

# the news



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PHILADELPHIA SECTION

AMERICAN SOCIETY OF CIVIL ENGINEERS

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

Electronic Message Hotline: (215) 604-3639 (24 hours a day)

Vol. 72-1

## Our 86th Year

October, 1999

### OCTOBER DINNER MEETING

Philadelphia Section, American Society of Civil Engineers

**THURSDAY, OCTOBER 21, 1999**

WILLIAMSON'S • GSB Building • City Line Ave. • Philadelphia • See Location Map Below  
Cocktails - 5:30 p.m. • Dinner - 6:30 p.m. • Meeting - 7:30 p.m.

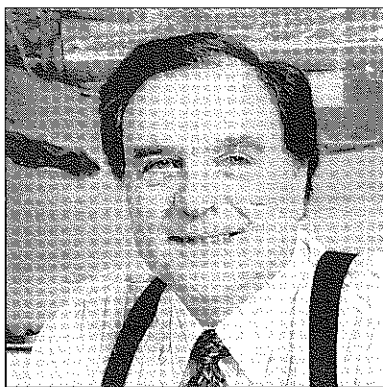
**SUBJECT: The Philadelphia International Airport - "Flyin' High"**

**SPEAKERS: Alfred (Fred) Testa, Jr., A.A.E., (Accredited Airport Executive)**

#### SPECIAL FEATURE: DREXEL UNIVERSITY NIGHT

The ASCE Student Chapter, Alumni and Faculty of the Civil and Architectural Engineering Department of Drexel University will be honored at this meeting. All Students, Faculty and Alumni are cordially invited.

**RESERVATIONS MUST BE SUBMITTED BY FRIDAY, OCTOBER 15, 1999.** Please send your check for the number of attendees @ \$25 per member or guest; \$13 ASCE Student Members, payable to the Phila. Section, ASCE, P.O. Box 58186, Phila., PA 19102-8186; or call the electronic Message Center: (215) 604-3639 (Open 24 hours/day).

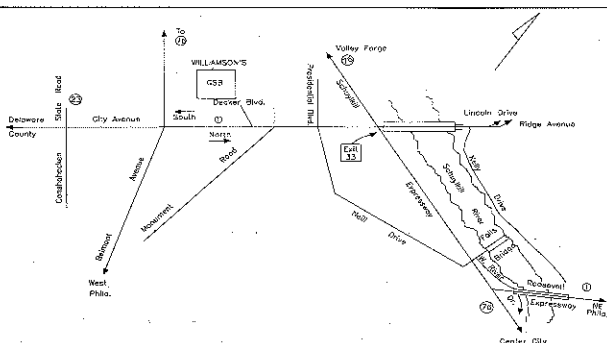


Alfred (Fred) Testa, Jr., AAE

Philadelphia International Airport is the principal airport for the City of Philadelphia and the surrounding metropolitan area. Passenger traffic has been growing at a very high rate, and over the past few years, it moved from the 24th busiest airport in the U.S. in 1996 to 19th in 1998, when it was used by 24 million passengers. It is served by 15 major scheduled airlines with nonstop flights to over 100 cities including 16 international destinations. Over the past decade a large capital improvement program has been implemented. The most significant projects have been the \$135 million consolidation of Terminals B & C completed in 1998 and the construction of a new \$221 million commuter runway which is scheduled for completion at the end of 1999. In partnership with the airport's leading airline, US Airways, the Division of Aviation is in the process of constructing a new interna-

(Continued on Page 2)

**LOCATION MAP  
for  
Williamson's  
GSB Building,  
City Line Ave.,  
Philadelphia**



### TECHNICAL GROUP ACTIVITIES

#### Structural and Engineering Management Groups Seek Chairpersons for 2000-2001 Season

The Phila. Section's six Technical Groups are active in their continuing effort to address the needs on specific areas of Civil Engineering. Each Group attempts to have at least three meetings during the September to April period and are here to better inform our membership. The Technical Groups chairpersons are listed elsewhere in this newsletter and they are always looking for both help and suggestions for their respective group.

Both the Structural Group and the Engineering Management Group are looking for new chairpersons to assume the present chairperson's role beginning in the Fall of 2000. If anyone is interested in taking over as chair of one of these two Groups please contact the respective chairperson.

#### Delaware Valley Geo Institute Group (DVGI)

The Geotechnical Environmental Group of the Phila. Section, ASCE is reorganizing as the Delaware Valley Geo-Institute (DVGI). The new organizing committee, led by **Mike Byle** of Gannett Fleming, is planning an exciting year of meetings. Meetings will generally be held the second Tuesday of the month, except where Joint meetings with other organizations modify the schedule. The schedule of meetings for 1999-2000 includes the following:

**October 12, 1999 - Sinkholes and Karst for US202, John Meyers**

**November 9, 1999 - Geology and Foundation Design for South Street Bridge in Philadelphia • Mike Byle**

**December 15, 1999 - Geosynthetic Applications • Dr. Ahmad Al-Qadi (tentative)**

**January 11, 2000 - Foundations Design for US202**

**February 8, 2000 - Geosynthetics for Erosion and Sedimentation and NPDES**

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## THE PRESIDENT'S MESSAGE

It's my pleasure to welcome you back and prepare for what I hope to be a very exciting year. We have an ambitious agenda and only your enthusiastic participation will help us achieve it.

Every incoming President of the Phila. Section, ASCE is advised by the Past Presidents and the "wise ones" that help guide this Section to select a theme for his or her year of tenure. It was an easy choice for me. Coming from a country where engineering is considered to be a very prestigious profession and engineers are held in high esteem, it was an eye-opening experience for me to discover a situation quite different in

the United States. I found that even Civil Engineers themselves were unsure of their own position in society and most were content to be self-effacing anonymous contributors to this country's growth and prosperity. I hope you will share my enthusiasm and desire to help our members shake off this attitude, become more active in reasserting themselves as movers and shakers and take their rightful place. I have chosen from ASCE's Strategic Plan, Goal 4: **Recognition** – *enhancing recognition of civil engineering as a highly respected profession and a most desirable and rewarding career* as a theme this year. Let us work together to ensure that our profession is no longer referred to as an invisible one.

Several projects are already in the pipeline targeted towards this end. The particular ones that I want to highlight at this time are the Mural project and the Outreach project. The first one, initiated under the leadership of **Al Zion** (President 1996-1997) and ably shepherded by past YMF President and a former Director of the Section, **Yael (Heller) Jekogian**, will be a 20'x48' mural entitled "Civil Engineers Building America's Future." The mural will be completed by the time this newsletter reaches you. Outreach to the Next Generation — the second one, initiated by immediate Past President, **Sandra May**, will continue this year. My thanks to the members who participated in this effort last year and helped us reach more than 900 school children at the elementary through high school level. Past President **Darrin Gatti** will be the Section's coordinator at the National level for the Society's 150th anniversary activities in 2002 when the profession's achievements will be showcased nationally.

Our congratulations to **Larry Moy**, President (1971-1972) who was elected as this year's Delaware Valley Engineer of the Year; and to the Drexel University ASCE Student Chapter Concrete Canoe team that made it to the finals.

Please help us achieve our objectives this year by participating in all the activities of the Section. You can call our 24-hour Electronic Message Center (215) 604-3639 with your suggestions or contact any Board Member.

Sincerely, Faruq Siddiqui  
President, Phila. Section, ASCE

## October Dinner Meeting

(Continued from Page 1)

tional terminal and a new commuter terminal, and is working with PennDOT on the construction of new access ramps from I-95. It is estimated that this total program will cost over \$500 million. In addition to these projects, the Division of Aviation is undertaking a new master plan to look at the needs and potential growth opportunities over the next 20 years. Mr. Testa will discuss the current projects and his vision of future development.

**Fred Testa, Jr.** is the Director of Philadelphia International and Northeast Philadelphia Airports since April 5, 1999. He was the Director of Manchester Airport, (New Hampshire), from August, 1991 through April 1999 and was previously Deputy Director of T.F. Green Airport (Providence) and is a licensed attorney (currently inactive) in the State of Rhode Island. He is a graduate of the University of Rhode Island with a B.A. in Political Science and earned his J.D. at Suffolk University Law School.

He has taught American Government and International Politics at the University of Rhode Island while a graduate student there, Business Law at Roger Williams College in Providence, and Daniel Webster College in Nashua, NH and Airport Administration at Daniel Webster. He is an Accredited Airport Executive with the American Association of Airport Executives and speaks be-

fore many national AAEE conferences on airport development, management, and marketing.

As Director of Manchester Airport, he oversaw the development of Manchester Airport from one which handled 750,000 passengers per year to one projected to handle well over 2.5 million passengers by 1999. This development will result in the complete rebuilding of the airport and its entire infrastructure within 12 years that will have cost over \$320 million dollars.

## Delaware Valley Geo-Institute Group

(Continued from Page 1)

**March 14, 2000 – Ground Improvement**

**April 11, 2000 – Geophysical Investigations for Geological and Geotechnical Engineering**

If you are interested in participating in the organizational planning for the DVGI, please contact **Mike Byle** at Gannett-Fleming, Inc. by email at "mbyle@gfnet.com" or phone (610) 650-8101.

## October Meeting

**Tuesday, October 12, 1999**

Holiday Inn, King of Prussia, PA

For reservations, call **Mike Byle** (610) 650-8101

Social Hour – 6:15 pm • Dinner – 7:15 pm

• Presentation – 8:00 pm

**SUBJECT: Sinkholes and Karst for US 202**

**SPEAKER: John Meyers, P.E.**, Geotechnical Project Manager, URS Greiner, Woodward Clyde, Design Consultant for PennDOT

The Pennsylvania Department of Transportation is presently undertaking the US Route 202 improvements project, S.R. 0202, Section 400 in Chester and Montgomery Counties. **John Meyers, P.E.**, is the Geotechnical Project Manager for the prime design consultant on this project, URS Greiner Woodward Clyde. This project involves the rehabilitation of about five miles of Route 202 and complete reconstruction of the interchanges with Route 422 and Interstate I-76. The first phase of the construction has already begun and three more construction contracts are still being prepared.

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## PHILA. SECTION, ASCE OFFICERS 1999-2000

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**COPY DEADLINE FOR  
NOVEMBER 1999 ISSUE  
OCTOBER 21, 1999**

## YOUNGER MEMBER FORUM NEWS

by Christopher Menna, Forum Editor

The Younger Member Forum (YMF) current membership includes college students, recent graduates, and young Registered Professional Engineers who are 35 years of age and under. The objectives of this group are: 1) To provide networking opportunities, 2) To interact with schools and the general public to promote Civil Engineering, and 3) To enhance career development.

Young engineers or college students who would like to become part of the YMF please contact **Chris Barber**, Armand Corporation at (609) 348-9430.

### Past Accomplishments

The YMF has stayed very active these past few months. Elections for our 1999-00 officers were held during the April meeting at Cavanaugh's in University City. We are proud to announce that **Christopher Menna**, Philadelphia Streets Department, has been elected President; **Carol Martsoff**, Parsons Brinckerhoff, has been elected Vice President; **Chris Barber**, Armand Corporation, has been elected Secretary; **Heather Givey**, Sun Oil, has been elected Assistant Secretary; **Jennifer Diec**, Parsons Brinckerhoff, Treasurer; **Michael McAtee**, Urban Engineers, has been appointed Vice President for College Contacts; **Michael Scott**, Urban Engineers, has been appointed Vice President for Technical Groups; **Christopher Wright**, Frederic R. Harris, Inc., has been appointed Vice President for Community Service; and **Stephen Steinbrook**, Roy F. Weston, has been appointed Archivist. Also serving on our Board of Officers is Past President **John Zarsky** of Parsons Brinckerhoff.

On **Saturday, April 17, 1999** several YMF and University of Pennsylvania Student AIA members volunteered for a Christmas in April workday. This activity is similar to a Habitat for Humanity project. The site was located on the 4900 block of West Stiles Street in West Philadelphia. Rehabilitation work was conducted in two rowhomes. Individuals were given the opportunity to try various construction crafts. Overall, it was a very rewarding experience. A special thanks goes to **Heather Givey** for helping to organize this event.

A very successful Joint Luncheon Meeting of the Phila. Section's Construction Group, Transportation Group, and YMF took place on **Thursday, April 29, 1999** at the Municipal Services Building. The speaker was **Mr. Randy Wanger, P.E.** of PennDot. The topic was an overview of PennDot's Route 202/I-76 Interchange Reconstruction project taking place in the King of Prussia area. Kudos to **Steve Buckley**, Parsons Brinckerhoff, for encouraging YMF attendance.

On **Saturday, June 5, 1999** the YMF participated in National Trail Day at the Wissahickon Park. This event was sponsored by the Friends of the Wissahickon (FOW), the Fairmount Park Commission, and by Eastern Mountain Sports Equipment (EMS). The area worked on was in the vicinity of Hermit's Cave (Kelpius Cave), which is near the intersection of Henry Avenue and Her-

mit Lane in the Roxborough Section of Philadelphia. Volunteers helped to relocate a trail due to erosion problems and to overuse by mountain bikers. This new path was cleared, graded, and connected to adjacent trails. The highlight of the clearing involved cutting a doorway through a three-foot diameter downed tree. This tree was massive and could not be moved. EMS provided T-shirts for everyone. YMF members found this activity to be very enjoyable and fulfilling. For their efforts, the YMF was given publicity in the FOW's Fall newsletter. **Chris Menna** arranged YMF participation for this event.

On **Sunday, September 19, 1999**, the YMF participated in a Volunteer Trail Day at the Wissahickon Park. This event was sponsored by the Friends of the Wissahickon, the Fairmount Park Commission, and by Eastern Mountain Sports Equipment (EMS). The site worked on was the Rex Avenue Toilet Building located along The Forbidden Trail in the Chestnut Hill Section of Philadelphia. Work included cleaning up of the grounds and the replacement of the building's roof. Restoring the roof required much demolition

## APRIL DINNER MEETING

### Tunnel Detection on Southern Border

By Bob Wright, Staff Writer

Williamson's City Line, Phila., PA

The April regular Phila. Section, ASCE monthly meeting, the last of the 1998-1999 season, featured a fascinating discussion of the U.S. Army Corps of Engineers' program: "Tunnel Detection Along the Southwest Border of the United States." The Corps' Waterways Experiment Station (WES) has been designated the lead agency in this program. The search missions have been initiated by the Drug Enforcement Agency (DEA), Customs, and the U.S. Border Patrol through Joint Task Force Six. Current search strategy requires a geologic assessment of suspect zones prior to the drug-related search missions. Principal speaker was **Janet E. Simms, Ph.D.**, Geophysicist, Geotechnical Laboratory, U.S. Army Corps of Engineers Waterways Experiment Station.

### Swarthmore College Night

The meeting honored the ASCE Student Chapter, Alumni and Faculty of the Civil Engineering Department of Swarthmore College. Phila. Section ASCE President-Elect (now President) **Dr. Faruq Siddiqui**, Head of Swarthmore's Civil Engineering Department and Faculty Advisor of the ASCE Student Chapter, emphasized that, even though the numbers of C.E. majors and the ASCE Student Chapter are small, both groups

are extremely active in promoting discussion, dialogue and progress on engineering ethics issues, and new curriculum pursuits in planning stages, and current programs. He reviewed outreach programs to promote civil engineering interest among Junior High and High School students. He also described a Student Chapter Council, recently successfully established by Swarthmore, especially aimed toward area schools. Dr. Siddiqui introduced prominent alumni in the audience.

### Student Chapter Treasurer Speaks

Swarthmore ASCE Student Chapter Treasurer **Michael Sheer**, substituting for President **Andrea Wolfe**, who was unable to attend the meeting because of prior commitments, thanked his hosts for their courtesies, and presented his fellow Chapter Officers, in addition to Miss Wolfe: Vice President, **Michael Avellano**; and Secretary, **Holly Baker**.

Mike also noted that although the Chapter is small, it has been extremely active in all affairs of technological and community benefit. It has participated in the Annual Model Steel and Concrete Beam and Bridge Construction Competitions, among numerous other activities. The Chapter is proud to have been a recent co-winner in a Com-

(Continued on Page 4)

mit Lane in the Roxborough Section of Philadelphia. Volunteers helped to relocate a trail due to erosion problems and to overuse by mountain bikers. This new path was cleared, graded, and connected to adjacent trails. The highlight of the clearing involved cutting a doorway through a three-foot diameter downed tree. This tree was massive and could not be moved. EMS provided T-shirts for everyone. YMF members found this activity to be very enjoyable and fulfilling. For their efforts, the YMF was given publicity in the FOW's Fall newsletter. **Chris Menna** arranged YMF participation for this event.

Some YMF members took a leisurely bike trip on **Saturday, August 28, 1999**. They rode along the Schuylkill River Bike Trail from the Art Museum to Valley Forge National Park and back. While at the park, members picnicked and shared ideas in an informal way. This new type of activity generated much interest and was a success. A special thanks goes to **Chris Menna** for helping to organize this event.

On **Sunday, September 19, 1999**, the YMF participated in a Volunteer Trail Day at the Wissahickon Park. This event was sponsored by the Friends of the Wissahickon, the Fairmount Park Commission, and by Eastern Mountain Sports Equipment (EMS). The site worked on was the Rex Avenue Toilet Building located along The Forbidden Trail in the Chestnut Hill Section of Philadelphia. Work included cleaning up of the grounds and the replacement of the building's roof. Restoring the roof required much demolition

as well as new carpentry work. EMS provided lunch. YMF participants also found this activity to be very rewarding. **Chris Menna** arranged YMF participation for this event.

### Member Spotlight

The purpose of the member spotlight is to introduce a fellow YMF member to the Delaware Valley Engineering Community.

**John Zarsky, P.E.** is a Civil/Highway Engineer at Parsons Brinckerhoff's Philadelphia Office. He is currently Project Manager of three bridge replacement projects in Montgomery County, and a Signalization and Streetscape project along Market Street in the City of Philadelphia. The latter project will incorporate improvements to Market Street during SEPTA's reconstruction of the Market El. John is also Deputy PM for the preparation of EISs for two sections of US 202. Late last year, John was appointed Head of the Civil Engineering Department at PB's Philadelphia office.

John has been very active in both ASCE and other engineering societies. He recently completed his term as President of the YMF and will continue to advise the group in his role as Past President. He presently sits on the Board of Directors of the Delaware Valley Section of the American Society of Highway Engineers where he chairs the committees for technical papers and the Project of the Year. Earlier this year he chaired a seminar on "Critical Issues Facing Young Engineers" sponsored by ASCE and the Engineers'

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## April Dinner Meeting

(Continued from Page 3)

munity Service Program in Wawa, PA, in the planning and construction of playgrounds and bicycle paths throughout the town.

### Allan Moore Introduces Speaker

Allan F. Moore, Jr., Phila. Section, ASCE Membership Secretary, who is principally credited with arranging the April 8th meeting, introduced our Speaker **Janet E. Simms, Ph.D.**, Geophysicist, Geotechnical Laboratory, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS. Dr. Simms serves in the Research Laboratory at the facility and has been a key member of the tunnel detection efforts.

### The Tunnel Construction and Threats

Dr. Simms explained that many of the tunnels are being constructed beneath the United States/Mexico border. Considerable drug trafficking and illegal crossing activity have prompted the tunnels. The Corps of Engineers has been brought to the sites to help detect the tunnels and seal them once they are found.

The tunnels pose a threat to law enforcement. Most have recently been identified, many with the aid of informants. Conservative estimates are that there is at least one tunnel near each of the twenty major border crossing points along the frontier.

Most of the tunnels are simple construction with no real structure or reinforcement, and they tend to be small in width. Some are more elaborate, with side tunnels which serve as holding areas. Several have been actual designed structures with reinforced concrete. A few even have electric power.

### Investigation and Detection

Dr. Simms outlined some of the tools used to detect the tunnels. There are four basic types — electromagnetic, radar, magnetometric, and seismic. Instruments can generally detect depth of the tunnels through changes in the electromagnetic fields.

Investigations generally start once the existence of a tunnel is suspected. Local law enforcement officials work with federal authorities to identify possible locations. Federal bodies, such as the Border Patrol, notify a branch of the U.S. Army which performs the actual detection work with the aid of the Corps of Engineers.

When a possible location has been found, one of the detection methods is utilized to confirm any suspicions. This is generally followed by the drilling of test borings. One example noted by Dr. Simms was a site at Otay Mesa, CA. Once this tunnel was discovered, it was used for trials for new detection methods as well as tests on instruments already in use for such work. Even with the sophisticated methods and instruments used, only about two or three actual tunnels are detected each year, mainly through information supplied by informants.

### Methods to Thwart Construction

Federal authorities prefer a proactive approach when dealing with possible tunnels. From

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## SECTION AWARDS PRESENTED AT SPRING DINNER DANCE

The Section Awards for 1999 were presented at the Annual Spring Social and Dinner Dance, which was held on Friday, May 7, 1999, at the Sugarloaf Conference Center in Chestnut Hill. Roughly 120 Section members, spouses and guests were in attendance as the Section celebrated St. Patrick's Day for a second time in 1999 with an Irish theme of "Erin Go Bragh," continuing our popular citation of certain nationalities and cultures as part of the Social program.

The event also included the traditional induction of new Officers and Board Members. ASCE District 4 Director, Section Past President and 1997 Delaware Valley Engineer of the Year **Joe Syrnick** presented the oath of office to the new Officers as well as those completing the second year of their terms.

This year's four Section Award recipients were highlighted through the audio-slide show that has become a Section standard. Information on each of the awardees follows.

### Philadelphia Civil Engineer of the Year

**Carmine M. Fiscina** is this year's recipient of this award, the Section's highest honor. Carmine is the Technology and Safety Engineer for the Federal Highway Administration's Philadelphia Metropolitan Office. He has been in this position since the opening of the Metropolitan Office in June 1997, and has served as the FHWA's Area Engineer for the Philadelphia region since 1975. His career at FHWA has spanned the past thirty-five years. During his tenure, he has been an integral part of the design and construction oversight team for major interstate and primary highway projects in the Delaware Valley. He is a 1963 graduate of Manhattan College, earning his Bachelor degree in Civil Engineering. He is an active member of ASCE.

### Young Civil Engineer of the Year

This year's award went to **Carol Martsoff**, a Highway Design Engineer with Parsons Brinckerhoff's Center City office. She performs traffic analyses, roadway and traffic design, specification writing, and related tasks. She has served in this capacity for the past six years and has been involved in several significant highway and transit projects in the region. She is 1992 graduate of Temple University, earning a Bachelor's degree in Civil Engineering. She has been very active in the Philadelphia Section and has served as Secretary of the Section's Younger Member Forum. She is also very involved in several technical and community service organizations in the area.

## Delaware Valley Geo-Institute Group

(Continued from Page 2)

### November Meeting

Tuesday, November 9, 1999

Holiday Inn, King of Prussia, PA

For reservations, call **Mike Byle (610) 650-8101**

Social Hour — 6:15 pm • Dinner — 7:15 pm

• Presentation — 8:00 pm

### History and Heritage Award

**Dr. Richard Tyler**, the Historical Preservation Officer and Director of the Philadelphia Historical Commission, was nominated for this award. Dick has served in this position since 1974. He oversees preservation issues, evaluates historic properties and districts, makes determinations of effects of construction and/or rehabilitation proposals on historic properties and districts, and related duties. He has played key roles in the many design and construction projects in the City. He assisted the Section in our pursuit of Historic Civil Engineering Landmark status for the Philadelphia City Plan in 1997.

### Engineering Manager of the Year

**Ronald P. Flegel** is the 1999 nominee for this award. Ron is the Assistant Chief Engineer and Manager of Design for the Delaware River Port Authority and he has held this position for the past six years. He directs all design, construction and maintenance activities for the Authority's four Delaware River bridges and approach roadways. He has held key roles in the recent efforts to rehabilitate the Walt Whitman and Ben Franklin Bridges. He has been with DRPA for the past fifteen years and served as a structural engineer at the Pennsylvania Department of Transportation District 6 office for nineteen years prior to going to DRPA. He is a 1965 graduate of Villanova University, where he received a Bachelor's degree in Civil Engineering.

### Scholarships

The Section Scholarship program was revamped this year. The number of scholarships was increased from two to three and the amount of each scholarship was raised from \$2,000 to \$5,000. This year's recipients were **Joyce Nyamande** of Temple University, **Christopher Palazzi** of Widener University, and **Jennifer Slaw** of Swarthmore College.

Special thanks are extended to those who helped make the Awards Program a success once again this year. This includes the audio narrators, who gave up a nice spring evening to donate their voices to the effort — **Sandra May** and **Bob Wright** — and the Awards Committee — **Sandra May**, **Brian Stover**, **Bill Thomsen** and **Bob Wright**. And, of course, the Social could not have succeeded without the leadership provided by the coordinator of the event, Past President **Sandra May**.

The Year 2000 Social is tentatively scheduled for **Friday, May 5, 2000**. Be sure to mark your calendars now. More information will be provided in upcoming issues of THE NEWS.

**SUBJECT: Geology and Foundation Design for South Street Bridge in Philadelphia**

**SPEAKER: Michael Byle**, Project Manager, Gannett-Fleming, Inc.

**Mike Byle** will discuss the evaluation and reuse of existing foundations, dating from the late 19th century, including geophysical testing, geotechnical exploration and coring.

## GRADUATE STUDY AT DREXEL

By Dr. J.P. Martin, CAE Drexel

Civil Engineering M.S. programs are offered in concentrations in Structural, Water Resources, Geotechnical/Geosynthetics, Construction Materials & Transportation. A new Building Systems program is starting this year, an outgrowth of our Architectural Engineering program. Students compile a plan of study with a coherent core, that also meets their career goals.

Classes start September 21st. For full information on Fall, Winter and Spring courses, contact the Graduate Advisor, **Dr. S.C. Cheng** at (215) 895-2396; chengsc@drexel.edu. Admissions information: www.drexel.edu.

## PHILA. SECTION PARTICIPATES IN 1999 DELAWARE VALLEY SCIENCE FAIRS

By Chris L. Rood, P.E.

The Phila. Section, ASCE, for the fifth year in a row, sponsored Special Awards in the Delaware Valley Science Fairs with this year's Fairs being held on March 31, 1999 at the Fort Washington Expo Center. The Delaware Valley Science Fairs offer the best and brightest students of our Region an opportunity to present exhibitions of research that promote Science and Technical education. The team of judges representing our Section evaluated more than 950 public, parochial and private school student Science Fair winners from the fifteen county Tri-State area in Grades 6 thru 12, looking for the top projects relating to the Civil Engineering field.

The Section presented four awards. First and Second place awards were presented in both the Grades 6th thru 8th and the Grades 9th thru 12th categories. The Second place awards consisted of a plaque and a \$50.00 check. These were presented to **Matthew Skidmore** (Grades 6-8) of Unami Middle School for his project entitled "*Blowin' in the Wind - A Study of Reducing the Movement of Tall Structures in the Wind*" and **Renee Robert** (Grades 9-12) of Emmaus High School for her project entitled "*What is the Optimum Structural Design for a Bridge?*" The First place awards consisted of a plaque, a \$100.00 check and complimentary tickets for the student and his/her parents to attend our Section's Spring Social, held on May 7, 1999. These were presented to **Anne Stilwell** (Grades 6-8) of Logan Township School for her project entitled "*Does Shear Strength Vary With The Type of Soil?*" and **Kate Newman** (Grades 9-12) of Delran High School for her project entitled "*Don't Drink the Water.*" All four of these projects were exceptional and well presented by the students.

The Section anticipates participating in the Science Fairs scheduled to be held in April, 2000. If anyone is interested in either volunteering to be a judge for the Section's awards or being one of the over 500 volunteer judges needed for the overall Science Fair judging, contact our Section Vice President, **Chris L. Rood, P.E.** at (215) 580-7586.

## SECTION BOASTS ANOTHER MEAD PRIZE WINNER!

The Phila. Section, ASCE can add another Section Member to its list of winners of the National Daniel W. Mead Prize for Younger Members. This past Spring, **Carol Martsoff**, Vice President of the Section's Younger Member Forum and recipient of the 1999 Philadelphia Young Civil Engineer of the Year Award, took this honor.

Carol, a Project Engineer with Parsons Brinckerhoff's Center City office, submitted a paper on the topic, "*Is It Ethical For Consulting Firms To Make Political Contributions to Candidates That Can Directly Affect Engineering Contracts?*" Her paper was one of two submitted to the Section for the competition and was selected by the Section for the Zone I contest. The paper won both Zone I and National honors.

As the National winner, Carol has been invited to attend the 1999 ASCE Convention in Charlotte, North Carolina in October to present her paper. It will also be published in *Civil Engineering* magazine this Fall. The paper is available on National's website, asce.org.

Congratulations to Carol on her success in the competition and her receipt of the Mead Prize.

Past Section winners in this competition include the following:

- 1973 - *Greg Neiderer*, Zone III Award
- 1974 - *John Spitko*, National Award
- 1977 - *Joseph R. Syrnick*, Zone I Award
- 1978 - *David S. Shaw*, Zone I Award
- 1979 - *Harm Bernaroya*, Zone I Award

## April Dinner Meeting

(Continued from Page 4)

past experience, assumptions are made that tunnels are more likely to be found in urban or built-up areas where the cross-border traffic is high. One method considered to thwart tunnel construction is the placement of subterranean fences which would prevent any underground construction. Another concept is the placement of boreholes 100 feet in depth and 100 feet apart. Seismic recorders would be placed within the boreholes and these would measure any tunnel-related disturbances.

### Discussion Period

Several questions were fielded by Dr. Simms. In response to one, she noted that the tunnels appear to be used more for drug activity than for illegal alien entry. She also noted that any discovered tunnels are usually filled with concrete and abandoned. Many of the tunnels are built from the Mexican side, and the removed soil and other materials are generally concealed. At least one began in the living room of a private home!

Numerous comments and questions arose from members of the audience, regarding the places of origin of the tunnels, who were the builders, how did the builders elude detection of the tunnels and appurtenant buildings, etc.

President May thanked Dr. Simms for her outstanding presentation and last-minute filling-in for Maureen Corcoran, and presented her with parting Gifts of Appreciation from the Section.

## ACI ANNUAL AWARDS COMPETITION

The Delaware Valley Chapter of the American Concrete Institute is pleased to announce its 9th Annual Awards Competition for 2000. The purpose of the competition is to recognize outstanding concrete projects. Submittal projects must be completed between January 1, 1994 and December 31, 1999. Projects located in the Chapter Counties of Philadelphia, Montgomery, Bucks, Delaware, Chester, Berks, Lehigh, Lebanon, Dauphin, and Northampton in the Commonwealth of Pennsylvania, or in the State of Delaware, are eligible for the Competition.

The previous Competition was a great success, honoring six Grand Prize winners and nine finalists.

### 1999 GRAND PRIZE WINNERS

- Precast Concrete Systems Buildings*
- Genesis Health Ventures Parking Facility**
- Cast-in-Place Concrete Frame Construction*
- Harvest States Flour Mill**
- Concrete Bridges/Highways*
- Merck East Pedestrian Bridge**
- Architectural Concrete/Precast Claddings*
- Four Tower Bridge**
- Concrete Restoration and Rehabilitation*
- University of Pennsylvania - Parking Garage Lot #14**
- Concrete Structures 25 Years or Older*
- American Baptist Convention National Headquarters**

It is hoped that the competition will continue to promote an appreciation of excellence in concrete design and construction among the industry and general public.

For further information, and submittal forms, please contact: **Ken Balch**, CVM Engineers, (610) 989-3800.

## Younger Member Forum

(Continued from Page 3)

Club of Philadelphia.

John enthusiastically supports involvement in Professional Societies, especially the YMF. In his own words: "My involvement with the YMF has provided me with the opportunity to work with the present and future leaders of our profession. I will carry these relationships with me the rest of my career. In my role as an Officer of the YMF I have also been able to hone my organizational and public speaking skills."

John adds, "I'd like to thank everyone, especially the Officers, who worked so hard during my presidency. The YMF continues to grow and expand into new areas of opportunity. I know **Chris Menna** and **Carol Martsoff** will continue the substantial legacy that this group is building. I encourage young engineers who want to make a difference in their profession and community while enhancing their careers, to come to one of our events or to contact one of the officers and get on our contact list. The rewards are well worth the time invested."

## '99 SOUTHEAST PENNSYLVANIA STORM WATER MANAGEMENT SYMPOSIUM IMPLEMENTING BEST MANAGEMENT PRACTICES

October 20-21, 1999  
on the campus of Villanova University

Villanova University will host a regional symposium – *Implementing Best Management Practices* – on **October 20-21, 1999**. Co-sponsors include DRBC, PaDEP Southeast Region, and the Brandywine Conservancy. The purpose of the symposium is to bring together both public and private sector Engineers and Stormwater Management Professionals to discuss the design, construction, maintenance, and overall implementation of Best Management Practices now and in the future.

The Symposium starts with addresses from water resource leaders, including:

**Carol Collier**, Executive Director, Delaware River Basin Commission

**Durla Lathia**, Chief, Stormwater Planning and Management Section, PADEP

**Dan Greig**, Director, Chester Conservation District

**Wes Horner**, Associate Director, Brandywine Conservancy

**Robert Traver**, Department of Civil and Environmental Engineering, Villanova University

Besides the plenary speakers, over 25 submitted papers will be both presented by the authors and published in the Symposium proceedings. A tour of Best Management Practices will be conducted, and two panels on legal issues and the needs of the profession will be held. CEU's will be given for attendance at the symposium. The Symposium proceedings will be published. "Brown Bag" lunches will be provided both days. An informal reception will be held following the conclusion of the first day. To see further information, speakers, tentative schedules, and the latest symposium update access Professor Traver's homepage: <http://www.homepage.villanova.edu/robert.traver>.

Cost: \$200 for individual registrations received before October 1st. \$500 for industry booths (add \$50 after Oct. 1). For more information contact Villanova for the conference announcement, or visit the web page.

### Questions?

#### Content:

**Professor Traver (610) 519-7899**

[rtraver@email.vill.edu](mailto:rtraver@email.vill.edu)

#### Sponsors:

**Professor Falcone (610) 519-7920**

[ffalcone@email.vill.edu](mailto:ffalcone@email.vill.edu)

#### Registration:

**Ms. Linda DeAngelis: (610) 519-4358**

[ldeangel@email.vill.edu](mailto:ldeangel@email.vill.edu)

## MICROSCALE CHARACTERIZATION FOR MATERIALS DISCOVERY

October 21-22, 1999

University of Delaware

Trabant University Center, Newark Campus  
*An exciting international conference*

Engineering Outreach has assembled an impressive agenda of 13 of the world's preeminent researchers who will focus their talks on leading-edge microscale characterization technologies – those currently used to understand the nature of materials produced through combinatorial methods, or those having the clear potential for that use. These experts from both industry and academia will emphasize the characterization of new materials and catalysts, responding to the needs expressed by the nearly 200 engineers and scientists who attended last year's highly successful international conference *Combinatorial Chemistry: Beyond Pharmaceuticals*.

### Who Should Attend:

This conference is designed for all scientists and engineers involved with research and development of specialty chemicals and new materials (from electronic materials to polymers and biomaterials), as well as those involved in the development of catalysts. The interdisciplinary exchange will be valuable for those in the pharmaceutical industry as well, particularly with respect to state-of-the-art characterization technologies that complement combinatorial chemistry discovery techniques.

### Exhibit & Sponsorship Opportunities

This is an ideal opportunity for marketing exposure to research scientists and engineers who have decision-making powers. Limited exhibit and poster space will be available, as well as opportunities to advertise in conference materials or to sponsor a meal, break or reception.

For more information, contact Engineering Outreach, (302) 831-4863/2401; email: [enggoutreach@udel.edu](mailto:enggoutreach@udel.edu).

### Registration & General Information:

Registration Fee: \$495 (includes conference, materials, continental breakfast each day, and lunch plus dinner banquet on October 21).

### Welcome to the First State

If this is your first trip to the State of Delaware, we hope you can extend your visit to take advantage of some of the campus events as well as local and regional attractions. Nearby Longwood Gardens, Winterthur and Hagley Museums are popular attractions. The University of Delaware is centrally located between New York City and Washington, DC (about 2 hours by train and slightly longer by car) and is less than a one hour drive from Philadelphia.

### Questions?

Contact **Kathy Werrell**, (302) 831-4863; email: [enggoutreach@udel.edu](mailto:enggoutreach@udel.edu).

## MEMBERS IN THE NEWS

### Dr. Harris Publishes Book Edition

ASCE Fellow, **Dr. Harry G. Harris, Ph.D., P.E.**, Professor of Structural Engineering, Drexel University, has published the second edition of his text book on experimental methods in structural engineering. The textbook is entitled "*Structural Modeling and Experimental Techniques*" and is published by the CRC Press, Boca Raton, Florida. The revised edition has new material in all 12 chapters reflecting the considerable developments in structural modeling and physical testing of the last few years as well as two new chapters on model fabrication techniques and educational models for advanced senior students of Civil and Architectural Engineering. The book is also suited for post graduate and practicing engineers and those in related engineering disciplines and architects who want to learn about experimental methods. The course in structural modeling is offered at Drexel University in the Spring and Summer terms. More information about the content of the courses and examples of model case studies can be found in Prof. Harris's web page and the web page of the Structural Models Laboratory: [www.pages.drexel.edu/faculty/harrishg/](http://www.pages.drexel.edu/faculty/harrishg/).

### Allen Cadden Active CYM Rep

The Phila. Section, ASCE is proud of the work being accomplished by Younger Group Member **Allen Cadden** as Zone I Representative of National ASCE Committee on Younger Members (CYM). He covers the Younger Member Forums of Rhode Island; North, Central, and South Jersey; Maryland; Philadelphia; Connecticut; Pittsburgh and Central PA. His reports are published in the Younger Member newsletter of National ASCE.

## EDUCATIONAL OUTREACH COMMITTEE A RESOUNDING SUCCESS

### Co-Chairs Paula Estornell and Faruq Siddiqui

We're happy to report that the ASCE Educational Outreach Committee and all the Phila. Section, ASCE volunteers were successful last school year in speaking to about 1200 students about Civil Engineering. Nineteen ASCE volunteers spoke to students from 16 different schools, grades 4 through college.

Special thanks to **Sandra May** and **Jim Maloney** who spoke to over 200 students each. Great job! We congratulate all the other outreach volunteers. These include **Chris Menna**, **Steve Buckley**, **Allan Moore**, **Sue Lior**, **Jeff Chenault**, **Daniel Hoenig**, **Arthur McGarity**, **Charles Stracciolini**, **Bob Wright**, **Jennifer Peirce**, **Jennifer Diec**, **Allan Cadden**, **Darin Gatti**, **C Martsoff** and **John Zarsky**. Thank you for all your efforts everyone. Our apologies to anyone whose name we may have missed.

The Committee hopes this school year, to



## POSITIONS AVAILABLE

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## 2000 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.

*The paper must be written on:*

***“What are the ethical ramifications for licensed Civil Engineers in signing and sealing engineering drawings for portions of civil engineering projects that are outside their area of expertise?”***

### RULES:

- Authors must be Associate Members, Members or Affiliates of the Society 35 years of age or less on February 1, 2000.
- 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 and International membership of the Society.
- 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 at the ASCE National Conference and Exposition, Seattle, WA, in October, 2000.
- The paper by the national winner will be submitted for publication in *Civil Engineering*.
- By February 1, 2000, two copies of each paper must be submitted through the Section or Branch Secretary to: ASCE Awards Department, 1015 15th Street NW, Suite 600, Wash-

## 2000 EDMUND FRIEDMAN YOUNG ENGINEER AWARD

To recognize professional contributions of younger members of the Society, Edmund Friedman, Past President of ASCE, contributed funds to establish the Edmund Friedman Young Engineer Award for Professional Achievement. The award was officially instituted by action of the Board of Direction in October 1972.

The recognition is awarded annually to members of the American Society of Civil Engineers who are 35 years of age or less on February 1 in the year of the award, and who are judged to have attained significant professional achievement, by the degree to which the candidates have shown:

- Service to the advancement of the profession;
- Evidence of technical competence, high character and integrity;
- Leadership in the development of younger member attitudes towards the profession;
- Contributions to public service outside of their professional career;
- Other evidence of merit, which has advanced the Society objectives.

### RULES:

- The Award may be made each year to as many as five recipients. No recipient may receive the award more than once.
- An individual or group may submit written nomination forms which are available from ASCE at the address below.
- A nominee not selected one year may be re-nominated in a subsequent year, provided he/she is eligible under the above stipulations. Meritorious nominees, not selected in a given year, may be held over by the Committee on Younger Members for consideration in the competition of the following year.
- Deceased persons are not eligible for nomination for the award, although an award can be made posthumously to a nominee whose petition had reached the award committee during his/her lifetime.
- The award shall consist of a framed certificate inscribed with the name of the recipient and his/her exceptional achievements, to be presented at the 2000 ASCE National Convention.
- By February 1, 2000, seven copies of the nomination should be submitted to: ASCE Awards Department, 1015 15th Street NW, Suite 600, Washington DC 20005.

*“The present is the  
ever moving shadow  
that divides yesterday  
from tomorrow.”*

— Frank Lloyd Wright

## 2000 YOUNGER MEMBER GROUP AWARD

The purpose of the award is to promote excellence among the Younger Member Groups of the American Society of Civil Engineers. Younger Member Groups are defined as Associate Member Forums (AMF), Younger Member Forums (YMF), Younger Member Committees (YMC), etc. which operate at the Section and Branch level. It does not include Younger Member Councils. The award was officially instituted by action of the Society on July 9, 1985.

The Younger Member Group Award is made annually to the most outstanding Younger Member Groups of the American Society of Civil Engineers. Certificates of Commendation may also be awarded.

Phila. Section YMF nomination form may be obtained from **Sid Robin**, Editor. See page 2.

The award shall consist of a framed certificate to be presented to the winning Younger Member Groups at an Annual Convention of the Society.

Up to two awards will be made each year. One Younger Member Group in each size category is eligible to receive the award. Size categories consist of large Sections and Branches (Section membership greater than 1,000 and Branch membership greater than 250; and small Sections and Branches with Section membership of 1,000 or less and Branch membership of 250 or less).

### RULES:

- The evaluation process involves scoring of nomination documents submitted by Younger Member Groups. The nomination documents should list professional, technical, social, and special activities sponsored by the Younger Member Group for the preceding calendar year.
- Younger Member Groups may submit written nomination forms which are available from ASCE at the address below.
- Previous award recipients are eligible to re-apply.
- By February 1, 2000, seven copies of the nomination should be submitted through the Section or Branch Secretary to: ASCE Awards Department, 1015 15th Street NW, Suite 600, Washington DC 20005.

## Educational Outreach

*(Continued from Page 6)*

reach even more students and really help increase the awareness and interest in our wonderful profession. Phila. Section President **Faruq Siddiqui** will continue on as co-chairman of the Committee for the present time. If anyone is interested in continuing or even starting to participate in this effort, please contact **Faruq Siddiqui** at (610) 328-8074. One of us (**Paula Estornel**) is actually changing professions to teach an introduction to engineering course, full time, at George Washington Carver High School, the high school for science and engineering located next to Temple University.

## JOIN THE SECTION'S TECHNICAL GROUPS

### Younger Member Forum

*Christopher Menna, President*

City of Philadelphia, Dept. of Streets  
Bureau of Surveys & Design - Bridge Section  
MSB Building, Room 830  
Philadelphia, PA  
(215) 686-5070; fax (215) 686-5059

### Construction

*Brian Stover, P.E., Chairman*

Urban Engineers, Inc.  
530 Walnut St., 16th Fl.  
Philadelphia, PA 19106  
(215) 923-5077

### Structural

*Richard Roberts, P.E., Chairman*

Pennoni Associates, Inc.  
3001 Market St.  
Phila., PA 19104  
(215) 222-3000

### Transportation

*Chris Rood, P.E., Chairman*

SEPTA - Eng'g & Construction Div.  
1234 Market St., 12th Fl.  
Philadelphia, PA 19107  
(215) 580-7586

### Engineering Management

*Dennis MacBride, P.E., Chairman*

SEPTA - Eng'g & Construction Div.  
1234 Market St., 12th Fl.  
Phila., PA 19107  
(215) 580-7084

### Delaware Valley Geo Institute (DVGI)

*Dr. Joseph P. Martin, Chairman*

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

*Michael Byle, Liaison*

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## IMPORTANT! 1999-2000 MEETING NOTICES

**MARK YOUR CALENDAR!** for the dates of the Philadelphia Section, ASCE monthly meetings and social functions, as follows: (Check each upcoming edition of THE NEWS for additional details, possible date and topic changes.) **THIS IS A TENTATIVE LIST.**

**ALL DINNER MEETINGS** (except as noted):

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.

**Thursday, November 11, 1999** Dinner Meeting, Williamson's City Line, Philadelphia, PA • "Proposed Baseball Stadium," Doug Glanville, Center Fielder, Phila. Phillies • University of Pennsylvania Night

**Thursday, December 16, 1999** Luncheon and "Tour of Fairmount Waterworks" Details to be announced

**Wednesday, January 12, 2000** Joint Dinner Meeting with Delaware Valley Section, American Society of Highway Engineers (ASHE), Holiday Inn, King of Prussia, PA - Topic and speaker to be announced. College Night to be announced.

**Thursday, February 17, 2000** Joint Dinner Meeting with South Jersey Branch, NJ Section, ASCE • Harbor League Club, Camden, NJ • Topic and Speaker to be announced. College Night to be announced.

**Thursday, March 16, 2000** Joint Dinner Meeting with Delaware Valley Chapter, American Concrete Institute (ACI) • Williamson's City Line • Topic and Speaker to be announced. College Night to be announced.

**Thursday, April 20, 2000** Location to be announced. • "Three Gorges Dam Project, China" • Speaker to be announced. College Night to be announced.

**Friday, May 5, 2000** Annual Spring Social Dinner Dance, Date tentative • Location and details to be announced.

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