

ENGINEERS INVENT AMAZING

2019 Engineers Week

ADVERTISING SUPPLEMENT TO THE PHILADELPHIA BUSINESS JOURNAL



DELAWARE VALLEY ENGINEERS WEEK SPONSORS

The Delaware Valley Engineers Week Committee and all of the Engineers Week activities that it sponsors are funded solely by contributions from numerous individuals, corporations, societies, and educational institutions. Without their support, the Committee would not have the resources to

recognize the achievements of the engineering communities in the Delaware Valley. The Committee would like to thank all of our contributors, with special thanks going towards the following people and organizations for their generous support to Engineers Week events:



1877 Club (\$5000 +)

- James J. Anderson Construction Company, Inc.

Franklin (\$2,000 to \$3,499)

- AECOM*
- American Institute of Chemical Engineers, Delaware Valley Section
- American Society of Civil Engineers, Philadelphia Section
- Burns Engineering, Inc.*
- Deborah Grubbe, PE and James Porter
- STV, Inc.*
- Timothy Haahs & Associates, Inc.

Edison (\$1,000 to \$1,999)

- American Society of Highway Engineers, Delaware Valley Section
- Bentley Systems, Inc.*
- Boles, Smyth Associates, Inc.
- HDR
- Jacobs
- Kreischer Miller*
- McMahon Associates, Inc.*
- Richard A. Mulford, PE
- Peirce Engineering
- Remington & Vernick Engineers
- Temple University College of Engineering
- Traffic Planning & Design, Inc.*
- Urban Engineers, Inc.*

Washington (\$500 to \$999)

- American Society of Highway Engineers, Southern New Jersey Section
- Arora Engineers, Inc.
- Matthew J. Burns, PE
- Carr & Duff, Inc.
- Construction Management Association of America, Mid-

Atlantic Chapter

- Electrical Association of Philadelphia
- Fenner & Esler Agency, Inc.
- Gannett Fleming, Inc.
- GZA GeoEnvironmental, Inc.
- International Society of Pharmaceutical Engineers, Delaware Valley Chapter
- Johnson, Mirmiran & Thompson (JMT)*
- KMJ Consulting, Inc.
- Joseph P. McAtee, PE
- Michael Baker International*
- Modjeski and Masters, Inc.
- Momenie and Associates, Inc.
- Pennoni*
- Rettew Associates, Inc.
- RK & K
- Society of Fire Protection Engineers

Baxter (\$250 to \$499)

- Bergmann
- Construction Specifications Institute, Philadelphia Chapter
- Eric L. Flicker, PE
- Greater Valley Forge TMA
- Christopher and Valerie Holliday
- JBC Associates, Inc.
- Douglas Kriebel, PE
- Langan Engineering & Environmental Services
- McCormick Taylor, Inc.
- McHugh Engineering Associates, Inc.
- Menna Engineers & Associates
- Navarro & Wright Consulting Engineers, Inc.
- Nave Newell, Inc.
- Pennsylvania Society of Professional Engineers, Delaware County Chapter
- Schnabel Engineering
- Signal Service, Inc.

- T & M Associates, Inc.
- Taylor Wiseman & Taylor
- Whitney Bailey Cox & Magnani, LLC
- Robert M. Wright, PE

Slide Rule (\$150 to \$249)

- Allan Myers, Inc.
- Dawood Engineering, Inc.
- Intelligent Transportation Society of Pennsylvania
- Chris L. Rood, PE

Pocket Protector (\$50 to \$149)

- American Institute of Aeronautics and Astronautics, Greater Philadelphia Section
- Ruben D. David, PE
- Pennsylvania Society of Professional Engineers, Valley Forge Chapter

Media Sponsor

- The Philadelphia Business Journal

Additional Recognition

- Engineers Week Title Sponsor
James J. Anderson Construction Company, Inc.
- Young Engineers Social – Door Prizes
Menna Engineers & Associates

* Indicates Engineers' Club of Philadelphia corporate member

Sponsors listed are as of January 30, 2019. If you would like to have the name of your organization added to this list for next year and help the Committee to further its work towards advancing our professional engineering programs, please contact Casey Moore, PE, Director of Fund Development, at cmoore@mcmahonassociates.com.

Enduring. Driven. Visionary.

TRANSPORTATION & INFRASTRUCTURE

BUILDINGS & FACILITIES

CONSTRUCTION MANAGEMENT

ENERGY SERVICES

STV 100 Years

An employee-owned firm
Offices in Philadelphia and nationwide
Toll-free: 877-395-5459
info@stvinc.com
www.stvinc.com

Burns
Inspire. Create. Deliver.

Congratulations, 2019 Delaware Valley Engineers Week award recipients!

Burns is a nationally respected provider of specialized engineering services, bringing highly-technical expertise to complex transportation and critical infrastructure projects.

burns-group.com

2019 DELAWARE VALLEY ENGINEER OF THE YEAR



**John J.
Peirce, Jr.,
PE**

Each year, one professional from the Philadelphia region is recognized by the area's engineering and technical societies to serve as an ambassador and leader for the engineering profession. The Delaware Valley Engineer of the Year Award is given to a local engineer who reflects the qualities and talents that define professional excellence, civic duty, society leadership, and community stewardship. This year, the Engineers' Club of Philadelphia, through its Delaware Valley Engineers Week (DVEW) Committee, is pleased to present John J. Peirce, P.E., D.G.E, owner and principal of Peirce Engineering, Inc., as the 2019 Delaware Valley Engineer of the Year.

Let's take it back to the beginning. What do you believe led you on the path to becoming an engineer?

Growing up, I had relatives working in construction, and that interested me. When I was 11 years old, we moved into a new neighborhood where new houses were still being constructed. Seeing this made me think that I wanted to be involved in construction and engineering. Going into college, I knew I wanted to study civil engineering, and I chose to attend Drexel University.

After completing your undergraduate and post-graduate education from Drexel University, where did you start your career? Can you recall any lessons learned early on that helped to guide you to where you are today?

Thanks to Drexel's co-op program, I gained a lot of practical experience before graduation. After graduation, I took a full-time position

with a company for which I had co-opped a few times - The Conduit & Foundation Corporation. Working there, I learned a lot from my immediate supervisor. He would say to me, "If you really don't know something, keep quiet, keep listening, and study up. Talk to people who have done it before. Ask them questions. You'll learn from them."

You worked at Schnabel Foundation Company for 11 years, where you were a branch manager at the Philadelphia office for eight years. What type of work were you doing in this role?

The work I did then is similar to what I am doing now, except at Schnabel, I also built my designs. I was designing and building geotechnical-type structures, retaining walls, doing ground anchors for temporary and permanent-type retaining walls, underpinning of buildings – everything involved with construction and big bridges. When a project needed a deep excavation, I designed and built walls to support the ground around that excavation so nothing collapsed into the hole or damaged adjacent buildings or structures.

Tell us about your company, Peirce Engineering. What are some of the most notable projects you have worked on?

After I left the Schnabel Foundation Company, I started doing engineering work for other companies. I didn't realize how many contractors needed an engineer to design for them. I always assumed contractors had in-house engineering because that was my experience. I eventually started my own company, Peirce Engineering, with the advantage of having significant construction experience.

Everything I was designing for others, I had personally worked on jobs building those same structures. As a result, my designs were economical, buildable, and safe. Peirce Engineering kept growing. Very soon I got so busy I needed help, at which point my daughter had just graduated from Drexel and started working for me part time. Eventually, she decided to work with me full time.

Peirce Engineering has worked on close to 2000 projects. We just recently finished doing the excavation support and underpinning for the new Penn First project – about 60-feet deep in the ground. We worked on Children's Hospital projects on Civic Center Boulevard, one of which was 72-feet deep and, as far as I know, was the deepest building excavation ever in Philadelphia. One of projects I am most proud of is working on the structural design of two, temporary, truss bridges for the World Trade Center Ground Zero Recovery Project in New York. The larger bridge was used as the sole access ramp for personnel and equipment to enter and exit the deep site for debris remediation, clean-up, and sadly the recovery of victims.

You are highly involved in industry-related organizations and associations, including the American Society of Civil Engineers, the Delaware Valley Geo-Institute, the Pile Driving Contractors Association, the Deep Foundations Institute, and The Moles. Most notably, you are a past president of the American Society of Highway Engineers – Delaware Valley Section (ASHE). What was your focus for this organization?

ASHE is an organization of consulting engineers, contractors, suppliers, and others like PennDOT and government employees involved with highway construction. ASHE's main functions are fostering relationships and providing continuing education. Engineers have to continually maintain their level of education so, at each monthly meeting, there is a presentation on a specific topic. My passion led me to join ASHE's Board of Directors. Eventually I worked my way up to become Section President. After about 14 years in leadership roles, I finally transitioned off of the Board, but continue as an active member.

What excites you about the future of engineering? Are there any specific developments you hope to see in the next 10 years?

When I first started working, there were no computers, email, or internet. I used slide rules and hand calculators. Slowly, technology improved. Aside from the continued growth of technology, I would really like to see a more coordinated, national emphasis on continuing education and professional licensure. Right now, every state has its own rules for issuing professional engineering licenses and its own requirements for continuing education. There're too many governing bodies involved, which makes it difficult to work from state to state.

How does it feel to be recognized as the 2019 Delaware Valley Engineer of the Year?

It's exciting but still hard to believe because my firm is so small, and we work in such a specialized niche. There aren't many engineers who do what we do or specialize in it. Our work literally gets buried. Once a building starts to go up, our contribution is rarely remembered. Few people, if any, remember how deep the excavation was or how we had to protect the existing infrastructure. So I'm really proud that other industry professionals have now recognized the importance of our work.

What advice can you share with young people who are considering engineering as a career, or who may have just begun their career?

I believe anybody starting in engineering needs to get some really good hands-on experience. If you don't have a clue how something's built, how can you create economical and safe designs? Having actual field experience makes a big difference. I believe in starting at the bottom and doing the little jobs while constantly progressing in responsibility. It's important to know about many aspects of a project. It is not an overnight process. There's no express elevator to the top. Take your time. The process will make you a better engineer.

Two of your children also graduated from Drexel with engineering degrees. Can you explain what it means to you to share this passion and career with your children?

I am extremely proud that two of my children become engineers. My oldest child, my daughter Jennifer, who works with me at Peirce Engineering as my partner, always said she wasn't going to be an engineer. When it came time for college, she realized engineering was the path for her. My son, John, on the other hand, always wanted to be an engineer. I am elated that they are following in their father's footsteps, and I am very fortunate to have them both working with me. They continue to grow in their careers, while Peirce Engineering grows as a company.

Outside of your career, what other interests do you have?

I'm into sports. My children used to play every sport you can imagine and at high levels of competition. When I was younger I played sports, then watched my kids play, and now I'm watching my grandkids play. Now, I also enjoy sailing. Back in 2011, I bought a sail boat, and during the summer I sail on weekends with my wife. I find sailing relaxing and quiet. I just hoist the sails, and the boat goes by itself.

Is there anything else you'd like to add?

My wife, Beth, has made my life easy. You need a partner that really has your back, and she has mine, which is not an easy task. I have to give her all the credit in the world.

2018 DELAWARE VALLEY YOUNG ENGINEER OF THE YEAR



The annual Delaware Valley Young Engineer of the Year award recognizes an outstanding engineer who is age 35 or under, has demonstrated leadership capabilities, and has made a recognized contribution to the engineering profession within the Philadelphia region. Beyond the field of engineering, the recipient must also have contributed to and participated in charitable, civic and technical affairs. This year, the Engineers' Club of Philadelphia, through its Delaware Valley Engineers Week (DVEW) Committee, has selected Dr. Eleanor F. Small, a principal scientist at Johnson and Johnson Consumer Inc., as the Delaware Valley Young Engineer of the Year.

You earned your Bachelor's degree in chemical and biomolecular engineering from Johns Hopkins University. When did you realize that you wanted to be an engineer, and what sparked your interest in these areas?

I was interested in science from a young age. My freshman year, I went to school for biophysics. I quickly realized I didn't want to only work in a lab. I wanted science that has a purpose and an application to the world. I learned that the definition of engineering is applied science. Engineering is a way of thinking. Being an engineer means you're a really good problem solver. At Hopkins, we had the traditional chemical engineering pathway, but the biomolecular area was also opening up. It combined health care and pharma-based sciences. My dad is a doctor and my mom is a certified nurse mid-wife, so coming from a background of health care professionals and combining it with applied science led me to biomolecular engineering.

After graduating, you began working toward your Ph.D., which you completed at Drexel University. What was the focus

of your doctorate work?

My doctorate work was advanced drug delivery – the potential of using ultrasound as an external triggering device for drug release. We tried to figure out if we could trigger drug carriers by aiming it at the problem area, like a tumor, and release that drug locally to that area. My research specifically looked at the interaction between the ultrasound and the membrane of the drug carrier - how you can change the physical properties of liposomes by changing their chemical makeup. I looked at how these different physical properties respond to ultrasound to learn if we could tune the release profile of the drug to when the liposomes are hit with ultrasound. This would allow an individual to go to any doctor in the U.S. and have the same treatment and dosage applied.

During this time, I also participated in the NSF GK12 fellowship for two years, which gave me the opportunity to work with Philadelphia school district science teachers to develop hands-on activities to supplement curriculum. I taught in Philadelphia high schools about 10 hours a week. It had a huge impact on me and led me to become very passionate about STEM education.

You began your career as a post-doctoral scientist supporting new product development for the Listerine® brand at Johnson & Johnson Consumer, Inc. How did your experience in this role lay the foundation for the beginning of your career?

My very first role was really interesting because I worked on two sides of the fence. I worked closely with my upstream research and development partners on new technologies. Part of my role was supporting them to vet these technologies, and the other part was working with marketing partners to create products for consumers. I'd coordinate with my upstream partners to see if any technology was ready to bring to the consumers to satisfy their needs. The role connected me to the behind-the-scenes of product creation. It was a really cool introduction into the world of consumer products. I'll never look at my toothbrush the same or think of my shampoo in the same way again!

You've been at Johnson & Johnson Consumer, Inc. for six years now, and you've transitioned into a role as a Principal Scientist in consumer Wound Care Product Development supporting J&J's iconic Band-Aid® brands. Tell us a bit about your position and how it fits into the company?

I am still working in product development, and partially in upstream, so my role now is

similar to my first, but on a larger scale. Working in wound care, I'm focused on healing, curing minor wounds – that's what we specialize in at the Band-Aid brand. So how do we create the everyday products that people need for DIY wound care? It's something that we look at from a global perspective. We all get bumps and scrapes, and we all have different desires for wound care that are driven by the different environments and cultures that we've grown up in. On the upstream side, I am responsible for the research to know what our consumers are looking for to prevent an infection, what solutions they feel are missing, and what's out there in the world that can do the job or what needs to be invented to do the job better, faster or easier. I feed the research into the other half of my job and figure out how to apply the cool technology with specific products.

So far, what's been one of your favorite projects at Johnson & Johnson Consumer, Inc.?

One of my favorites was actually one of my very first projects. The product is called Listerine® Healthy White™ Gentle in North America. It is a formula that helps whiten your teeth, but without hydrogen peroxide, so it is gentler on your teeth. The flavor is a gentle mint and the experience in your mouth is a more gentle feeling that is different from standard Listerine®. That was the positioning we gave this product in North America. In Latin America, it was positioned as anti-stain. In Europe, hydrogen peroxide is not allowed over the counter, you have to get it specifically from a dentist. So in Europe, we positioned it as the strongest product on the market, Listerine® Advanced White™. When we went into Asian markets, we changed the flavor to suit cultural preferences. In our Asian markets, this product is actually sold as natural lemon and salt because lemon and salt are actually a home remedy treatment for brightening and whitening, and it connects the consumer with that whitening experience that works for them. That was one of my favorite products because it launched in all four markets and reminded consumers that while we are a global company, we are also a local company. Same product, same formula, but totally regionally relevant.

You're an active member of many professional organizations, most notably the Women in Science and Engineering (WISE) employee group and the International Society of Pharmaceutical Engineers Delaware Valley Chapter (ISPE-DVC). How has participating in these groups worked in tandem with your career?

What they have really helped me do is connect cross-functionally. Women in Science and Engineering is an employee group within J&J, and it includes women in all sciences, all departments and all franchises. It's a great place to really bring everyone together, and I've learned so much about all the other fields of engineering

and science in general. For ISPE, it is amazing to connect across every environment from medical devices to cosmetics that is FDA regulated. Connecting across our common goals and our common challenges in dealing with this regulated environment is really eye opening. Having these cross-functional relationships makes me a better partner in my career.

You also serve as chapter council advisor for Kappa Kappa Gamma at Princeton University. What part of this position do you find the most rewarding?

I think the most rewarding part is watching these women grow throughout their college careers. Most of Princeton's students are not local, so to be a local adult who they can bounce an idea off of, to be another source of advice, and be there for these women is an amazing opportunity. Kappa is an organization that is absolutely dedicated to women leadership, so I am working with the future leaders, and to see these women start to take on their first roles is inspiring.

I also work with Kappa from the Alumnae side with the Philadelphia Alumnae Association, serving in my fourth year as President of our charitable foundation. Kappa supports women for a lifetime, from their undergraduate and into their Alumnae years. It is the most amazing network of professional women, and more importantly it connects us across generations. Mentorship and inspiration can come from any angle, not matter how old you are.

You've progressed very quickly in your career, which has really only just begun. What are some goals you have for the future?

When I think about longer goals, lifetime goals, I'm really thinking about what is the impact I want to make on the world? For me, my short-term goal is to really broaden my experience. It's why I belong to professional societies, they help you learn from others. I really don't know what I want to be when I grow up. I can't tell you what role I want to retire from, because maybe that role doesn't exist yet. Maybe I have to go and create it. I just want to continue to make sure what I'm doing is meaningful to me.

What advice would you give to students – especially young women – who are considering entering chemical or biomolecular engineering?

Don't worry about whether or not this is the right niche of engineering. Is it interesting enough to keep you motivated, to get you to go to class and do your homework? If it is, then you're going to be good, because engineering is a way of thinking. So even after getting a degree in chemical engineering, you'll have a fundamental toolset that can be used throughout engineering.

What makes the 2019 Delaware Valley Young Engineer of the Year award a particular honor for you?

I am standing on the stage where some of my mentors and people I respect also stood. These are people I look up to, people I still admire and hold up as an example. It's really an honor, and I'm so proud because I feel like I am representing not only me, but everyone who has been a part of my journey as well. That makes it incredibly special. I hope I can be as good of an example as they have been for me.

Where are you originally from?

My father served 28 years active duty in the United States Air Force, so I moved every two to three years growing up. I was actually born in the UK while my dad was there on foreign assignment. I've lived in Texas, Nevada, Alaska, and California. I went to college in Maryland and grad school in Pennsylvania, and that is where I have settled. I have been in Philly for about 12 years now, and that makes me more from Philadelphia than any other place.

What interests do you have outside the engineering field?

In between all my other work, advising and professional roles, I also have a husband, and he is extremely supportive, and our hobby is ballroom dancing, which is something we got into about seven years ago. We do American Smooth and American Rhythm, which includes many styles. We just really love to dance!



THE “HANDOFF”

On February 14, at the Opening Ceremony for Engineers Week, 2018 Delaware Valley Engineer of the Year Deborah Grubbe, PE will end her term and our incoming 2019 Engineer of the Year, John Peirce, PE will be introduced and inducted.





Known for excellence. Built on trust.

**HELPING TO BUILD A STRONG FOUNDATION
FOR PENNSYLVANIA'S FUTURE**

PROPERTY DUE DILIGENCE
BROWNFIELDS SERVICES
SITE INVESTIGATION AND REMEDIATION
ENVIRONMENTAL COMPLIANCE
GEOTECHNICAL/FOUNDATION ENGINEERING
WATERFRONT/MARINE ENGINEERING
CONSTRUCTION SUPPORT

For more information, contact:
Ernest Hanna, PE, 267.464.3612, ernest.hanna@gza.com
John Oberer, LSRP, 609.209.2823, john.oberer@gza.com
www.gza.com

GEOTECHNICAL	ENVIRONMENTAL	ECOLOGICAL	WATER	CONSTRUCTION MANAGEMENT
				

DELAWARE VALLEY ENGINEERING HALL OF FAME

Carl A. Baumert, Jr., PE, Renowned structural engineer

Samuel S. Baxter, Municipal engineer extraordinaire

Benjamin Franklin Bridge, Permitting efficient travel across the Delaware River

Joseph Bordogna, PhD, International authority on science and engineering education and research

Center City [Philadelphia] Commuter Tunnel, Connecting Suburban Station and Market East Station

City Plan of Philadelphia, Conceived by William Penn in 17th Century, model for city planning and development throughout colonial North America

Discovery of Electricity, By Benjamin Franklin

ENIAC, The first electronic digital computer

Fairmount Waterworks, At one time

the most advanced municipal system in the world and initial portion of Fairmount Park

Frankford Avenue (The King's Road) Bridge, City of Philadelphia, Critical connection for colonial America, stone-arch bridge built in 1697 and still in continuous use

Golden Age Engineers of GE Aerospace and Lockheed Martin, Innovators of re-entry vehicles, spacecraft and related products beginning in 1956

Ralph Modjeski, Civil engineering pioneer

C. R. "Chuck" Pennoni, PE, Exemplary civil engineer and businessman

Pennsylvania Railroad, At one time the "Standard Railroad of the World" and one of the largest

Philadelphia City Hall, The nation's largest municipal building and the largest and tallest Masonry Building in the world

Frank Piasecki, Pioneer of the United States' helicopter industry

Hilliard W. Page, Aerospace pioneer

Constantine Papadakis, PhD, PE, Engineer and educator

PSFS Building, Landmark in modern high-rise air conditioning

RCA Victor, Camden, For the development of Victrola Recordings

Reading Terminal Train Shed, Last surviving single-span arched train shed in the United States, repurposed for use as part of the Pennsylvania Convention Center

Removal of the "Chinese Wall", Elevated rail line between 30th Street and Suburban Stations; divided Philadelphia at Market Street

Schuylkill Expressway, The first limited access roadway in the area, predating the Interstate Highway System

Leo Steg, PhD, PE, Innovator in re-entry systems and director of GE's

Space Systems Laboratory

J. Edgar Thomson, First chief engineer of the Pennsylvania Railroad

Vukan R. Vuchic, PhD, Internationally-recognized authority in transportation engineering

Walnut Lane Memorial Bridge, Bridge over Lincoln Drive, first precast, prestressed concrete girder bridge in the United States

Roy F. Weston, PhD (Hon), PE, DEE, Renowned environmental engineer

MAKING THE COMPLEX ELEGANT

Precision Engineering for Performance Critical Facilities:

Pharma & Biotech
Healthcare
Higher Education
Central and Critical Utilities
Data Centers
Critical Warehousing



Mechanical
Electrical
Plumbing
HVAC
Process
Fire & Life Safety
Sustainable Design



215.540.9800
Philadelphia | Raleigh
precisengineering.com

2019 DELAWARE VALLEY ENGINEERS WEEK AWARDS

One of the purposes of Engineers Week is to cultivate interest in math, science, and engineering among the nation’s youth – tomorrow’s work force. A key component of that is the recognition of outstanding students and teachers. With the support of the Philadelphia Engineering Foundation, we proudly recognize the following secondary school students and teachers and undergraduate college students.

Delaware Valley Science Fairs Awards (2018)

YADAV PRADYAT
North Penn High School
Lansdale, PA
11th & 12th Grades

CARTER GASSLER
Avon Grove Charter High School
West Grove, PA
9th & 10th Grades

LEO WYLOUIS
Tredyffrin-Easttown Middle School
Berwyn, PA
6th-8th Grades

Outstanding High School Student Awards

JASON GRANATO
Unionville High School
Kennett Square, PA

DANIELLE VENUTO
Bishop Eustace Preparatory School
Pennsauken, NJ

Delaware Valley Engineers Week Undergraduate Scholarships*

JON COWART III
The Pennsylvania State University

JISOO JULIE LEE
Temple University

Delaware Valley Engineers Week/ASCE Undergraduate Scholarship*

JOEL GIVEN
Widener University

Lewis A. Caccese Scholarship*

ELIZABETH SHALOKA
Temple University

Pennoni/John Morrison Memorial Scholarship*

MEGAN CULLISON
Widener University

Walter G. Neal, Jr. Memorial Scholarship*

CALYN HALL
University of Pittsburgh

Undergraduate Student Paper Awards*

GABRIELLA AIELLO, MARISSA CIOCCO, REBECCA GAVIN, OLIVIA KONONIUK, AND GINA VENUTO
Rowan University
The Potential of winery Waste in Biofuels

JEFFREY DOWKOWSKI, SHANE KELLY, WILLIAM MAI, RYAN RORICK, AND TUCKER SIMMONS
Rowan University
Evaluating the Feasibility of Converting Brewery Waste into Biofuels

ROB CHURCH AND NICK VITELLO
Rowan University
Determination of Minimum Thickness of Insulation Layers in Asphalt Pavements

JOEL GIVEN
Widener University
Maximum Shear Modulus of Coarse-Grained Soil Mixtures

MARVIN TA
Drexel University
How Traffic Calming Can Reduce Speeding and Volume Issues on Local Roads

* The Delaware Valley Engineers Week/American Society of Civil Engineers Scholarship is funded by the Philadelphia Section ASCE. The remaining scholarships and student paper awards are financed by contributions from the engineering community or endowments administered by the Philadelphia Engineering Foundation.





RowanUniversity

HENRY M. ROWAN
COLLEGE OF ENGINEERING

rowan.edu/engineering

HANDS ON.

MINDS ON.

INDUSTRY FOCUSED.

ENGINEERING EDUCATION FOR THE 21ST CENTURY.

DELAWARE VALLEY ENGINEERS WEEK EVENTS

Opening Ceremony/Dinner | DoubleTree Philadelphia Hotel, Center City Friday, February 14

2019 Engineers Week in the Delaware Valley starts off with the Opening Ceremony. A networking and cocktail hour will begin at 5:00 PM. At this time, recipients of our Student and Teacher awards will be available to interact and network with guests. These awards include Student Papers, Scholarships, Outstanding High School Students, Delaware Valley Science Fairs, and Outstanding High School Teachers. The Future City Competition regional winners will be featured along with their working model. Participating Affiliate Societies will also be available to feature their awards and special events from the past season. Dinner follows at 6:00 PM.

After dinner, the Engineer of the Year and the Young Engineer of the Year will be formally introduced and make brief remarks to kick off the celebration of Engineers Week in the Delaware Valley. All Engineers Week awardees will be formally recognized as well.

Young Engineers Social | Ladder 15, Center City Tuesday, February 19

The Young Engineers Social is a mid-week happy hour/networking type event where young engineers (and those young at heart!) can have an opportunity to meet engineers of all disciplines from around the region. You'll get to enjoy appetizers and drinks. We will be giving out door prizes as well. As part of the evening's festivities the Delaware Valley Young Engineer of the Year is recognized and makes brief remarks.



PART-TIME OPTIONS FOR FULL-TIME ENGINEERS

Flexibility ranks as one of the top reasons students choose Villanova University to pursue a graduate engineering degree. Working professionals enjoy the freedom to take classes **online** from the comfort of home, the office, or **on campus**, as their schedule permits.

Graduate Studies in Engineering
9 MS Degrees | 17 Certificates | PhD

**V VILLANOVA
ENGINEERING**

Biochemical Engineering | Chemical Engineering | Civil Engineering
Computer Engineering | Cybersecurity | Electrical Engineering | Mechanical Engineering
Sustainable Engineering | Water Resources & Environmental Engineering

PAST DELAWARE VALLEY ENGINEERS OF THE YEAR

The Delaware Valley Engineer of the Year award was initiated in 1953 by the Philadelphia Chapter of the Pennsylvania Society of Professional Engineers (PSPE). Within a few years, the other regional chapters of PSPE joined the Philadelphia Chapter in this selection and in the celebration of Engineers Week. Since the early 1970’s, the other regional engineering and technical societies have been part of both the selection of the EOY and the celebration. The Delaware Valley EOY award is bestowed upon a colleague who reflects the qualities and talents that define professional excellence, civic duty, and community stewardship. The following is a listing of the distinguished individuals who have been so recognized.

1953	Nevin E. Funk, PE	1987	Richard E. Woodring, PE, PhD
1954	Walter A. Kruger, Jr.	1988	Gunnar E. Sarsten, PE
1955	Harry A. Kuljian	1989	Gerald E. Speitel, PE
1956	Francis S. Friel, PE	1990	E. Ross Forman, PE
1957	Lester M. Goldsmith, PE	1991	Mark Z. Hanlon, PE
1958	Kilshaw M. Irwin	1992	Joseph V. Mullin, PE, PhD
1959	Samuel S. Baxter, PE	1993	Stephen B. Lester, PE
1960	Hilliard W. Page	1994	John E. Kampmeyer, PE
1961	I. Melville Stein	1995	Harry M. Perks, PE
1962	James M. Harlow, PE	1996	Edward E. Gilvey, PE
1963	Leroy A. Brothers, PhD	1997	Joseph R. Syrnick, PE, PLS
1964	Henry M. Chance, II, PE	1998	Thomas G. McWilliams, Jr, PhD
1965	Leo Steg, PE	1999	Lawrence M. Moy, PE
1966	Carl C. Chambers, PE, PhD	2000	Bruce A. Eisenstein, PE, PhD
1967	Frank N. Piasecki, PE	2001	Pasquale A. Dougherty, PE, PLS
1968	Nathan Cohn, PE	2002	Edward M. D’Alba, PE
1969	Allen F. Clark, Jr, PE	2003	Robert M. Rodgers, PE
1970	William H. Haggerty, PhD	2004	Matthew J. Burns, PE
1971	Samuel T. Hudson, PE	2005	Donald D. Dalessandro
1972	James L. Everett III, PE	2006	Eric L. Flicker, PE
1973	Louis T. Klauder, PE	2007	Joseph J. Viscuso, PE, PLS
1974	Lewis A. Caccese, PE	2008	Dianne Dorland, PE, PhD
1975	John L. Rumpf, PE, PhD	2009	David D. Lowdermilk, PE
1977	John Lotz, PE	2010	Selçuk Güçeri, PhD
1978	H. Robert Sharbaugh	2011	Douglas W. Kriebel, PE
1979	Vincent S. Boyer, PE	2012	Timothy Hyungrock Haahs, PE AIA
1980	W. Spencer Bloor, PE	2013	Charles A. Clerecuzio, PE, CPIP
1981	Robert M. Koerner, PE, PhD	2014	Suzette M. Schultz
1982	Walter F. Spiegel, PE	2015	Adam K. Fontecchio, PhD, PE
1983	August D. Pistilli, PE	2016	Kevin L. Johnson, PE
1984	Joseph Bordogna, PhD	2017	John A. Nawn, PE
1985	C. R. Pennoni, PE	2018	Deborah L. Grubbe, PE
1986	John S. Kemper, PE		



THE ANDERSON COMPANIES



JAMES J. ANDERSON CONSTRUCTION COMPANY
6958 Torresdale Avenue, Suite 200
Philadelphia, PA 19135
www.jjaconstruction.com
215-331-7150



Anderson Construction Services, Inc.
www.andersonconstructionserv.com
215-331-7150



Riverside Materials, inc.
www.riversidemat.com
215-426-7299



Dyer Quarry Inc.
www.dyerquarry.com
610-637-8704

HEAVY/HIGHWAY CONSTRUCTION, MILLING AND BITUMINOUS PAVING, STRUCTURES, CONCRETE PAVING, SITE WORK, CONSTRUCTION MATERIALS, EQUIPMENT RENTALS, INDUSTRIAL CONSTRUCTION SERVICES

PAST DELAWARE VALLEY YOUNG ENGINEERS OF THE YEAR

1990	K. Jim Jem
1990	Susan L. Best, PE
1991	William K. Grauer, PE
1992	Stanley Yuen, PhD, PE
1993	James M. Matthews, PhD, PE
1994	Sandra Joyce May
1995	Phillip W. Wursta, PE
1996	Lisa M. Walton, PE
1997	Carol M. Reich, PE
1998	Elaine Elbich, PE
1999	Lucia Chan
1999	Thomas K. Cassidy
2000	John Zarsky, PE
2001	Christopher John (CJ) Sabol, PE
2002	Casey A. Moore, PE
2002	Carol C. Martsolf, PE
2003	Christopher J. Menna, PE
2004	Michael J. McAtee, PE
2005	Thomas Brady, PE
2005	James P. Markham, PE
2006	David Thatcher, PE
2007	Jeremy D. Colello, PE

2007	Keith S. Yamatani, PE
2008	Rajeev K. Arora, PE
2009	Joesph A. Platt, Jr, PE
2010	Michael Witkowski, PE, LEED AP
2011	Angela Fante, PE, LEED AP
2012	Catherine Golata Farrell, PE
2013	Alan S. Levy, PE
2014	Philip M. Gonski, PE
2015	Brian Mark Crokston, PhD, PE
2016	Daniel Sujo
2017	Kazi M. Hassan, PE
2018	Alexa Egan Harper, PE



2019 DELAWARE VALLEY ENGINEERS WEEK COMMITTEE

The Delaware Valley Engineers Week Committee of the Engineers' Club of Philadelphia sponsors Delaware Valley Engineers Week on behalf of the Engineering and Technical Societies. The events are supported by area corporations, universities, individuals and, participating societies. The Committee members are volunteers, several having volunteered their time for many years, supported by Club staff and consultants. We thank all the members and their employers for their support of the program.

The Key Leadership of the 2019 Delaware Valley Engineers Week Committee includes:

Co-Chair
Megan Syrnick Clayton, PE

Co- Chair
Robert Wright, PE

Advisory Committee Chair
Suzette Schultz

Awards Director / Deputy Director
AnnMarie Vigilante, PE /Briana Earle, PE

Events Director / Deputy Director
Christopher Menna, PE
Christopher Gray, PE /

Fund Development Director
Casey Moore, PE

Engineers' Club President
Christopher Holliday, PE

Other Planning Committee Members

Christine Alizzi
Erica Antoine, PE
Helene Brennan, PE
Kevin Brown, EIT
Anthony Cirillo, PE
T. James Cokonis, PE
Ruben D. David, PE
Briana Earle, PE
Eammon Farley, PE
Christopher Gray, PE
Ernest Hanna, PE
Alexa Egan Harper, PE
Andrew Hartmann, PE
Emily Hoffman, PE
Mark A. Kinnee, PE
Jacob Nichols
Chris L. Rood, PE
Evan Rosario
Carol A. Rose
Jennifer Walsh, PE
Dennis Wilson, PE

Awards Selected By

Kevin Brown, EIT
Assunta Daprano
Briana Earle, PE
Danielle Eisenstock
Abbey Gancz, PE
Christopher Gray, PE
Tyler Ladd, PE
Helen Lam, PE
Carol C. Martsolf, PE
Catherine Martsolf
Christopher Menna, PE
Robert M. Wright, PE

Support Staff and Consultants

Jocelyn Craighead
Alyssa Zinar

We are always looking for more people to provide ideas and help plan for the celebration of engineering during Engineers Week. If you are interested in getting involved, or simply want to provide input on next year's events, email engineersclubofphiladelphia@gmail.com or call (267) 639-1234 and indicate your interests and time availability.

FOR NATIONAL ENGINEERS WEEK, SEPTA SALUTES THE MEN AND WOMEN WHO ARE BUILDING OUR FUTURE.

It is no easy feat to build and maintain the nation's sixth-largest public transportation system that travels over 2,200 square miles and carries approximately 750,000 passengers each workday. But Southeastern Pennsylvania Transportation Authority (SEPTA) Engineers have been up to the task, from our early beginnings to today and into the next decades.

As the economic engine of the Philadelphia region, SEPTA salutes our Engineers who are helping to build new projects, expand infrastructure and move people more efficiently. We could not have done it without you.



Winner of Best Large Transit Agency Award
APTA Gold Standard Recognition for Sustainability
Pennsylvania Governor's Award for Environmental Excellence
Committed to Continuous Improvement and Innovation

The Delaware Valley's
Home of Chemical Engineers

AIChE  Delaware Valley Section

catalyzes our profession through...

- Networking
- Professional Development
- Community / Student Outreach

Discover our active community at:
www.aiche-philadelphia.org

Congrats ELEANOR SMALL, Young Engineer of the Year!



TimHaahs
PLANNING PARKING | CREATING PLACES | HELPING PEOPLE

"PLANNING for PLACES and PEOPLE NOT JUST CARS!"
Forward Thinking Drives Success
www.timhaahs.com



Atlanta | Miami | New Brunswick | Philadelphia

 American Society of Civil Engineers, Philadelphia Section
Visit our website: asce-philly.org
Like us on Facebook: [facebook.com/ASCEPhilly](https://www.facebook.com/ASCEPhilly)

We salute our members who are being honored during Delaware Valley Engineers Week 2019

John Peirce, PE, Delaware Valley Engineer of the Year

Leo Leonetti, PE, Outstanding Service

What do Civil Engineers do? We touch many aspects of daily life, from the water you use to brush your teeth in the morning, to the road you drive on to work and the school where you take your children, to the power that charges your cell phone.

The 2018 Pennsylvania Report Card (PARC) on Infrastructure was released this past November. The overall PARC GPA is a C-. The good news is there are solutions to all of the challenges presented, and we can raise Pennsylvania's infrastructure grades. By learning more today about the conditions of the infrastructure you use every day, you too can help raise the grade.

Visit pareportcard.org to see the 2018 Pennsylvania Infrastructure Report Card.

Visit asce.org to learn more about civil engineering.

AFFILIATE AWARD RECOGNITION PROGRAM

To help us celebrate engineering in the Delaware Valley, the Engineers' Club undertook an effort to recognize the many and various projects and individuals cited by the engineering and technical societies in our region. This illustrates the varied fields and specialties covered by these groups and the notable contributions made in these specialty areas by engineers.

We have listed below the various projects and individuals submitted to the Engineers Week Committee by the noted engineering related technical societies. We greatly appreciate these people and efforts that have had positive effects on life in the Delaware Valley for the benefit of all of us.

American Society of Civil Engineers, Philadelphia Section

Philadelphia Civil Engineer of the Year
William Thomsen, PE, Urban Engineers, Inc.

Young Civil Engineer of the Year
Jesse Gormley, PE, Pennoni Associates, Inc.

Young Government Engineer of the Year
Katrina Lawrence, DVRPC

Geotechnical Engineer of the Year
Melissa Logan Gillespie, PE, TRC Engineers

Engineering Manager of the Year
Carmen Zappile, Philadelphia Industrial Development Corporation

Environmental and Water Resources Engineer of the Year
Franco Montalto, PhD, Drexel University

Community Outreach and Service Award
Timothy Abel, Pennoni Associates, Inc.
John Doyle, Traffic Planning & Design, Inc.

American Society of Highway Engineers, Delaware Valley Section

2017 Project of the Year (over \$10 million)
Pennsylvania Turnpike Delaware River Bridge Emergency Repairs

Pennsylvania Turnpike Commission (owner), Michael Baker International (designer), STV, Urban Engineers (construction manager), Cornell & Company (contractor)

2017 Project of the Year (\$10 million and under)
SR 926 Section 53S, Bridge over Brandywine Creek

Pennsylvania Department of Transportation (owner), Gannett Fleming (designer), Pennsylvania Department of Transportation (construction manager), Clearwater Construction (contractor)

Pennsylvania Society of Professional Engineers, Delaware County Chapter

2019 Engineer of the Year
Helen Robinson, PE, GEI Consultants

2019 Outstanding Project Award
PA Route 926 Over Brandywine Creek Bridge Replacement

Pennsylvania Department of Transportation (owner), Gannett Fleming (designer)

Pennsylvania Society of Professional Engineers, Philadelphia Chapter

Outstanding Engineering Achievement
The Rail Park
Urban Engineers, Inc.

Notable Engineering Achievement
Replacement of St. Louis Gateway Arch Tram MG Sets with VF Drives
Maida Engineering

Honorable Mention
West Deptford 625,000 sf Amazon "Sort" Facility
Pennoni Associates, Inc.

PSPE Engineer of The Year
Joseph F. Maida, PE, Maida Engineering

Women's Transportation Seminar, Philadelphia Chapter

Diversity Award
COMTO Philadelphia

Employer of the Year Award
Louis Berger

Innovative Transportation Solutions Award
American Street Improvement

Man of the Year
Kenneth McClain, Pennsylvania Department of Transportation, District 6-0

Member of the Year
Helene Brennan, PE, STV Inc.

Philadelphia Award
Schuylkill River Development Corporation

Woman of the Year
Kate O'Connor, PE, SEPTA



ABOUT THIS SUPPLEMENT...

This Engineers Week Supplement to the Philadelphia Business Journal has been prepared by the Delaware Valley Engineers Week (DVEW) Committee of the Engineers' Club of Philadelphia. The Club is pleased to sponsor DVEW on behalf of the affiliated engineering-related societies and supported by those organizations that have advertised in the supplement.

The Engineers' Club of Philadelphia was founded in 1877. The Club works to maintain and expand a strong connection with affiliated engineering-related societies that has existed since its earliest days. By organizing and delivering Engineers Week, the Club is working toward this goal by strengthening its resources and allowing Engineers Week organizers to plan

strategically for improved celebrations and greater visibility.

The Engineers' Club offers individual, student, and corporate memberships to further the goals of relationship building and networking among technical professionals, communication and collaboration among engineers, raising the awareness of engineering in our society, and the

professional development of its members. The Philadelphia Engineering Foundation, a 501(c)3 organization, is the charitable arm of the Club to support its student outreach efforts.

Please visit the Club's website at www.engrclub.org for more information.

REGIONAL STUDENT OUTREACH



Future City Winners

The Philadelphia Regional Future City Competition is an educational outreach program of DiscoverE. This year's regional competition was held

on January 19, 2019 at Archbishop Carroll High School, Radnor, PA and featured teams of 6th, 7th and 8th graders from over 30 middle schools located in Pennsylvania,

New Jersey and Delaware. Philadelphia is one of 39 regional programs conducted throughout the country with the goal to introduce middle school students to the engineering profession.

Students form teams and work with a teacher and an engineer mentor from September to January to design and lay out a city of the future using SimCity computer software, build a table-top model using recycled materials that illustrates one section of the city, write an essay on a specific topic related to their city,

and present their model and city to a team of judges on competition day in January. The winner of the competition goes on to compete at the Annual Future City National Finals in Washington, DC during Engineers Week.

The winner of this year's Philadelphia Regional Future City Competition is the team from Downingtown Middle School.

For more information on the Philadelphia Regional Future City Competition please visit www.futurecityphilly.org.

SPECIAL INTEREST

Local Engineering Achievement – 100 Years Ago

Philco Established, Local Pioneer in Radio/Electronics Fields

In 1892, the Helios Electric Company, was established in Philadelphia to manufacture carbon-arc lamps. As competition in that market expanded, the company diversified to manufacture batteries for another rising innovation, electrically-powered vehicles, rebranding itself as the Philadelphia Storage Battery Company in 1906. Its product line later added home charging batteries for the emerging radio industry, with the Philco brand name first appearing in 1919.

In 1925, with commercial electricity becoming more widespread, Philco developed a battery eliminator which enabled users to operate their radios from standard light or wall sockets, and over 1 million of these were sold. Utilizing the newly-available vacuum tube rectifier in 1928, the company began making radios, producing and selling 96,000 that year. Local competitors Atwater Kent, in Philadelphia, the leading radio producer

in the country, and RCA, across the Delaware River in Camden, began to take notice.

Philco began to incorporate assembly line techniques then only used by the automobile industry to be able to efficiently produce and mass-market its product. By 1929, it was in third place in home radio sales, behind Atwater Kent and Majestic, with sales of over 600,000 worth \$34 million. Despite the Depression, by the mid-1930's, it was the leading radio manufacturer in the country and had captured 30% of the domestic radio market. During that time it expanded to include several large plants in Philadelphia to handle production and engineering and had become one of the city's leading businesses and employers.

Philco radios were notable for their economy of design, as well as their high quality and durability. The company offered a wide line of AM-band radios from simple five-tube sets to high-fidelity consoles with 20 tubes. It also produced battery-powered radios, most of which had cabinets identical to their AC powered versions. The "Baby Grand", called

a "cathedral" radio by collectors, was very popular and over 2 million were sold from 1930 to 1938. The firm was one of the largest furniture producers in the world as well, with the high-quality cabinets usually provided for its radios, televisions and stereo equipment.

Philco began marketing car radios in 1930 and later expanded to manufacture other household products and appliances, including televisions. It was a pioneer in television broadcasting, launching experimental station W3XE in 1932 from its factory at C and Tioga Streets in Kensington. In 1941 the station became the third commercially licensed TV operation in the United States as WPTZ (Channel 3), although there were few television sets available in local homes to receive the broadcasts. The station was sold to Westinghouse Broadcasting in 1953 and continues to broadcast locally today as KYW-TV.

The firm had also become a major provider in the defense industry prior to World War II and continued in this role in the post-war era, particularly in the development and production of computers. It invented and produced a

number of transistors and components for high-speed computers that were later used by national security agencies and in the "space race". Continued innovation in electronics, including the development of the integrated circuit, used in place of vacuum tubes, changed Philco's fortunes, and the company applied for bankruptcy protection in 1960. The Ford Motor Company purchased the firm in 1961 with the same product line but re-branded as Philco-Ford.

Trends in the American electronics industry to reduce costs and be more competitive resulted in more production being outsourced and handled in foreign countries, and goods being imported rather than domestically produced. Consequently, the role of the Philadelphia plants was reduced, with these downsized or closed and work diverted to other locations by the early 1970's. The Philco name remains in the consumer electronics field, having been purchased by several other concerns over the years, including GTE Sylvania and Philips.

Philadelphia Engineering Foundation Golf Outing

Our 19th Annual Golf Outing, also known as the Mulford Classic, occurred on October 8, with over 60 participants, and, as usual, it was all for a good cause. The proceeds of the outing will go toward Delaware Valley Engineers Week activities and programs supported by PEF. The winner of the prized Mulford Prism, awarded to the low scoring team in the Outing, was the Brehm Nofer & McCarter squad, taking home the Prism for the second year in a row.

Thanks to all who participated and sponsored as well as our diligent volunteers and Golf Committee for making the Outing a success once again.

Sponsors

Platinum

- Pennoni Associates

Gold

- Bentley Systems
- STV

Silver

- AECOM

Bronze

- Hill International
- McMahon Associates
- Richard Mulford

Snack Stations

- Electrical Association of Philadelphia
- Employing Bricklayers Association

Hole Sponsors

- Burns Engineering
- Carr & Duff
- Global Fire Sprinkler
- KMJ Consulting
- Traffic Planning & Design
- Urban Engineers

Our 20th annual Golf Outing is scheduled for Monday, October 14, and new contests and challenges are being developed for this one. Please mark your calendar and plan to attend. Details will be provided this Summer.

ENGINEERING FOR THE NEXT STEP

Master's in Engineering Management

Gain leadership and business acumen in a program designed for technical managers.

Available online, on-campus or as a hybrid.

Explore Our Graduate Programs for Working Engineers

- Bioengineering
- Civil Engineering
- Computer & Systems Security
- Electrical Engineering
- Engineering Management
- Environmental Engineering
- Mechanical Engineering

Information Sessions

Online March 21

On-Campus March 28

Register: engineering.temple.edu/gradoh

TEMPLE ENGINEERING CELEBRATES ENGINEER'S WEEK

Saturday, February 23 | 11 AM — 2 PM

Join us at the Dilworth Plaza Ice Rink for a family friendly hands on STEM activity, to see the student built Temple Formula Race Car and then stay for a spin on the ice!



College of Engineering

215.540.9800

Philadelphia | Raleigh
precisengineering.com

Mechanical
Electrical
Plumbing
HVAC
Process
Fire & Life Safety
Sustainable Design

Precis Engineering

provides innovative systems and utility engineering solutions for performance-critical facilities throughout the eastern U.S. Find out why our clients trust us to support their most challenging and complex work. For projects ranging from data centers to vaccine manufacturing facilities, our award-winning engineering solutions begin with our clients' goals in mind. Our designs are strategically sensitive to schedule, construction and operating costs, and our clients' business operations and profitability. We are committed to providing principal-level leadership, engineering excellence, and collaboration throughout every aspect of our work.

Let us become your trusted advisor.

Services include:

- Performance-Driven Engineering
- cGMP and cGLP Consulting
- Central Utility Design
- Critical Warehousing
- Energy Audits
- Sustainability Solutions

Contact us today to learn more:

Murray Sterling

msterling@precisengineering.com



Engineering Education for the 21st Century

The Henry M. Rowan College of Engineering at Rowan University has a long history of successfully collaborating with the professional engineering community to develop distinctive programs and specialized workforce credentials.

Rowan's signature undergraduate engineering clinic program – a rigorous eight-semester sequence of courses – routinely provides students with opportunities to work directly with industry, foundation, and government agency sponsors to solve real-world engineering problems. The clinic program fosters interdisciplinary collaborations, promotes project-based learning, is an effective method for industry to tap into the R&D potential of Rowan Engineering, and serves as a channel to recruit engineering interns and graduates.

As Rowan Engineering continues to invest in its nationally recognized clinic program, it is excited to offer expanded industrial partnership opportunities through the introduction of its first formal cooperative education program (co-op).

Co-op programs award academic credit to students who complete formal internships and onsite coursework with industry sponsors. Co-op students have unique opportunities to seek mentorships from industry professionals, who often serve as program faculty and project supervisors.

Co-op programs empower graduates with both the engineering expertise and professional acumen they will need to contribute to their employers and cultivate successful careers.

Rowan's first co-op program, sponsored by Lockheed Martin, began in fall 2018. Students in the program intern at Lockheed Martin's Moorestown campus and take a sequence of combat systems engineering courses. Students in the Lockheed Martin co-op earn both a certificate of undergraduate study in combat systems engineering and a bachelor's degree in electrical and computer engineering, completing their studies and earning multiple credentials in just four years.

Rowan Engineering takes tremendous pride in its hands-on, minds-on, industry-focused approach to engineering education. The College's expanding co-op program ensures that students will continue to receive a world-class education and industry partners will have even greater opportunities to tap into the resources of Rowan Engineering and its exceptional students and graduates.



HENRY M. ROWAN
COLLEGE OF ENGINEERING
rowan.edu/engineering



Strong, Proven & Cost Effective

We have it all...

Labor

TRAINING & QUALITY OF LIFE

- Skilled training program
- Safety training
- Fair wage
- Healthcare
- Retirement
- Scholarships to various programs
- Support community with tax dollars

Buildings

SAFE & BEAUTIFUL

- Structurally Strong Materials
- Beautiful Designs
- Longevity
- Safe for occupants and first responders

Engineers & Architects

SERVICES & SUPPORT

- Free Services and Education
- Software assistance for design
- Structural Engineering Assistance
- Provide cost saving options



Both framing systems cost the same, which would you want your firm to be associated with?



Type IIIA/B and V construction -
limited heights... limited areas



Type I and II construction -
unlimited heights... unlimited areas

Masonry is NOT more expensive than wood frame construction... plus you get more sustainability, fire resistance and resilience from a masonry building. Find out how you can design a MASONRY structure efficiently and cut out unnecessary costs. And use TRAINED CRAFTWORKERS to reduce costly mistakes and minimizing risk to all project participants.

Contact EBA for additional information and assistance in your building needs amy@employingbricklayer.org

1375 Virginia Drive Suite 101 | Fort Washington, PA 19034
www.EmployingBricklayers.org



PROMOTING SAFETY, QUALITY, AND CRAFTSMANSHIP SINCE 1923

- Resource for Engineers & Architects
- Price vs Cost
- Safety
- Structural Integrity

- Creative Design
- Skilled Labor
- Flexibility with Size & Time of Projects

Call Today 610-834-8400

1375 Virginia Drive Suite 101 | Fort Washington, PA 19034
www.EmployingBricklayers.org