced the presentation of the Pump Funds as a \$9000 contribution to each of two fine high school educational institutions, Prime, Inc. and the Environmental Technology Academy. Dr. William Gaither of the ETA was present to receive this contribution, described the efforts of the ETA, thanked the Section for this generous gift, and assured us they would put it to good use.

ACI ACTIVITIES

Seminar on Concrete Parking Structures

Parking Structures should be durable, attractive structures. Learn to design and build a structure for longevity of service and how to maintain that structure to assure a long life. On **October 3, 1991** a seminar on Parking Structures will be conducted at the Holiday Inn King of Prussia, sponsored by the American Concrete Institute in cooperation with the Delaware Valley Chapter of ACI.

Nationally prominent presenters who will help participants learn:

1. How to select a structural system.
2. Good design practices.
3. Concrete properties and admixtures.
4. Protection measures for concrete.
5. Construction tips on reinforcement placing, consolidation, finishing, post-tensioning and inspection.
6. Essential steps in maintaining a structure.

The registration fees for this seminar are \$225.00 for members of ACI and \$245.00 for non-members of ACI (this includes a complimentary six month ACI membership). All seminar participants receive the seminar course manual, which contains recent articles from *Concrete International* and ACI's state-of-the-art reports.

For more information about this seminar, call **Helmuth Wilden** at (215) 966-3935 or fax (215) 966-4515.

Certification Course and Examination for Technicians

1. **A Two-Day Course in Field Testing of Fresh Concrete, Friday and Saturday, October 18 and 19, 1991 – 8:00 a.m.** Villanova University, Lancaster Ave. (Rte. 30), at Rte. 320, John Barry Hall, Villanova, PA 19085

This course covers: sampling of fresh concrete; slump testing; testing for unit weight, yield, temperature, and air content; and the making and curing of test specimens. The course prepares trainees for the Written and Performance Examinations for ACI Certification as Concrete Field Testing Technician – Grade I. Instructor: Michael Boyle, Valley Forge Laboratories, Inc.

2. **Examinations for ACI Certification as Concrete Field Testing Technician – Grade I. Saturday, October 26, 1991, all day, at John Barry Hall, Villanova.** Review and written examination – 8:00 a.m. The performance examination will immediately follow the written examination.

Course Fees:

- (1) 17 hours of instruction (including practice test runs), both examinations, three luncheons, advance texts, materials and parking: Chapter members \$265; Nonmembers \$290.
- (2) Both examinations only, lunch, advance text, and parking: Chapter members \$155; Nonmember \$180.
- (3) Written examination only, and parking: Chapter members \$50; Nonmembers \$75.

For full info and registration forms, contact **Randy Cronin**, 1720 Gwynedd View Rd., North Wales, PA 19454; (215) 699-5613.

1991 PHILA. SECTION ASCE SALARY & BENEFITS SURVEY

(Results of Questionnaire mailed in the April-May, 1991 issue)

The results of the ninth bi-annual ASCE, Philadelphia Section Salary and Benefits Survey are in. Our typical respondent is a 37 year old Caucasian male and has worked for 15 years. He either has a Master's Degree or has taken some courses towards one and is a Registered, Professional Engineer. He is salaried, working for a consulting firm located in Philadelphia doing primarily technical work while doing some supervising of the work of others. This is his second job and he has worked for his current employer 6 years. He spends 40 minutes a day driving to and from work. He earned \$51,000 per year and did not receive a bonus and does not get paid overtime. His benefits include 15 days vacation, 9 holidays, 10 days sick leave. Hospitalization, Major Medical, Child Care, Life, Dental and Disability are at least partially company paid. He does not have a paid optical or legal plan and he contributes more than half of the cost into his company sponsored pension plan.

As far as trends, our average number is 1 year younger since the survey in 1989, has had fewer jobs and fewer years with his current employer. There are more women responding than ever before. Salaries lag inflation, on average up 2%. There is little fluctuation in responses to the opinion questions. There were 200 respondents this year as compared to 182 in the 1989 survey.

I was impressed by the number of you who suggested new questions and modifications to existing questions or had other ideas and comments. Comments and suggestions about services ASCE should be offering would best be sent to the President or Executive Director in New York. If you think the Section should be doing more, drop a note to Moustafa Gouda or any of the Board Members.

My favorite suggested question was "If you had a second chance, would you still become a Civil Engineer?" Also, there were requests for questions on job security, functions actually performed, employment/work place conditions and clerical support. Several of you suggested that the question concerning the most critical concerns about a job (D-5) be ranked rather than all or nothing. This had been done previously but was dropped due to the difficulty in presenting and evaluating the results. Information on areas of specialization (highway, structures, etc.) was also requested. Finally, dearest to my heart was the comment that the questionnaire is too long and should be reduced.

SECTION A - PERSONAL DATA

	Survey Dates		
	1991	1989	1983
1. Age-Average	39.8	40.5	39.3
Minimum	22	21	20
Maximum	70	99	82
Median	37	38	36

2. Yrs. of Full Time Employment			
Average	15	17.5	16.3
Minimum	1	0	1
Maximum	45	55	56
Median	15	15	13
3. Race (Percent)			
Caucasian	95	94	
Black	1	0	
Hispanic	1	2	
Asiatic	2	3	
Other	1	1	
4. Sex (Percent)			
Male	91	93	
Female	9	7	
5. Education (Percent)			
No Degree	1	2	2
BS	39	35	37
BS plus 15 hours	15	20	19
Master's Degree	40	39	35
Doctorate Degree	5	4	7
6. ASCE Membership Grade (Percent)			
Student	3	4	
Associate	31	28	37
Member	60	62	55
Fellow	4	4	7
Life	2	2	1
7. Registration (Percent)			
E.I.T.	20	45	54
P.E.		71	71
L.S.		7	14
8. Membership in Other Professional/Technical Organizations			
Average	22	1.2	1.2
Maximum	6	7	6

SECTION B - EMPLOYMENT DATA

	Survey Dates		
	1991	1989	1983
1. Income Source (Percent)			
Self-Employed	3	7	5
Salaried	96	90	93
Commissioned	0	0	1
Retired	1	1	2
Unemployed	0	0	
Student	0	2	
2. Type employer or Self-Employed (percent)			
Consultant	58	53	47
Contractor/Builder	7	9	8
Federal Government	8	8	7
State Government	3	3	2
Municipal, Local or Regional Government or Authority	9	10	12.5
Utility (Public & Private)	4	6	5.5
Manufacturer	3	5	8
Education	2	3	3
Sales	0	0	1
Other	6	3	6
3. Primary Responsibility (Percent)			
Technical	49	45	51
Sales	1	1	2
Supervisory	28	28	18
Administrative	17	17	21
Other	5	9	8

4. Supervision (No. of Employees - 1989 + prior)			
Average (Yes	79	19.0	
Maximum (No	21	999	
Median		5	
5. Number of Different Employers Since Graduation	2.7	3	2.8
6. Second Job (Percent)			
None	90	95	
Salaried		1	
Self-Employed	10	3	
Other		1	
7. Years with Current Employer			
Average	9	9.8	9.3
Minimum	1	1	1
Maximum	34	45	36
Median	6	8	7
8. Primary County of Employment			
PA - Bucks	8		
Chester	14		
Delaware	7		
Montgomery	19		
Philadelphia	37		
NJ - Burlington	5		
Chester	1		
Gloucester	0		
Other	9		
9. Method of Commuting			
Drive	73		
Mass Transit	14		
Car Pool	1		
Walk	4		
Drive & Mass Transit	7		
Other	1		
10. Approximate One Way Commuting Time (Minutes)			
Average	23.7		
Minimum	1		
Maximum	120		
Median	20		

SECTION C - SALARY AND BENEFITS

	Survey Dates		
	1991	1989	1983
1. Salary			
Average	53,800	54,300	38,800
Maximum	100,000	175,000	99,000
Median	51,000	50,000	37,000
2. Bonus/Commission			
Percent Receiving	34	56	
Average	3,000	4,148	2,400
Maximum	42,000	9,999	99,000
3. Overtime Renumeration (Percent)			
None	47	55	47
Time	15	14	19
Straight Pay	29	24	24
Time & A Half	6	7	9
Double Time	1	0	1
4. Vacation (including Administrative Leave, Personal Days, etc.)			
Average days off	15.7	8.7	16.2
Median days off	15	9	15

	1991	1989	1983
5. Holidays	9	10	9
6. Company-Paid Sick Leave (Days)			
Average	11.2	31.6	20.9
Median	10	3	12
Minimum	0	0	0
Maximum	70	100	Unlim.
7. Company Paid Insurance			
a) Hospitalization Ins (%) Company Paid			
All	47	53	54
Part	51	43	44
None	2	4	2
b) Major Medical			
All	44	52	51
Part	53	43	46
None	3	5	3
c) Dental Plan			
All	25	24	17
Part	46	41	43
None	29	35	40
d) Optical Plan			
All	13	15	7
Part	26	23	17
None	61	72	76
e) Disability Insurance			
All	51	37	33
Part	28	32	38
None	21	31	29
f) Life			
All	55	14	
Part	32	43	
None	13	43	
g) Legal Fees (%)			
All	10		
Part	6		
None	84		
h) Child Care (%)			
All	2		
Part	5		
None	93		
8. Pension Plan (%)			
Yes	80	77	70
100% Com. Paid	28	29	31
Emp. Contribution	72	71	69
No	20	23	30
9. Profit Sharing (%)			
Yes	45	30	39
No	54	40	61
Not Applicable	1	30	
10. Formal Severance Pay (%)			
Yes	34	27	35
No	66	73	65
11. Tuition Reimbursement (%)			
None	21	29	26
Partial	79	24	28
100%		47	46

SECTION D - OPINION (PERCENTAGES)

	Survey Dates		
	1991	1989	1983
1. Are you satisfied with your current employment situation?			
Unsatisfied	4	6	2
Somewhat unsatisfied	17	18	23
Satisfied	20	20	25
Mostly satisfied	45	34	34
Very satisfied	14	22	16
2. Do you believe that, in your current employment situation, you are performing true engineering work?			
Yes	56	55	55
No, administration, supervisory, business, promotion, etc.	37	37	37
No, primarily technician/draftsman	2	1	4
No, other functions	5	7	4
3. Do you believe that your work is properly reviewed?			
Yes	39	32	
Yes, could be better	41	39	
No	12	17	
Not applicable	8	12	
4. Do you think you will be looking for a new job within the next 2 years?			
Salary	16	12	
Problems with Boss	5	4	
Lack of responsibility	1	3	
Other	13	15	
Not looking	65	66	
5. Critical Job Concerns			
Pay and Benefits	29	27	
Company Reputation	9	7	
Responsibility	15	25	
Security	5	5	
Location	11	8	
Type of work	27	23	
Other	4	5	
6. Ease of Finding New Job			
Very easy	10	28	
Easy	45	47	
Somewhat difficult	35	21	
Difficult	10	4	
7. Do you believe your salary, considering your experience and ability, compared to other Civil Engineers, is:			
Much lower	3	3	4
Lower	24	19	25
Similar	48	46	52
Higher	23	27	17
Much higher	2	5	2
8. Do you believe your fringe benefits, compared to other Civil Engineers, are:			
Much lower	7	5	2
Lower	15	17	17
Similar	45	45	45
Higher	28	25	30
Much higher	5	8	6
9. Is your professional physical environment (office, appearance, privacy, secretarial support, etc.) important to you?			
Yes	89	92	
No	11	8	

10. Are you satisfied with your professional physical environment?

Yes	75	70
No	25	30

11. Do you agree or disagree with the following statement?

a) Registration should be required for all Engineers as a condition of continued employment.

Agree	37	38	37
Disagree	63	62	63

b) Continuing education should be required to maintain registration.

Agree	54	51	49
Disagree	46	49	51

c) Consulting work may be competitively bid when the requirements are reasonably well defined.

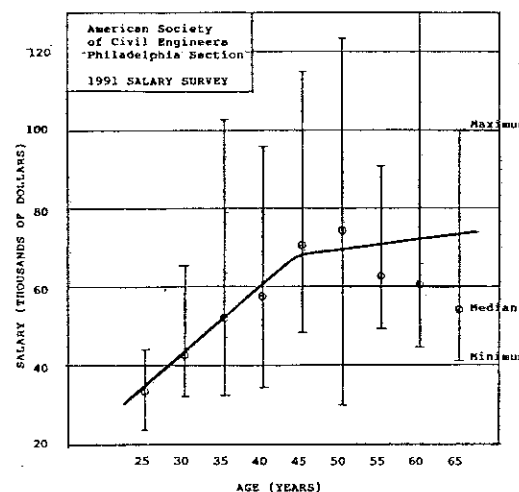
Agree	60	66	64
Disagree	40	34	36

d) Advertising, by engineers, that is not self-laudatory is acceptable.

Agree	90	86	85
Disagree	10	14	15

e) There is currently a shortage in the number of Civil Engineering Graduates.

Agree	44
Disagree	56



On behalf of ASCE, I would like to thank the Philadelphia Water Department for assisting in processing and analyzing the response, particularly Lee Ticker and Paula Pasternak who made the task easier. Also, I would like to thank everyone who responded and helped make the survey meaningful.

Norman Weintraub, Chairman
Salary & Benefits Committee

NOTICE TO PAST PRESIDENTS

Phila. Section President Moustafa A. Gouda is contemplating a "Past Presidents Celebration" during the 1991-1992 season. He requests that all Past Presidents of the Phila. Section, ASCE mail him their current addresses as soon as possible, in order to expedite planning. Send your address to: Moustafa A. Gouda, c/o Lippincott Engineering Assoc., 1 Pavilion Avenue, Riverside, NJ 08075; phone: (609) 461-1100.

ASCE DUES BILL AND TECHNICAL GROUP DETAILS

Section members will notice in the 1992 dues bill from National ASCE Headquarters, that the PHILADELPHIA SECTION DUES is itemized as \$18.00. This amount includes assessment for membership in all Phila. Section Technical Group of your choice.

Also, because National's bill did not list the Technical groups, *you are requested to get in touch with the Chairmen of the Technical Groups of your preference*, so that their membership lists can be classified.

The appropriate individuals to contact are the following:

Liaison

Robert M. Wright

Phila. Dept. of Streets
920 Municipal Services Bldg.
Phila., PA 19102
(215) 686-5538

Younger Member Forum

Richard P. Markwith, President

Fredric R. Harris, Inc.
260 S. Broad St., Suite 720
Phila., PA 19102
(215) 735-0832

Construction

Fredric L. Plotnick, Chairman

Empromac
P.O. Box 11264
Elkins Park, PA 19117-0264
(215) 843-7313

Structural

David A. VanOcker, Chairman

Christakis & Kachele, Inc.
6910 Ludlow Street
Upper Darby, PA 19082
(215) 352-7676

Transportation & Urban Development

William T. Thomsen, Chairman

Urban Engineers, Inc.
330 N. Third St.
Philadelphia, PA 19106
(215) 922-8080

Engineering Management

Alvin Zion, Chairman

Hill International, Inc.
1 Levitt Parkway
Willingboro, NJ 08046
(609) 871-5800 or (215) 977-7750

Geotechnical

Dr. Joseph P. Martin, Chairman

Drexel University
Civil Engineering Dept.
32nd & Chestnut Sts.
Philadelphia, PA 19104
(215) 895-2363

Water Resources & Environmental Engineering

Raymond A. Lees, Chairman

Westinghouse Environmental & Geotechnical Services, Inc.
323 Norristown Rd., Suite 206
Ambler, PA 19002
(215) 542-9100

IMPORTANT! 1991-1992 MEETING NOTICES

MARK YOUR CALENDAR for the dates of the remaining Philadelphia Section, ASCE monthly meetings and social functions, as follows: (Check each issue of coming editions of THE NEWS for details, possible date and topic changes.)

ALL DINNER MEETINGS

Cocktails - 5:30 pm Dinner - 6:30 pm Meeting - 7:30 pm

STUDENTS: All dinner and/or luncheon charges one-half price. If you prefer, you are welcome to attend all meetings after dinner or luncheon, at no charge.

Tuesday, November 19, 1991 - Dinner Meeting, WILLIAMSON'S, GSB Building

City Line Ave., Philadelphia

Subject: PennDOT Program

Speaker: **Howard Yerusalim**, PA Secretary of Transportation

Swarthmore College and Widener University Night

December, 1991 - No Meeting

Wednesday, January 8, 1992 - Dinner Meeting, HOLIDAY INN, King of Prussia

Joint Meeting with ASHE and Reading Branch, Phila. Section, ASCE

Subject: To be announced

Speaker: **Mark Hanlon**, 1991 Delaware Valley Engineer of the Year

Spring Garden College and Villanova University Night

Wednesday, February 19, 1992 - Dinner Meeting, HARBOR LEAGUE CLUB, Camden, NJ

Joint Meeting with South Jersey Branch, ASCE

Subject: To be announced

Speaker: **C.R. Pennoni**, National President, ASCE

Temple University Night

* **March, 1992** - Spouse Night, details to be announced

* **April, 1992** - Dinner Meeting, OFFICERS' CLUB, Phila. Naval Base

Joint Meeting with Society of American Military Engineers (SAME)

Subject: Downtown Fire

Speaker: Panel - **D. Wismer, R. Roe**

Saturday Evening, May 16, 1992 - Annual Spring Dinner Dance (location to be announced)

* **July, 1992** - PICNIC - Phila./South Jersey Sections Tournament between engineering firms.

*Date to be announced.

PENNONI TO BE INAUGURATED

Former Philadelphia Section President and current National President-Elect **C.R. "Chuck" Pennoni** will be installed as National President at the ASCE National Convention, to be conducted October 21-24 at the Buena Vista Palace Hotel, Orlando, Florida.

To cite this special event, the Philadelphia Section, in conjunction with Drexel University (Chuck's alma mater) and Pennoni Associates Inc. (Chuck's consulting engineering firm), is sponsoring a Presidential Reception on Tuesday, October 22, in the Islander Room, Island Suite Resort at the convention hotel. Cocktails and hors d'oeuvres will be served starting at 6:00 PM.

All members of the Philadelphia Section are cordially invited to attend the Presidential Reception and share this special event with Chuck. Please advise Ms. Mary Ann DeAngelis at (215) 561-0460 before October 5 if you plan to attend.



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Dr. Frederick C. Schmitt, P.E.
Chair, Civil Engineering Department

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