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The Southeast Branch News is published monthly by the Southeast Branch of the Wisconsin Section of ASCE. Change of street and/or e-mail address should be sent to ASCE, 1801 Alexander Bell Drive, Reston VA 20191 (800/548-ASCE). You may update your own information at the Members Only page of [WWW.ASCE.ORG](http://WWW.ASCE.ORG)

The deadline for articles for the next newsletter is the first of the month.

## PRESIDENT'S MESSAGE

Greetings,

It's election season! While the Wisconsin Section and ASCE are just wrapping up their elections, the Southeast Branch is just getting underway. Both the Wisconsin Section Southeast Branch and the Wisconsin Section Southeast Branch Younger Member Group will be holding elections throughout the month of June. We will be announcing the results of the elections in July and the new board members will assume their positions after the ASCE Wisconsin Section Annual Meeting in September.

With these candidates taking on leadership roles and helping to shape our organization, it is important to make sure that we're comfortable with the qualifications and dedication of those running for the various positions. Please take time to familiarize yourself with them by reading through their bios before casting your vote.

I am excited to be working with the new Branch and YMG board members and look forward to the new thoughts and ideas that they will bring to help us continue growing.

Sincerely,  
Jared Wendt, P.E.



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**June Luncheon Meeting**

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**ASCE - SOUTHEAST BRANCH  
JUNE LUNCHEON MEETING****Soldier Pile Project**

Chad Underwood (Engineering Partners International LLC) and Jason Pieton (Terra Engineering LTD) will present on a soldier pile wall construction project for CN Railroad in Duluth, MN. The project area had experienced a slope failure of approximately 185 ft. which required a soldier pile wall to be added to the project. The soldier pile wall is 208' with HP14x73 at 8' spacing and anchors up to 8 strand with an average length of about 90 ft. In addition to the slope failure, the contractor was met other challenges including differing site conditions with bedrock being about 25 feet deeper than what was shown on the plans. .

Jason Pieton is with Terra Engineering. He has 15 years of experience in heavy civil projects (locks, dams, bridges, waste water treatment plants, drilled shafts, soldier pile walls, etc.). He graduated from Ohio University in 1999 with a BS in Civil Engineering.

Chad Underwood, PE, PG, D.GE is a Principal with Engineering Partners International LLC in Minneapolis, Minnesota. Engineering Partners is a specialty consulting engineering firm practicing in the areas of earth retention, slope stabilization, foundation underpinning, and specialty deep foundation design. Mr. Underwood has a M.S. degree in Geotechnical Engineering from the University of Wisconsin – Madison. He is a registered P.E. in seven states and has 16 years of geotechnical design and project management experience with regional and national engineering firms. He is also a board certified geotechnical engineer by the Academy of Geo-Professionals.

Speaker:	Jason Pieton, Terra Engineering LTD Chad Underwood, Engineering Partners International LLC
Topic:	CN Railroad Soldier Piling Project
Date:	<b>Friday, June 5th, 2015</b>
Time:	11:45 a.m. – Social 12:00 noon – Lunch followed immediately by the presentation
Location:	Mama Mia's Brookfield, 18880 W. Bluemound Rd, Brookfield, WI - Right behind Kopp's
Meal:	Italian Buffet – including Lasagna, mostaccioli, pizza, salad, garlic bread, and drink.
Cost:	\$15 for Members, \$18 for Non Members, Free for ASCE Student members with advance registration

**To make reservations please go to:**

<http://events.r20.constantcontact.com/register/event?oeidk=a07eb2jujgk1e140c03&llr=cvve7pkab>

**by 3 pm, Wednesday, June 3, 2015.** Please note: No-shows **will be billed** for the cost of dinner.

\*\* PDH's are available

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**2015 Scholarship Golf Tournament**


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**Editor's note: Registration closes this Friday, June 5!**

## 2015 ASCE SE BRANCH SCHOLARSHIP GOLF TOURNAMENT

**FRIDAY, JUNE 12, 2015**

10:30AM SHOTGUN, IRONWOOD GOLF COURSE, SUSSEX, WI

VISIT [WWW.ASCEWISE.ORG](http://WWW.ASCEWISE.ORG) TO REGISTER



Sponsored by your Geopier® Technology team.



We are getting close to the registration deadline and we are filling quickly. Don't miss out, get your foursome together and sign up.

The highlights of our golf tournament include the following:

Bloody Mary/Screwdriver Bar at registration, goodie bag with the essentials to get you through the day, lunch, Jamie with FSW will be at his usual spot at the putting green serving up cool ones along with as many peanuts as you can take down, hors d'oeuvres and ball toss to the green at the Barn after golf, 50/50 raffle, dinner but not just any dinner, we have Spanferkel (that is a roasted suckled pig-cooked on-site), and raffle, raffle, raffle prizes and of course NETWORKING with industry leaders in civil, structural and transportation engineering, state and local municipalities, construction and development.

Our wristband prizes scheduled this year are huge:

**50" 4K LED Flat Screen TV**, GoPro Hero 3, Allen Edmonds Gift Card (\$299) and 20 Person Bunzels Meal and Cash. Only eligible if you purchase a wristband. Will also be available for purchase on the day of the event at registration.

Check out the list of companies that will be represented by those already signed up and committed to playing or are sponsors this year:

Title Sponsors: Ground Improvement Engineering and FSC

Sponsors: ASCE WI Section, Mead & Hunt, Inc., PSI, EMCS, Inc., Foundation Supportworks of WI, Lakeside Engineers, One Source Consulting, Cedar Corporation, R.A. Smith National, GAI Consultants, Inc., CORRE, Inc., GESTRA Engineering, Inc., Advanced Disposal Emerald Park Landfill, LLC, Tensar International Corporation, GRAEF, AECOM, Lynch & Associates - Engineering Consultants, LLC, Natural Resource Technology, Inc., SX Foundations, Inc., Hayward Baker, Berghammer Construction Corporation, HGA Architects and Engineers, Terra Engineering & Construction Corporation, Rams Contracting, Ayres Associates, American Transmission Company, CGC Inc., US Bank, Dretzka Park Golf Course, Marquette University, UWM, MSOE, Boldt Construction, HNTB, Terracon Consultants, Inc., JSD Professional Services, CH2M HILL

Golfers from: The Opus Group, CG Schmidt, Zenith Tech, TADI, MSA Professional Services, City of Milwaukee-The Wisconsin DOT, Golder Associates, Bloom Companies and ESI Group, Collins Engineers

Don't miss this opportunity to give back to the civil engineering community.

**April Meeting Recap**

Article By: Mike Arnold

A joint lunch meeting between ASCE and STEM Forward was held on April 22 at the GRAEF office. The audience of 31 enjoyed an informal but detailed presentation about the Transform Milwaukee Initiative, a comprehensive, public-private initiative that seeks to leverage Milwaukee’s workforce, industrial strengths and transportation assets to expand community investments, increase business development, boost job creation and strengthen neighborhoods. The presentation focused on the Strategic Action Plan, based on a) the predefined 5 Key Strategies for the initiative, b) community and business desires, c) recommendations from 60+ past plans, and d) expert knowledge of Milwaukee and the southeastern Wisconsin region. The finalized Plan will become available for public viewing in the near future.

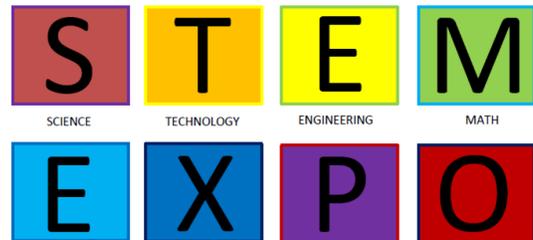
Thank you to STEM Forward for facilitating the meeting and GRAEF for hosting.

**STEM Expo**

**Editor’ note: The two flyers mentioned below are on pages 9 & 10 of the newsletter.**

Article By: Tony Castle

Planning for the STEM Expo is underway, with an enthusiastic committee made up of young STEM professionals from the area. The Expo is only 5 short months away, so start getting the word out and plan to spend Saturday October 10 at the Kern Center exploring the fascinating aspects of Science, Technology, Engineering and Math.



The next planning meeting is scheduled for June 24 at 5:30 PM. Please contact Bridget Henk ([Bridget.Henk@graef-usa.com](mailto:Bridget.Henk@graef-usa.com)) or Tony Castle ([acastle@emcsinc.com](mailto:acastle@emcsinc.com)) with any questions about the event.

- Click here to view the [STEM Expo Promotional Flyer](#)
- Click here to view the [STEM Expo Save the Date flyer](#)
- Click here to view the [STEM Expo Website](#)

**YMG Activities**

Articles By: Tony Castle and Josh Mitchell

Silver Spring Neighborhood Center STEM Program

On May 14, Kyle Bareither, Lindsay Kaufman, and Tony Castle visited the Silver Spring Neighborhood Center to demonstrate to local children how density works and why certain objects sink and float in water. The children watched a few demonstrations before testing some of the principles themselves with some hands on activities. Thank you to the volunteers for taking time out of their day to help the children discover the world of STEM.

Future visits to the Silver Spring Neighborhood Center are planned for this summer and fall. Please contact Tony Castle at [acastle@emcsinc.com](mailto:acastle@emcsinc.com) if you are interested in participating.



Brewers Tailgate

YMG hosted the 15<sup>th</sup> annual ASCE SE YMG Brewers game on Friday May 8<sup>th</sup>, it was well attend by many YMGers and students from UW-Milwaukee, UW-Madison, Marquette, and MSOE. The food and beverages were provided by Bunzel's catering, and everyone had plenty to eat along with some close Bean bag games. Unfortunately the Brewers could pull out a win but a great time was had by all. We would like to thank everyone who attended and hope to see everyone next year!



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**YMG Activities (cont'd.)**

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**Wiffle Ball**

YMG has team in the Hart Park Wiffleball League on Monday nights. Come check it out and crank a few home runs. There is a weekly email with the game times sent out each week or just email Josh Mitchell at [jmitchell@patrickco.com](mailto:jmitchell@patrickco.com) for more information.

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**Continuing Education Opportunities**

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**Aging Infrastructure, Risks, and Making Tough Decisions**

Since the construction of modern structures, civil engineers have been assisting infrastructure owners with planning, designing, constructing and inspection of their assets using the methodologies that have been developed empirically. Most of these heuristic approaches are based on simplified assumptions. As the infrastructure, especially the bridge inventory, continues to age and becomes a more complicated system its behavior changes. In these cases the traditional methodologies provide a significant challenge to bridge engineers, especially during inspection, load rating and overall safety assessment of “geriatric” bridges. Even though, in some cases the current conventional approaches have met the needs of the owners, there are an increasing number of situations where they have been proved insufficient. In recent years, engineers and bridge owners have started to hire smart technologies and sensing techniques in planning, evaluation, and monitoring of their assets which are mostly geriatric signature bridges that cannot be replaced or their replacement requires a few years during which the bridge has to remain in safe service.

Register at: <http://mylearning.asce.org/diweb/catalog/item/id/71846>

**Failure of Molecules, Bones, and the Earth Itself: Nanotechnology and Bioinspired Materials in Civil Engineering**

Major challenges of our time include issues such as disease, energy, and mobility, which are deeply rooted in our understanding of how materials are designed, and how they fail to provide required functions at all length scales (from the nanoscale to the macroscale). Nanotechnology provides a powerful path to analyze, understand, and utilize materials in unimaginable ways. It can be used to develop novel solutions for sustainable and durable “green” materials, new insight into disease mechanisms and treatments, and the utilization of low-energy materials for high-volume applications. This webinar will provide an introduction to nanotechnology and outline its application to analyze, understand, and utilize materials more efficiently.

Register at: <http://mylearning.asce.org/diweb/catalog/item/id/78409>

**Newsletter Publication**

We welcome your articles, letters & news items for publication in the ASCE SE Branch Newsletter.

Advertisements and job postings are also accepted by contacting:

**Brian Genduso, P.E. – 414.278.9200 – [bjg@spireengineer.com](mailto:bjg@spireengineer.com)**

Deadline for next issue is the first of the month.

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## Letter to a Young Engineer

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Editor's note: This article was included in a recent edition of the ASCE Roundup. It can be found online at <http://blogs.asce.org/letter-to-a-young-engineer>

*This letter, from a father to a son, was written by professional engineer Bob Breeze upon his son's graduation as a mechanical engineer. The letter was published in a collection entitled, Letters to Young Engineers, published by the University of Ontario Institute of Technology and edited by Daniel Hoornweg, UOIT associate professor and Jeffrey Boyce Research chair. Inspired in part by Ranier Maria Rilke's Letters to a Young Poet, the book was presented to recent engineering graduates at the university to inspire and encourage their continued development as professional engineers.*

### **Congratulations on your graduation!**

You have good reason to be proud of your accomplishments.

Now take time to reflect: Take time to think about your personal and professional goals. Reflect as well on what it means to be an engineer in this ever-changing world and, more importantly, what it means to be a fully contributing member of society. How will you take your place in your community, this country, and the world? There are tough personal and career decisions ahead that will challenge the very idea of who you are.

Engineering teaches that you can think your way through any problem when it is broken down into manageable parts. But today's broader societal problems can't be broken down in the same manner. Our problems are intractable. They are multidimensional. Sound decisions require us to consider the ethical, social, cultural, environmental, and economic sides of any issue. They didn't teach us that in engineering school.

I can't help you make the tough decisions ahead. Frankly, I'm not sure what tomorrow or these decisions will look like. But here are some things that you can do to prepare yourself for the future.

### **Read Broadly**

Engineering students don't receive a broad education. The curriculum focuses on the narrow confines of our profession. Many argue that it must focus given the amount of material engineering students have to master. I won't argue either point, but you need to catch up and develop a broader understanding of the world around you.

Read literature, history, economics, philosophy, biographies, and poetry. Build an appreciation of the arts. Go to the symphony as well as the jazz festival. Listen to TED lectures and download podcasts for those long flights or commutes to work and back.

There are many points of view, and many solutions to any problem. The key to taking a broader role in your community is to understand these points of view, develop sound judgment, and use it to guide you in the future.

### **Follow Current Affairs**

We aren't just taxpayers. We are citizens first. To be good citizens, we must follow what is happening around us and seek to understand root causes. Take an interest in what's happening in your community, nation, and world affairs.

What was the "Arab Spring" all about? How are its effects shaping our world? What should we do about it? Can we do anything about it?

And at home, what caused the Lac-Mégantic disaster and the Walkerton drinking water tragedy? Were these caused by lazy or drunk workers? Or by greedy companies? Or by the current focus of our society on profits? It's up to you to decide and to use this understanding to guide your professional and personal decision-making.

### **Get Involved Politically**

Politics isn't a dirty word! Politics is how societies consider issues and make decisions. Being a politician is a noble profession. Yes, too many politicians have been found lining their own pockets at our expense. And political parties have become far too introspective. They cater to the needs of

the party base and not the good of the province and country. You can help change that! Politics must focus on the broader public good and not just the good of the few.

It doesn't matter what political party you choose to support. Just make sure that the vision and, more importantly, the actions of your chosen political party align with your personal views.

**Volunteer**

Mahatma Gandhi said, "The best way to find yourself is to lose yourself in the service of others." Remember the two years your mother and I spent in the African bush teaching science and languages? It was a tough assignment, but in the end we gained far more than our students. It taught us self-reliance and judgment, and it gave us an appreciation [of] how difficult life is in many developing countries. It was a personal growth experience and ... we found ourselves!

Your mother and I have done well personally, financially, and in our careers. You could argue that it was because of hard work and good judgment. Yes, but there was a lot of luck involved too. We were born and grew up at the right time and place. Reach out to those who are less fortunate and in need of help. Volunteer in your community. Give back!

**Be Ready for Opportunities**

You need to have career and personal goals and sound plans to achieve them. After your time of reflection, you need to decide what you want to do with your life and your career. But you still need to maintain a good measure of flexibility and be ready to seize opportunities that present themselves.

This will often mean a move out of your comfort zone. But that's a good thing. The psychological high after you've accepted a challenge and achieved what you set out to do is amazing!

Just don't be complacent. Keep moving forward. Challenge yourself.

**Learn to Communicate Effectively**

Engineers are poor communicators! We think once we have worked through the calculations, the solution should be obvious to everyone. But it is not obvious to everyone.

The best ideas are often lost because they weren't well communicated or the timing was wrong. Senior decision-makers have limited time and are being pressed from all sides. Make it easy for them to see the benefits from their perspective.

Join Toastmasters, or take a course in public speaking and making presentations. And before the big day, practice, practice, and practice!

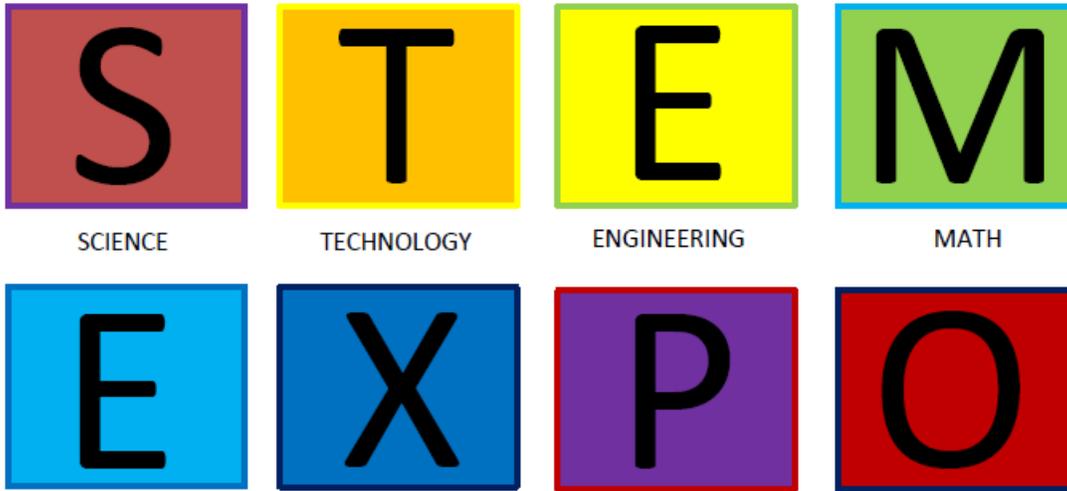
**Speak Truth to Power**

Let's stop building subways to city wards when there is no business case. Spending hundreds of millions of dollars to extend a subway to solidify votes for the next election is dishonest! Let's push for evidence-based decision-making.

It's easy to follow the path of least resistance, and we all need to do that at times. You can't keep hitting your head against the wall. But when the issue at stake is fundamentally important, stand up and speak truth to power. Engineers need to let their voices be heard on issues of public importance.

In conclusion, engineers can continue to be small, bit players in community, provincial, and national decision-making by providing technical solutions to narrowly defined problems. Or they can get involved in helping define the problem, thinking through the broader social, cultural, environmental, and ethical implications, considering the broader options, and communicating to the broader society. They can make sure that engineering thinking is part of problem definition, analysis, and solution.

I have a tee-off time this afternoon. Here's the torch! Let me know how it goes.



**October 10, 2015, 10:30 AM TO 3PM**

**Milwaukee School of Engineering - Kern Center**

1245 North Broadway Avenue, Milwaukee

Discover the world of Science, Technology, Engineering, and Math at the at STEM Expo! Activities are geared for ages 6-18 and include college representatives and volunteers from area college programs as well as STEM professionals. Bring your questions and be prepared to get a little messy!

Exploration Stations include: Toy Chemistry, Traffic Trivia, Lego Tower Building and much, much more. Check our website for an updated list of events.

<http://www.ascewise.org/stem-expo/>

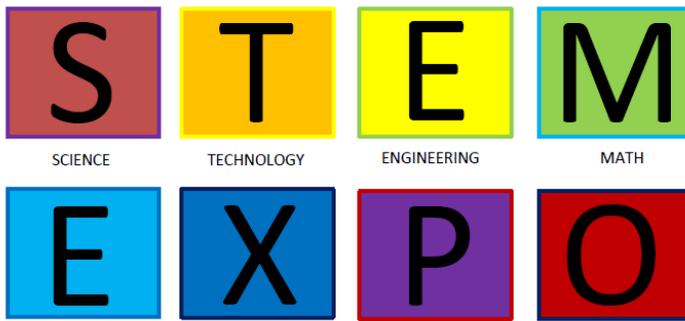


- The first 100 kids to attend will receive a goodie bag of prizes from the sponsors
- Food Trucks will be on site during lunch
- There will also be free raffle prizes throughout the day!

If you are a company looking to get involved in the Exploration Stations, please contact Bridget Henk (Bridget.Henk@graef-usa.com) or Tony Castle (ACastle@emcsinc.com) for more information. ASCE is a tax exempt 501(c)3 Non-profit organization.

Sponsored By





**October 10, 2015, 10:30 AM TO 3PM**  
**Milwaukee School of Engineering -**  
**Kern Center**  
1245 North Broadway Avenue,  
Milwaukee

Back by popular demand is the STEM Expo hosted by the American Society of Civil Engineers (ASCE) Wisconsin Section Southeast Branch Younger Members Group (YMG). STEM Expo will be held October 10, 2015 at the Milwaukee School of Engineering (MSOE).

Similar to the past STEM Expo's, the 2015 STEM Expo will have different companies and organizations from Milwaukee and surrounding areas as sponsors for exploration stations. These stations will have an activity or demonstration of various Science, Technology, Engineering, and Math (STEM) related themes. This event is designed to promote STEM fields to the next generation in a fun and thought provoking way. A time lapse video and pictures from the previous STEM Expo can be viewed at [www.ascewise.org/stem-expo](http://www.ascewise.org/stem-expo).

We are asking for companies and organizations that have STEM backgrounds to attend and sponsor the event. Sponsorship provides support for exploration station activities specific to STEM field and allows the event to be free to the public. Sponsors will be recognized at STEM Expo and on the STEM Expo website.

Sponsorships are set up in tiers, as listed below:

- Platinum Sponsorship - \$2,000
- Gold Sponsorship - \$1,500
- Silver Sponsorship - \$1,000
- Bronze Sponsorship - \$500
- Exploration Station - \$250
- Friends of STEM Sponsorship – anything less than \$250

To sponsor the event, click on the link below or contact Ken Mika (kmika@naturalrt.com).

<http://events.constantcontact.com/register/event?llr=8wbor5kab&oeidk=a07eaq4c2glf1e632f1>

Please contact Bridget Henk (Bridget.Henk@graef-usa.com) or Tony Castle (ACastle@emcsinc.com) for more information. ASCE is a tax exempt 501(c)3 Non-profit organization.

This is a paid advertisement, and is not affiliated with ASCE.



If you are looking for a company where you can work with a great team of co-workers, where collaboration, improvement and innovation are valued, look no further than American Transmission Co.

We are currently looking for a Civil Designer to complete moderate to complex drawing packages from sketches for our transmission lines and substations using Microstation. The designer also assists the design engineering team with engineering calculations, reviewing and storing records and preparing construction documents. Our designers possess an associates' degree in either Civil Engineering Technology, Mechanical Engineering Technology or Computer Aided Design. Experience with PLS-CADD is a plus. We will also consider candidates with equivalent experience with AutoCAD or Microstation.

This is a great opportunity to get your foot in the door at a growing company, which was recently recognized by Fortune Magazine as a "Great Place to Work" and the Milwaukee Journal Sentinel as a "Top Workplace".

If you are interested in this opportunity or have questions, please contact Lisa Krueger at [lkrueger@atcllc.com](mailto:lkrueger@atcllc.com) or 262-832-8743. Also, please feel free to pass this opportunity on to anyone who you feel may be interested.



**This is a paid advertisement, and is not affiliated with ASCE.**

## **Civil or Structural Engineer Position Available**

March 27, 2015

Building Envelope Consultants, Ltd, a forensic engineering firm providing services throughout the U.S., is seeking full time Civil or Structural Engineer in the following locations: Waukesha, WI

We are seeking an engineer with hands on failure analysis experience. Must have ability to analyze various residential and commercial building failures to determine causation, and must have the ability to write professional, concise reports. Professional appearance is necessary and P.E. is required.

This full time position involves inspections of various buildings to determine the cause of damages, including damages from improper design, improper construction, storm related damages, misuse, lack of maintenance, and intentional damages. Most travel will be same day with an occasional overnight. Experience with any of the following is preferred: forensic engineering, residential construction, commercial construction, code enforcement, code inspection, roofing experience, facilities maintenance, materials testing, home inspections, expert witness testimony, residential design, storm damage assessments, etc.

Excellent salaries and competitive benefits program including company paid full Medical, STD, LTD, Life and AD&D insurance. Company paid 401K retirement program. PE Licenses, Associated Memberships and PDH credits covered by the company.

Interested parties should email resumes with cover letter to [sales@building-envelope.net](mailto:sales@building-envelope.net).