President’s Message

As we move into 2012 our Society has many interesting events planned. We have an interesting and informative series of speakers scheduled for February, April and June with the NYC DDC, MTA, and the Port Authority. We are working out details to have the NYC DOT speak to us in March. Additional details will be forwarded as exact dates and topics are determined.

In a very short time our website will be up and running. We hope to be able to distribute information to our members in a more efficient manner once our web site is completed. An announcement will be sent out shortly with the new address.

We are also beginning the process of selecting our NY Chapter Awards for the Engineer of the Year, the Government Engineer of the Year, the Young Engineer of the Year and the Project of the Year. Nomination forms will be available on our web site in the near future. In addition to these awards, our chapter also awards scholarships each year to high school students who are going to college to study engineering. If you know of a student who may be eligible, please encourage them to apply.

On a final note, like a great many things today, our Society has been affected by the state of the economy, as our membership continues to drop. I would like to thank all of our members who year after year continue their support for the NYSSPE – NY Chapter. In the spring we plan on a new membership drive to encourage new professional engineers to join our society.

Wishing you all a Happy New Year.

Sincerely,

Toby Hansson, PE
President, NY Chapter
New York State Society of Professional Engineers
Toby.hansson@stantec.com

An LIRR Success Story
by Gerard Hillenbrand, PE

Inauguration Ceremony of NSPE CCNY Student Chapter

Young PROfessionals’ News
by Christian Wienderholz, PE

An LIRR Success Story
by Gerard Hillenbrand, PE

Inauguration Ceremony of NSPE CCNY Student Chapter

Young PROfessionals’ News
by Christian Wienderholz, PE
NEW YORK CHAPTER
NEW YORK STATE SOCIETY
OF PROFESSIONAL ENGINEERS

Toby Hansson, P.E.
President

Richard Lefever, P.E.
First Vice-President

Eric Pawlowski, P.E.
Second Vice-President

Ivan Ramirez, P.E.
Secretary

Mark Schiffman, P.E.
Financial Secretary

Alfred H. Brand, P.E.
Treasurer

Erich R. Arcement, P.E.
Past President

DIRECORS
2009 - 2011

Howard N. Blitman, P.E.
Marc Chiffert, P.E
William L. Gross, P.E
Gerard Hillenbrand, P.E
Lester Karstadt, P.E
Alvin Rohssler, P.E
Thomas Szekokey, P.E
Paul B. Wood, P.E

DIRECORS
2010 - 2012

Diego Alaimo, P.E.
Jeremy Edmunds, P.E.
Edward Finfer, P.E.
Robert W. Luoma, P.E.
Lloyd Merkel, P.E.
Alonzo C. Rand, P.E.
David Reyes-Guerra, Ph.D., P.E.
Christian Wiederholz, P.E.

UPCOMING EVENT
NYSSPE NY CHAPTER DINNER LECTURE

NEW YORK CITY PLAZA PROGRAM
Featuring: High Bridge
Boroughs of Manhattan and The Bronx

Presentation by
Eric C. Macfarlane, PE
Deputy Commissioner
NYC Dept. of Design & Construction

Wednesday, February 15, 2012

CORNELL CLUB
Ivy Room
6 East 44th Street
Reception: 5:30pm to 6:30 pm
Dinner and lecture: 6:30 pm to 8:00 pm

1 PDH CREDIT CAN BE EARNED FOR THIS MEETING

While we are a society of professional engineers, we encourage young engineers, all professionals, and those outside the field to attend.

2012 Awards

NY CHAPTER SCHOLAR AWARD
2012 SEAP SCHOLARSHIP AWARD

THE NY CHAPTER AWARDS
ENGINEER OF THE YEAR
GOVERNMENT ENGINEER OF THE YEAR
YOUNG ENGINEER OF THE YEAR
ENGINEERING PROJECT OF THE YEAR

Good Luck to all the Candidates!
That’s what New York Chapter members and their guests learned at our March 16, 2011 technical dinner meeting held at the Cornell University Club in Midtown Manhattan. The special speaker for this meeting was Helena Williams, Long Island Railroad President, who summarized the important safety and security issues accompanying the rehabilitation of the Atlantic Avenue Viaduct in Brooklyn. Professional Engineers attending this presentation qualified for 1 Professional Development Hour of credit toward satisfying their tri-annual requirements for continuing education, as mandated by the New York Department of Education.

Ms. Williams was welcomed to this meeting by Alfred H. Brand, P.E., New York Chapter Treasurer, who first briefly summarized the technical meetings scheduled in April, May and June of last spring, and invited all attendees to take advantage of the opportunities to earn additional PDH credits. After a suitable introduction, Ms. Williams described her role as president of the railroad and coordinator and attorney overseeing a number of key developments for rail transportation in the New York metropolitan area. For example, the recently completed expansion of the Atlantic Terminal in Downtown Brooklyn and enhanced integration with the city subway system has received special awards by the ASCE and industry organizations.

Ms. Williams related how LIRR management first became fully aware of the urgent need for maintenance to upgrade deteriorating conditions on structural steel supporting the elevated viaduct along Atlantic Avenue in Brooklyn in June 2007. This viaduct, which supports a two track rail line used by 25,000 customers daily, has portions which date from original construction in 1901. Critical inspections revealed that 199 individual spans required replacement at the earliest opportunity. Responding to these problems, LIRR engineers quickly developed a game plan of remediation, including an investigation of possible design-build arrangements and several different partnerships. The plan mandated that train service along the viaduct and vehicular traffic along Atlantic Avenue not be interrupted. Also, the plan included provisions for liaison with the local community in Brooklyn. The plan was presented to the MTA board and quickly gained approval with construction scheduled to start in 2008, primarily on weekends.

The rehabilitation program was conducted in three separate phases and completed in early April 2011. As a result of the railroad’s urgent planning, this project qualified for assistance under the Obama administration’s “shovel-ready” stimulus construction program and qualified for a $77.3 million federal grant. The MTA contributed $56 million in funding and the entire project was completed on schedule and within projected budget costs. This rehabilitation was only a portion of the long range improvements to the LIRR’s Atlantic branch, which include the aforementioned Atlantic Terminal expansion, as well as renovation of the Atlantic Avenue train yards adjacent to the new sports arena and housing complex now being built. Ms. Williams directed special attention to the enhanced safety provisions and natural lighting employed in the expansion of the Atlantic Terminal. She also disclosed plans to initiate shuttle train service along the Atlantic Avenue viaduct between Downtown Brooklyn and Jamaica, where expanded connections to the Air Train to Kennedy Airport are expected to increase the...
current Air Train usage above its current 9,000 passengers per day. Of course, these projects are only a portion of the LIRR total construction program, which includes the East Side Access Project and Penn Station rehabilitation.

Next, Ms. Williams introduced Paul Dietlin, the Chief Coordinating Engineer for the rehabilitation project, who presented a very detailed technical overview highlighted by a computerized video progress record of the various construction stages. The video team located its cameras in an adjacent building high above the viaduct and produced a visual record at rapid speed of the construction methods, a very impressive summary of the entire project. As previously mentioned, the LIRR’s Atlantic branch transports 25,000 passengers per day (running 143 trains). On weekends, the line employees 75 trains transporting 16,000 people. One portion of the elevated viaduct, from Nostrand Avenue to Ralph Avenue, was more than 100 years old and inspections revealed extensive steel corrosion, cracking and metal fatigue, resulting in localized speed restrictions and increased posting of manpower to monitor isolated danger conditions. Inspections determined that 189 longitudinal girders and 10 cross girders required replacement, for a total of 199 spans.

The LIRR’s Atlantic branch transports 25,000 passengers per day (running 143 trains). On weekends, the line employees 75 trains transporting 16,000 people. One portion of the elevated viaduct, from Nostrand Avenue to Ralph Avenue, was more than 100 years old and inspections revealed extensive steel corrosion, cracking and metal fatigue, resulting in localized speed restrictions and increased posting of manpower to monitor isolated danger conditions. Inspections determined that 189 longitudinal girders and 10 cross girders required replacement, for a total of 199 spans.

The rehabilitation plan, developed within the latest design guidelines at 30% of total project cost, included installation of center walkways between tracks to compensate for no existing guard rails along the structure. Replacement spans were designed for a minimum 50 year service life with maximum corrosion protection and optimum scheduled maintenance. The most advanced quality control procedures were employed consistent with mandated safety requirements. The project proceeded with no service interruptions and only limited train delays. Vehicle parking under the viaduct was banned and used for material storage and equipment alignment, but an off-site assembly yard was required for larger machinery and supplies. The entire plan was coordinated with the New York City Police Department and Transportation Department. Weekdays were primarily used for preparatory work and major construction reserved for weekends.

Replacement spans were fabricated in Pennsylvania, along with required bracing, G-beam trusses, and gooseneck support members. Spans were designed with uniform dimensions and repeatable steel specifications. The maximum rate of replacement was 12 spans in a 47 hour work weekend. 87 spans were replaced during Phase I of the project and 102 spans during Phase II. An average of 56 hours of work time per span resulted. In all, 12 million pounds of steel were fabricated. Construction began on Friday nights with removal of the third rails and concluded Sunday evenings with reinstallation of improved tracks and third rails and successful passage of a test train, before restored normal service on Monday mornings. At ground level, the viaduct support columns were repaired and encased in reinforced concrete sleeves to prevent accidental impact with vehicular traffic. The top of each column was connected to the new spans with pre-drilled and bolted splice plates. The enhanced track work included new disc bearings, as well as fixed and expansion joints.

The question and answer period was equally informative. After rehabilitation, train traffic speed was restored to its 60 mile per hour average, with substantial improvement in smoother and more quiet operation, a substantial plus for the Atlantic Avenue community. At the conclusion of the presentation, the guest speakers received a well-deserved, lengthy round of applause. Congratulations to Ms. Williams and the LIRR engineering staff for a great job!
Engineering students at City College have organized a Student Chapter of NSPE. Zahid Khan, a mechanical engineer senior student led the organization and serves as its first President. He was assisted by numerous other students including Mansoor Musleh, Owais Naeem, and Besam Ebied who are other initial officers, as well as several other students. The faculty advisor is Professor Ali Sadegh.

The organizing students developed a very impressive organizational plan for the Chapter which includes a definition of the Chapter structure and the Chapter activities for the 2011/12 year. They have reached out to various departments within City College as well as the NYSSPE and New York Chapter for support. In support of the students, the New York Chapter invited them to attend one of our dinner meetings at the Cornell Club in October.

A chapter inauguration ceremony was held at City College on Thursday October 27, 2011. The program included a reception and buffet lunch. Kelly Norris, CAE, Executive Director of NYSSPE, and Louise Carosi Doyle, P.E. Past President of NYSSPE attended and made presentations on NYSSPE, licensure and professionalism. The program was also attended by NYSSPE Vice Presidents, Rudi Sherbansky and Al Brand, as well as several other society members.

Students at City College have shown an extremely high level of professionalism by organizing a student chapter in such a rigorous manner. We applaud them and we encourage them to forward the chapter to future students. We also encourage students at other universities and colleges to develop NSPE student chapters to promote professionalism among engineering students.

**Left to Right:**
Louise Doyle, PE (Former president of New York State Society of Professional Engineers)
Kelly Norris, CAE (Executive Director of New York State Society of Professional Engineers)
Zahid Khan (Founder/President of NSPE CCNY Student Chapter)

---

**NOTICE:** Licensure for Engineers

The **deadline** for submitting applications for the Principles and Practice of Engineering Examination - P.E. (Part B) for the **October 2012** Exam is **May 1, 2012**

The **deadline** for submitting applications for the Fundamentals of Engineering Examination - P.E. (Part A) for the **October 2012** Exam is **June 1, 2012**

The **deadline** for submitting applications for the Fundamentals of Surveying - FS (Part 1), Principles and Practice of Surveying - PS (Part 2) and the New York State Specific (Part 3) for the **October 2012** Exam is **June 1, 2012**
Investing in Your Future - Achieving Your PE

Closing in on graduation, one must make a decision as to where to seek employment. With any luck, one graduates during a period of ample opportunity. However, before graduation, one has the chance to sit for the Fundamentals of Engineering exam. I cannot stress the importance of this enough. Take that exam as soon as eligible. The concepts are fresh in your mind, and no studying is required. Finding time to study while employed full time is no easy task. Not only is this test a vital step to becoming an engineer, it will help to secure a full time position. Being able to write "Engineer in Training" on your resume can only help. I've worked at companies in which only those recent graduates who had passed the FE would be considered for employment. It demonstrates ambition in a job applicant and shows that they are serious about their professional development. To all young professionals reading this who have not taken their FE exam, do so as soon as possible. It is not a particularly difficult exam; it has a pass rate of about 80%. However, it does cover many varied fields of engineering. So, if you have been employed as an electrical engineer for a few years, the structural engineering concepts you learned in school will start to fade, making the test that much more difficult. Visit https://ncees.org/Exams/FE_exam.php for resources and information regarding the exam.

Other than passing the FE exam, there are many issues that are important to newly hired young professionals. Since they are just beginning their careers, the young professionals have only an inkling of what the company needs them to do and what they themselves want to do. Considering that you will spend a huge percentage of your waking hours at work, you must enjoy what you are doing. Make sure to stress to your employer that you would like to get exposed to many facets of the services that the company provides and work for various clients. This way, you can determine if you prefer public clients or private ones, bridge work or tunnel design, and so on. It is very easy, even as a young professional, to be pigeon-holed. This is not necessarily a bad thing for more experienced engineers, but can be disastrous for those just starting out. After having worked on several different types of projects, one can determine which projects one likes best and request to be staffed on similar projects in the future.

Some young new hires will rise through the ranks at the company, while others will lag behind. This is only natural. What can young engineers do to set themselves apart from the crowd? Obviously your engineering skill and work ethic are the two best tools at your disposal to make your mark. However, in working with young people, I have found that some much more elementary skills come into play, namely listening and following directions. Extremely often have I given directions, watched a young engineer nod that they understand, yet been absolutely sure that they did not understand what they were to do. Sometimes, the young engineers would brood over the problem for an hour or so, and then come back to me ready to hear it again and sometimes ready with some good questions. However, other times the new hire would spin his wheels on the problem and then hand in his work that did not achieve the objective of the exercise. In this way, countless hours are wasted; both the young engineer’s time and that of the supervisor. So, I advise all young professionals to listen attentively, ask questions, and make sure that what you are doing is in fact what you are supposed to be doing.

That is all that an employer could reasonably expect from a young professional with only a few years of experience. They should pass the FE, demonstrate a willingness to learn new concepts and procedures, have a strong technical knowledge and a rigorous work ethic, and follow the instructions of their supervisor and project manager. With these traits, the newly hired young professional will be well equipped to handle most issues that arise on the job.
The 2012 Mathcounts competition will be held at NYU on Saturday morning, February 4, 2012. Our Chapter will support the event with a contribution of $1,000. We also seek volunteers to help proctor the competition and grade the exams.

We have had a long history of supporting Mathcounts which is a national program to promote math skills at the intermediate school level. The New York Chapter event typically draws over 100 students from more than 15 schools in Manhattan. All students participate in several rounds of written questionnaires. The high scorers then compete in an amazing speed round of verbal questions. Winners of the Manhattan event will go on to statewide competitions and if successful, perhaps to national competitions.

Bill Gross, P.E. organized and ran the Manhattan Mathcounts event for many years. Jeremy Edmunds followed in his footsteps. Since last year, NYU took over from Columbia as host and organizer of the event.

Volunteering for this event has been very rewarding and enjoyable experience for those who have participated.

If you can participate on the morning of February 4th, please send an email to Al Brand at abrand@mrce.com.
**Sponsorship Opportunity for Monthly Dinner Meetings**

Sponsorship opportunities for upcoming NYSSPE NY Chapter Monthly Dinner Meetings are currently available.

Sponsorship begins at $500.

**Benefits for Sponsor Company:**
- Tickets to the sponsored dinner meeting
- Signage at each table indicating sponsorship
- Announcement recognizing sponsor at the dinner meeting

---

**Advertisements**

We are now accepting advertisements for inclusion in our publication.

<table>
<thead>
<tr>
<th>Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>business card</td>
<td>$100 per year</td>
</tr>
<tr>
<td>¼ page ad</td>
<td>$200 per year</td>
</tr>
<tr>
<td>½ page ad</td>
<td>$300 per year</td>
</tr>
<tr>
<td>full page</td>
<td>$400 per year</td>
</tr>
</tbody>
</table>

Other options are available. Please inquire.

Ads can be in black & white or color. Please provide the ad copy in pdf format. Ad copy should be provided via email by the 20th of the month for inclusion in the following month’s edition.

Please email ad copy to NY Notes Editor, Toby Hansson, P.E. at: toby.hansson@stantec.com.

Ad content subject to Board approval. Proceeds from the advertisement help support our scholarship fund.

Payment should be mailed to our treasurer, Al Brand, P.E. at the following address:

Mueser Rutledge Con. Engrs.
Attn: Alfred Brand, P.E.
14 Penn Plaza
225 West 34th Street, 2nd Floor
New York, NY 10122-0002

Check should be made payable to “NYSSPE New York Chapter”

---

Global Expertise. Local Strength.

Stantec, founded in 1954, provides professional consulting services in planning, engineering, architecture, interior design, landscape architecture, surveying, environmental sciences, project management, and project economics for infrastructure and facilities projects.

For more information visit stantec.com.

One Team. Infinite Solutions.
Now accepting registrations for the **Spring ’12 Sessions**

Find complete program descriptions at www.idpsessions.com

HALF-DAY SELECTIONS: (May be combined for a full day)

**Professional, Legal, and Ethical Issues for Design Professionals**

PART I (8:30am – 12:30pm) • PART II (1:00pm – 5:00pm)

Hamilton, NJ – Feb 28 • East Hanover, NJ – Feb 29
Syracuse, NY – April 4 • New York City, NY – May 3

FULL-DAY SELECTIONS:

**Practical Wind and Seismic Retrofit of Buildings**

Buffalo, NY – May 3 • New York City, NY – May 22

**New York City Building Code: Multi-Family / Mixed Use Building Design**

New York City, NY – March 30 • New York City, NY – May 10

**Forensic Engineering and Expert Witness Services**

Harrisburg, PA – March 7 • King of Prussia, PA – March 8 • Hamilton, NJ – March 14
East Hanover, NJ – March 15 • Syracuse, NY – May 10

**New York City/NYS Energy Conservation Code – 2010 Changes**

New York City, NY – April 24

**New York State Energy Conservation Code – 2010 Changes**

Albany, NY – April 27

7 topics to choose from

affordable continuing education

in 8 cities

and 3 states.

each full day session is worth

7 PDHs/LUs

(1/2 day = 4 PDHs/LUs)

Program Schedule for all full-day sessions:

8:00am - 8:30am Registration
8:30am Seminar Begins
12:00pm - 12:30pm Lunch onsite and included
12:30pm Seminar Reconvenes
4:00pm Seminar Concludes

Program Schedule for half-day sessions:

8:00am - 8:30am Registration
8:30am Seminar Begins
12:30pm Seminar Concludes

and/or

12:30pm - 1:00pm Registration
1:00pm Seminar Begins
5:00pm Seminar Concludes

Half Day Sessions:

$149/person • $275/person/2 half day sessions

Full Day Sessions:

$245/person before March 1
$295/person/session after March 1

(Lunch is included on site for all full-day sessions)

Call idp today

for more information or to register –

(315)682-1496

or visit our website,

www.idpsessions.com