Volunteering: Lessons Learned

FES Makes a Difference with ACE Mentoring

Florida Offices Share in Worldwide Volunteerism

Social Media Campaign Raises Awareness and Millions

Brownfields Program Helps Build Strong Communities

University Students Use 3-D Printing to Build Robotic Arm for 6-Year-Old

Chen Moore’s Community Service Committee Tasked with Giving and Caring

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Terrence J. “Terry” Hull, PE
Principal Engineer, INTERA Incorporated

Our November Journal provides motivating examples of volunteer efforts by both FES members and staff. While I believe that giving back to society certainly serves an altruistic and “right thing to do” purpose, I also believe community service gives back to us, the volunteers, in many ways. Some benefits include opportunities for personal development, enhancing the image of the engineer, encouraging students to enter the engineering profession, etc.

For me, one community service opportunity (outside of FES activities) has been ACE Mentoring. I’ll avoid spoiling the details provided in the enclosed article (page 14), but ACE Mentoring has opened my eyes to our opportunities to make a difference in our society, especially in engineering education. I am not actively involved in the mentoring process; I only serve on the Northeast Florida Affiliate board and the National Affiliate Council (advising both our national board and affiliates). However, I have been exposed to the rewards of our mentors’ efforts—which truly make the difference at the local and national levels. ACE Mentoring’s national website (http://www.acementor.org) provides many testimonials, but I’ll never forget our first year in Northeast Florida. One of our scholarship recipients broke down in tears and commented that she had never been recognized for her efforts. I’ve never seen a scholarship recipient, typically near the top of their class, react with such emotion. Engineers certainly had an effect on her life and career. I understand the students also have a positive effect on the mentors who truly enjoy the rewarding program.

With examples illustrated in this issue, our members serve many other volunteer efforts outside our traditional FES activities. Our FELI classes offer many other examples. I am truly proud to be a member of this great organization and a part (albeit small) of our community service efforts.

FDOT Wins 2014 QBS Award

The Florida Department of Transportation (FDOT) won the 2014 qualifications-based selection (QBS) award for consistently going beyond statutory requirements to follow the QBS process. Project managers are given specialized training in the consultant evaluation procedure; FDOT Secretary Ananth Prasad, PE strongly supports the QBS method; and Florida has been recognized by other state DOTs as a model to follow.

QBS Merit Awards were also given to the Connecticut Department of Transportation and the Conservation Resource Alliance in Michigan. The awards, sponsored jointly by ACEC and NSPE, recognizes individuals and entities in the public and private sectors for exemplary use of the QBS procurement process.

Shown left to right: FICE Transportation Chair Adrian B. Share, PE, FICE Past President Robert J. Behar, PE, FDOT Secretary Ananth K. Prasad, PE, FDOT Procurement Office Manager Carla M. Perry, PE, and FICE Executive Director Allen Douglas.
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About the Champion:

Giving through volunteering makes everyone’s lives better. I hope reading these stories of giving hope to the helpless, the power of social media, and creative and deliberate ways to utilize your skills and talents, will inspire you to give back to your communities. As Engineer Diaz of Stantec encourages and leads his staff, “I hope you get out into your local communities and roll up your sleeves.”

Debbie Hall is the Director of Communications for the Florida Engineering Society. An active volunteer throughout her life, her professional memberships are with the Society for Marketing Professional Services, Florida Society of Association Executives and the Tallahassee Society of Association Executives. Much of her free time is spent volunteering with the local tennis community. Since 2006, her leadership with the Tallahassee Tennis Association, serving on its Board of Directors, and capturing 21 teams for the United States Tennis Association has provided her with opportunities that have developed life skills and friendships. She received her bachelor’s of fine arts from the University of Michigan, Ann Arbor.

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The viral phenomenon known as the “Ice Bucket Challenge” has not only raised awareness, but also money for the Amyotrophic lateral sclerosis (ALS) Association.

Managing Principals Craig Finley Jr., PE and Jerry Pfunter, PE (shown center) with ten other staff members at Finley Engineering Group Inc. (FINLEY) just doused themselves in cold water for a cause—in this case, to increase awareness and raise money for medical research into ALS, an incurable condition also known as Lou Gehrig’s disease.

They join thousands of other people all over the world who responded to the ALS Ice Bucket Challenge, a social media campaign which asks participants within 24 hours of being challenged to record a video of themselves in continuous footage. First, they are to announce their acceptance of the challenge, followed by pouring ice into a bucket of water. Then, the bucket is to be lifted and poured over the participant’s head. Then the participant can nominate a minimum of three other people to participate in the challenge. Whether people choose to donate, perform the challenge, or do both varies. Some FINLEY staff had already completed their challenge, and they not only named their colleagues, but also participated in the challenge. FINLEY challenged 18 people and also offered to match staff contributions up to $100 each. FINLEY and staff contributed $450 for this cause.

The origins of the idea of dumping cold water on one’s head to raise money for charity are unclear and have been attributed to multiple sources. The most commonly accepted origin credits Pete Frates, a Bostonian who was diagnosed with ALS in March 2012. ALS is a progressive neurodegenerative disease that affects nerve cells in the brain and the spinal cord. Motor neurons reach from the brain to the spinal cord, and from the spinal cord to the muscles throughout the body. The progressive degeneration of the motor neurons in ALS eventually leads to their death. When the motor neurons die, the ability of the brain to initiate and control muscle movement is lost. With voluntary muscle action progressively affected, patients in the later stages of the disease may become totally paralyzed. The Ice Bucket Challenge underscores that when a social media event goes viral, it can take an “orphan” disease to worldwide recognition, raising awareness and research dollars.

To enjoy and get inspired, watch FINLEY’s challenge at https://www.youtube.com/watch?v=opRn639cQ7Q.
2015 PE Legislative Days
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February 3-4, 2015

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Legislative Days Schedule of Events

**Tuesday, February 3, 2015**
10 am – 2 pm  
FES Board of Directors Meeting*  
Four Points by Sheraton Tallahassee Downtown  
316 W Tennessee St

2:30 pm – 4:30 pm  
Legislative Workshop  
City Hall – Commission Chambers  
300 S Adams St

5 pm – 6:30 pm  
Legislative Reception  
22nd Floor Capitol Building  
300 S Monroe St

7 pm – 11 pm  
FES Big Bend Chapter Legislative Reception  
Harry’s Seafood Bar & Grille  
301 S Bronough St

**Wednesday, February 4, 2015**
8:15 am – 8:30 am  
Grouping of Appointment Partners  
City Hall – Commission Chambers  
300 S Adams St

8 am-11:30 am  
FICE BOD Meeting*  
Four Points by Sheraton  
Tallahassee Downtown  
316 W Tennessee St

8:45 am – Noon  
Meet with Legislators – Capitol Buildings

**Registration Desk Check In:**
Tuesday, February 3  
1:30 pm – 4:30 pm  
City Hall – Commission Chambers

Wednesday, February 4  
8 am – 8:30 am  
City Hall – Commission Chambers

Questions? Contact Samantha Hobbs at 850-224-7121 or shobbs@fleng.org.

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Rooms go quickly. Make your reservation today. Use group code: Florida Engineering Society.
Volunteering is an altruistic activity intended to promote goodness or improve human quality of life. Most of us know how important volunteerism is for the success of the Florida Engineering Society (FES). Its future is dependent on volunteers. Volunteers, in exchange, benefit from their service experience with personal and professional growth.

My experience managing my schedule and commitments outside my job and its professional associations has taught me to appreciate the time and energy you, the professional engineers, volunteer for your profession and community. I have tried to emulate those shining stars who perform 97% of the work for FES. Here are some tips to enhance volunteering I have learned from you and others over the years.

**Passion and Accountability.** Spend your time doing something that you enjoy and is important to you. As with a strategic business plan in our jobs, we should be just as strategic with our own growth. Once you figure out what makes you happy, commit to a plan and be accountable. Create goals and commit to specific actions that will move these goals forward. Also, tell someone your plans; this engages you in the power of social expectations. If you start to play tennis and you don’t practice, take lessons, play with different opponents and change your diet, are you going to be successful? Not likely. If you want results, you have to put in the time and the effort. The more you “play” (participate in committees, help plan events, contribute articles to the *Journal FES*), the more results you’ll have to show for yourself, and the more beneficial relationships you’ll develop with your peers.

**No excuses.** My daughter is a professional road cyclist. When she would come home for visits, she’d watch me play competitive tennis matches. After each match, she would ask me how it went. I usually would go on and on about what was not working, the strengths of my opponents; that I was tired, hungry, the sun was shining in my eyes, the noise from the nearby baseball field was distracting. After the fourth time, she simply said, “Mom. No excuses, give me results.” Many times when I am on the court, being 5’ nothing and facing a 5’ 11” woman or even worse, a 6’ 4” man, I would repeat her mantra, “no excuses, need results.” It works; and since then I have competed in championship leagues at the state level 23 times. When you volunteer, be proactive and committed. Don’t complain and enjoy the challenges.

**Winners don’t just happen.** I often think about why we make the choices we do, what motivates us to excel, and how to make lasting changes that impact our lives. I’ve been inspired by my boyfriend and “life coach,” John Costigan. He is deputy general counsel for the Florida Department of
Agriculture and Consumer Services. He supervises many attorneys for one of the state’s largest agencies. He is also an athlete who was a high school superstar in baseball and football, and played college baseball. John’s leadership and athletic skills have made me more aware of myself and how I needed to feel and think on the court. My ability has improved. This led to more wins and better confidence and self-image. I believe this is also true when you volunteer for FES. A good volunteer is one who knows the mission and vision of the association, can work with people and stimulate ideas. They are someone who can help their group use all the talents, abilities and experiences its members possess as they work together. It appears easy; but, the reality is that it takes preparation, practice and diplomacy.

**Demonstrate appreciation and recognition.** When we feel valued, we are motivated to give the best of ourselves. Two benefits that result from this are a positive emotional climate and increased productivity. Moreover, at the end of the day when someone genuinely appreciates your talents, time and efforts and says “thank you,” this strengthens your feeling of self-worth and respect.

Volunteering makes everyone’s lives better and builds on the strength of our community. It also is a great opportunity for you to grow as a person, meet people you normally would not encounter in a work situation, and experience something new.

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**About the Author:**

Debbie Hall is the Director of Communications for the Florida Engineering Society. An active volunteer throughout her career, she is a member of the Society for Marketing Professional Services, Florida Society of Association Executives and the Tallahassee Society of Association Executives. Much of her free time is spent volunteering with the local tennis community. Since 2006, her leadership with Tallahassee Tennis Association, serving on its Board of Directors, and capturing 21 teams for the United States Tennis Association, has provided her with opportunities that have developed life skills and friendships. She received her bachelor’s of fine arts from the University of Michigan, Ann Arbor.
Florida Offices Share in Worldwide Volunteerism

On September 15, a large number of Stantec employees in Florida headed out within their local communities to help out during a day of worldwide volunteerism around the world by the North American design firm.

The Florida team was among some 5,500 employees participating in Stantec in the Community Day. The events were part of celebrations for Stantec’s 60th anniversary, and their message to their local communities was to reinforce the firm’s promise to design with community in mind.

Examples of Stantec in the Community Day events around Florida include:

• Tampa’s group of 40 volunteers cleaned 1.1 miles along Tampa’s scenic Riverwalk, gathering 17 bags of trash and planting seven plant trays at USF Park.

• Coral Gables staff cleaned up Crandon Park Beach in Miami.

• The Boca Raton and West Palm Beach offices worked with Keeping Our Beaches Clean to clean two miles of beachfront, resulting in eight bags of trash.

• Bonifay staff began collecting school supplies in August and donated them to the Holmes County School District for needy students.

• The Fort Myers crew sorted 1,500 pounds of potatoes to help feed the homeless and hungry at Harry Chapin Food Bank.

• Our nearby neighbors in San Juan, Puerto Rico cleaned two square miles of beachfront, collecting 12 bags of trash.

“This day of volunteering will not only further support Stantec’s commitment to community, it will bring our team members together to make a coordinated, local impact,” says Stantec Vice President Fermin A. Diaz, PE. “Our employees have been serving their communities for decades, but bringing them together on one day like this just emphasizes what a difference we can make.”

“Our promise at Stantec is to design with community in mind,” says Diaz. “What better way to underscore that promise than to get out into our local communities and roll up our sleeves? We’re inspired by the communities in which we live and the impact our work has on them.”

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The thing Alex Pring hated most about kindergarten wasn't learning to cut, paste or count. It was answering the same question everyone asks when they meet the 6-year-old.

“What happened to your arm?”

Alex is missing his right arm from just above his elbow, and it’s the one thing he doesn’t like talking about.

“I mean, I’m me. So I don’t have an arm,” he said. “I still try real hard to do things like other kids using what I’ve got. But it’s getting harder the more I grow.”

Thanks to University of Central Florida engineering doctoral student Albert Manero, climbing a tree and catching a ball will get a lot easier for Alex. Manero heard about the Groveland boy’s need and pulled together a team of his friends.

In their free time they designed an arm for Alex. It was made on a 3-D printer and runs with off-the-shelf servos and batteries that are activated by the electromyographic muscle energy on Alex’s bicep. Unlike adults with missing arms, children’s arms are difficult to make, because of the need to miniaturize components. And most insurance companies won’t pay for them because the prosthetics need to be replaced often as the child grows.

Manero, who holds bachelor’s and master’s degrees from UCF in aerospace engineering, and his team designed and manufactured the arm for less than $350. Stratasys, one of the biggest commercial 3-D printer makers in the nation, donated some of the supplies. The team delivered the arm to Alex today.

“My mother taught us that we’re supposed to help change the world,” said Manero, who is from the Tampa area. “We’re supposed to help make it better. That’s why we did it. The look on Alex’s face when he used it for the first time was priceless.”

The team will upload the new designs and how to build the child-size arm and hand to the Internet so anyone with access to a 3-D printer can download the blueprints and give another child with a missing arm a chance to hug with both arms.

“When he hugged me with two hands, he just didn’t let go,” said Alyson Pring, Alex’s mother. “It was amazing. I think this arm will reinforce our ‘you can do anything you set your mind to’ attitude. I think it will help his confidence, so he can see future possibilities and make them seem all the more reachable for him.”

Alex was born with part of his arm missing. The Centers for Disease Control and Prevention estimates about 1,500 babies in the United States are born with deformed or missing arms or hands each year.

Manero, who is pursuing his Ph.D. in mechanical engineering, said he believes the team’s design could help many of these children.

Alyson Pring found Manero through the volunteer online network e-NABLE (http://enablingthefuture.org/about/). The international group of volunteer engineers, 3-D enthusiasts, occupational therapists, students, inventors and professors was started by Rochester Institute of Technology scientist Jon Schull. One of their goals is to help children without hands. Manero joined the group, in part, because he had a friend growing up who had missing fingers, and he hoped he could contribute somehow to helping others.

The organization has six hand designs available to the public online that can be printed on a 3-D printer. It didn’t have any designs for arms without a
functioning elbow, however, because the hand’s motion is linked to the elbow bend.

That’s where Mateo Alvarez, a UCF aerospace engineering undergraduate, came up with a key idea. Why not use the energy generated by the muscle movement in the boy’s upper arm to trigger the pull necessary in the arm chamber to open and close the hand?

Manero and the rest of the team—including friends who are majoring in electrical, mechanical and civil engineering, among other fields—spent seven weeks trying out different ideas. In early July, they had a large working prototype. The next challenge was making it small enough and light enough that a 6-year-old could move it easily.

Manero invited Alex and his family to visit the engineering college’s machine shop, where Tim Lindner, the acting manager of the shop, helped the students print the pieces needed to assemble the arm. When the team needed to take final measurements and test its prototype, Alex came back for a second fitting, and he learned how to use his muscles to open and close the hand and move the arm.

“He learned pretty fast,” Manero said. “The first thing he did when he could actually control it a little bit was hug his mother. He said it was their first real hug. There wasn’t a dry eye in the room.”

There’s nothing like a firm deadline to motivate a team to finish quickly. Manero, a Fulbright Scholar, left for Germany on August 1 to work for the German Aerospace Center. His yearlong research there will be part of his doctoral studies. But he isn’t abandoning Alex or others like him.

“We’ve already heard from another family who needs an arm,” Manero said. “We’re committed to helping anyone we can and I’ll be working with my team, even when in Germany.

“I think 3-D printing is revolutionizing our world in many ways. I believe changing the world of prosthetics is very real. There’s no reason why this approach shouldn’t work on adults too.”

Manero also has established the Limbitless Endowed Scholarship at UCF to support future students with disabilities like Alex’s.

In addition to Manero, the following team members helped to build the arm: Tyler Petresky, lead electronics developer; John Sparkman, electronics developer; Mateo Alvarez, human integration lead; Tim Lindner, senior engineer technician/acting manager; Kevin Tiller, lead consultant; Joseph Massimo, structural lead; Katie Manero, photographer; Tyler Pierce and Nathan Puhn, videographers; Chie Sparkman, seamstress and tailor; Jon Rowe, consultant and sponsor; Stephen Sofronsky, CAD specialists, developer; Dominique Courbin, machining specialist and 3-D printing; and Todd Harston, CAD developer.
FES Makes a Difference with ACE Mentoring

Founded in New York in 1995, ACE began serving Florida students around 2006 and now has affiliates in Jacksonville, Orlando, Lakeland, Tampa, Sarasota, Ft. Myers, West Palm Beach, Ft. Lauderdale and Miami. Today the program serves nearly 300 students in Florida and 8,000 students nationally. Since its inception, ACE has provided a positive influence on over 50,000 students.

The multifaceted program includes college advice, field trips, and hands-on projects. The program also includes a student project and project presentations. With oversight from mentors, teams of students design a hypothetical project in response to a Request for Proposal and present the project to a “Selection Committee” of industry professionals at a year-end event. At this year’s events, ACE awarded over $38,000 in scholarships to deserving seniors choosing to pursue careers in the industry. To date, Florida ACE Affiliates have awarded $156,000 in scholarships. Nationally, ACE has contributed over $14,000,000 in scholarships.

Recent national quantitative research proves that ACE works.
- Participants graduate high school at a higher rate than non-ACE participants.
- 40% of ACE alumni enter an engineering field.
- ACE increases diversity in university architecture, construction and engineering enrollment.

ACE student Destiny Childress wrote, “The many experiences I have had this past year from being a part of the ACE Mentoring Program have all been amazing. I grew both as a student and a person, learning about myself and the career field I plan on joining. The small but very competitive competitions we held in the beginning...”

By Jack Tipton, ACE Mentor Program of America
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gave us the teamwork, time-management, and communication skills that were necessary to complete the project. The project was so much fun. I enjoyed designing it with my team from the ground up. I learned everything that goes into a building, from the structure to the budget. Every mentor was so helpful and willing to give their time and effort to help us all grow. There are two main things that I will always be thankful for. While in this program I created friendships that will last forever, and I learned that I want to be a civil engineer, something that I was questioning before, but now I know that is what I love. I couldn’t have had such an amazing time if it hadn’t been for my team and mentors, and I can’t wait to be a part of the program next year!”

Financial and mentoring support streams from local architecture, construction, and engineering firms, as well as professional societies and construction industry organizations. Many FES members contribute as mentors, and FES’ Northeast Florida Chapter, for example, has contributed $4,500 in scholarship donations.

Responding to the Presidential Award, Charles H. Thornton, PhD, PE, Chairman and Founder of ACE, said “All ACE mentors share in this moment, as they are the lifeblood of our organization,” Dr. Thornton added, “It is because of their dedication, time, and effort, that we are able to reach and inspire wonderful young men and women.”

Becoming a mentor is rewarding and easy. After background screening, you attend a few organizational meetings to plan student activities and learn about mentoring tools and practices provided by ACE. Then, simply share your enthusiasm for your profession with the students who look forward to meeting with you and truly value your input. Mentoring sessions are generally held once a week at a school or participated firm for two hours, beginning 10 minutes after the school day ends. To learn more about ACE Mentoring, including inspirational testimonials, or to get involved with this rewarding program, visit www.acementor.org or contact the author. The ACE Mentor Program is a 501(c)(3) organization.

About the Author:

Jack Tipton is the Director of the Southeast Regional Programs for ACE Mentor Program of America. He received his bachelor’s in building construction technology from East Tennessee State University. During his 38 year career, he worked on, but not limited to, hospitals, chemical plants and condominiums. He joined the national staff of the ACE Mentor Program as a consultant in 2010. Prior to joining the team, he served for seven years as a mentor, team leader, board member, national affiliate council member and president of the Nashville Affiliate. Jack’s territory spans Arkansas to Southern Virginia, Kentucky to Miami, and most recently Puerto Rico.

ACE founder Dr. Charles Thornton accepts the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring.

ACE students gain an understanding of construction on a field trip.

FES member Denise Ramsey, PE, presents a scholarship check to an ACE student.

FES member Denise Ramsey, PE, presents a scholarship check to an ACE student.
Brownfields Program Helps Build Strong Communities

Since 1997, Florida’s Brownfields Redevelopment Program has helped communities, local governments and private stakeholders work together to assess and redevelop former commercial or industrial properties possibly affected by pollution. The voluntary program, administered by the Florida Department of Environmental Protection (FDEP), has two primary goals: contaminated site cleanup and economic growth.

Brownfields often are close to urban centers or transportation corridors. Site renewal encourages use of existing water, sewer and highway infrastructure and eases development pressure on farmland and natural areas. Brownfield renewal can eliminate eyesores and reinvigorate the community, bringing job growth and higher tax revenues.

The U.S. Environmental Protection Agency initiated its brownfields program in 1995 in response to the economic challenges posed by contaminated sites across the nation. Florida saw the potential of the brownfields program and enacted its law in 1997. The state has an incentive-based program that offers liability protections, dedicated staff and expedited reviews to encourage brownfield redevelopment.

The first step in the process is for a local government to adopt a resolution designating a brownfield area, which can include one or more parcels of land. A government can adopt the resolution on its own initiative or at the request of a developer or property owner. The state is not involved in the decision.

The resolution simply makes the benefits of the Florida brownfields program available to the designated area; it does not make any evaluation about the presence or absence

A shuttered hotel—a historic landmark in downtown Bradenton—is restored and reopened. In Tallahassee, a former industrial area now provides housing and retail space near college campuses. These properties were brownfields, or sites abandoned or underused because of perceived or actual environmental contamination.

By Florida Department of Environmental Protection
of contamination. When a local government considers a brownfield area for designation, the following criteria must be evaluated:

- Warrants economic development
- Is reasonably focused, not overly large
- Has potential interest to the private sector
- Is suitable for recreation or preservation.

If an individual requests a brownfield area designation, the following criteria must be evaluated by the local government before designation:

- The owner/controller agrees to site rehabilitation
- At least five new permanent jobs will be created
- The redevelopment is consistent with the local comprehensive plan
- The designation is properly noticed
- There is reasonable assurance of financial viability.

Once a brownfield area is designated and a person responsible for the project is identified, a brownfield site rehabilitation agreement (BSRA) can be executed with DEP. The BSRA provides a framework and schedule for the cleanup and makes additional incentives available.

Before the agreement can be negotiated, an advisory committee—either newly formed or existing—must be included in the process to ensure public participation. The committee includes residents of the proposed area and those who operate businesses in the area.

Florida’s brownfield incentives include loan guarantees for primary lenders, ranging up to 50 percent on all sites and up to 75 percent when the end use is affordable housing or health care.

Sites with a BSRA or properties that abut a site with a BSRA are eligible for a bonus refund for job creation of up to $2,500 per job and a sales tax refund on building materials for affordable housing.

The Voluntary Cleanup Tax Credit Program—applicable to state corporate income tax—is an additional incentive. A tax credit of 50 percent is allowed for the cost of cleanup activity that is essential for site rehabilitation, and a one-time 50-percent tax credit is allowed for solid waste removal.

Florida’s regulatory framework for BSRA cleanup includes liability protection and clearly defined cleanup target levels. Each of the department’s six district offices has dedicated brownfields staff to help implement BSRAs and provide timely review of technical documents.

A recent report by the Florida Department of Economic Opportunity attributes 2,496 projected new direct jobs, 7,257 projected new indirect jobs and more than $194 million in new capital investment to the Florida brownfields program in 2013. In addition, more than $6.6 million in tax credits were granted for site rehabilitation work completed in 2013.

In the period from July 2013 to June 2014, the total number of designated brownfield areas in the state increased by 18 to 362. Fifteen BSRAs were executed, bringing the program total to 202.

In addition, 10 site rehabilitation completion orders (SRCOs) were issued for sites that finished cleanup of property to standards protective of human health and the environment. Seventy-five SRCOs have been issued since the Florida brownfields program began.

The Bradenton Hampton Inn and Suites (shown left) is one of the success stories highlighted in the latest report on the Florida brownfields program. Originally built in 1925, the former hotel was used for retirement housing before going through foreclosure in 2009.

When a developer acquired the property in 2010, the Florida brownfields program provided incentives to help ensure preservation and productive use of the historic building. The environmental cleanup addressed petroleum contamination linked to underground storage tanks.

After a $21 million renovation, the hotel is open for business and expected to provide a $2.5 million economic impact in its first year of operation.

In Tallahassee, the site of a former lumber and supply company and railroad spur (shown above) was contaminated with arsenic and petroleum hydrocarbons. Private investors acquired the property in 2011 and quickly entered into a BSRA. The building foundations, paved areas and other features of the $25 million redevelopment were designed to act as engineering controls to eliminate exposure to contaminated soil. The property now provides 130 student housing units and 3,500 square feet of retail space.

The Department of Environmental Protection seeks to engage communities in the brownfields program with frequent outreach events, including workshops and speaking engagements. Visit the department’s brownfields website, www.dep.state.fl.us/waste/categories/brownfields, for the latest information and links to state and federal partners.
Chen Moore’s Community Service Committee Tasked with Giving and Caring

The company has a Community Service Committee which is tasked with identifying opportunities for giving back to the community. Also, we are actively involved in numerous societies including the American Society of Civil Engineers (ASCE), Florida Engineering Society, Leadership Broward, and the Florida Water Environmental Association. Through these organizations, employees have taken lead roles with adopt-a-highway programs, beach cleanups, engineering mentoring and outreach programs in Broward County.

**Examples of Our Contributions**

For Thanksgiving and Easter, we collected food for the Cooperative Feeding Program in Broward County. Chen Moore and Associates also collected toys for the Broward Children’s Home Society. In addition, the company collected clothing and sporting equipment to benefit the Broward Women’s Transitional Home for homeless women and their children.

Our commitment to the community goes beyond the holidays. We’re involved in numerous events throughout the year through our professional societies and our employee’s personal charities as well.

We have been a local MATHCOUNTS® partner for over 10 years. Several of our staff members have volunteered their time as the Broward County Coordinator of the competition. The Broward MATHCOUNTS® competition is attended by over 300 middle school students and over 40 volunteer engineers. The top individuals and top team from the local chapter competition will continue to the state competition. The top individuals from the state event will advance to the national competition. The MATHCOUNTS® Competition Series is the only competition program of its kind, with live, in-person events in all 50 states and U.S. territories, and schools worldwide.

Our involvement in various events for the ASCE is also extensive. This...
includes sponsoring and helping to organize the annual Bowl-a-thon for the Broward Branch for over a decade, and the annual mini-golf tournament for the Miami-Dade Branch.

The committee has also organized volunteer events with Habitat for Humanity in Broward and Miami-Dade Counties. Employees assisted Habitat for Humanity with the construction of homes in Pompano Beach, Dania Beach, Oakland Park and Miami. Between 2008 and 2010, we encouraged staff members to volunteer to work on the Dania Beach 18-Home Community. The cities of Pompano Beach and Dania Beach have been clients of the firm for many years, and this was a way CMA was able to give back to the community that we serve.

We are passionate about promoting science, technology, engineering, and math (STEM) through MATHCOUNTS®, presentations and mentoring programs. The CMA team members have served as judges and mentors for the Miami-Dade and Broward programs for several years. Jose Acosta, PE will begin his second year as a professional mentor for the 6th, 7th and 8th grade science classes at Nautilus Middle School in Miami Beach for their entry into the Future Cities Competition.

**Cleanups**

Chen Moore and Associates has participated in the Annual Waterway Cleanup in Miami-Dade and Broward Counties. The CMA Team has collected trash and debris at various sites over the years, including Riverside Park in Coral Springs, the Dania Beach Pier and Miami Beach. We were also part of the annual cleanups of OceanWatch, a non-profit group focused on cleaning and preserving South Florida’s Beaches.

We have also participated in a clean-up of the Florida Everglades west of Homestead. Employees traveled the Old Ingraham Highway hiking and biking trail which winds through sawgrass prairie and cypress forest. While walking the trail, employees performed trail maintenance where necessary.

**Other Events**

Employees also participated in United Way of Broward County’s 20th Annual Day of Caring in October 2011. The United Way organized 1,000 volunteers for the Susan B. Anthony Recovery Center to make it an even more beautiful place to live. The Chen Moore team task for the day included painting a two bedroom apartment.

The firm is also active with Pediatric Heart Foundation, participating in their annual walks in 2011 and 2012. With dogs at their side, employees have participated in several Annual Walks for the Animals for the Humane Society of Broward County.

CMA is greatly involved in assisting the professionals of tomorrow. Shareholders Dr. Ben Chen, PE, BCEE, Jose Acosta, PE and Peter Moore, PE, LEED AP are current or former members of the Department Advisory Boards of the University of Florida, Florida Atlantic University, St. Thomas University, the University of Miami and Florida International University. In addition, CMA hires numerous interns and provides financial and voluntary support to nearly every university in the state of Florida.

The Chen Moore team is committed to giving back to our clients, and has come up with a feasible community benefit plan that uses team member’s passions to help the community.

**About the Author:**

Peter Moore, PE, LEED AP is the President of Chen Moore and Associates, a consulting firm specializing in civil engineering, environmental, landscape architecture and planning, with six offices in Florida and one in the Republic of Panama. Chen Moore and Associates serves a municipal, private and institutional client base, including public-private partnerships, with planning, design and construction administration services.
Forbes magazine released its Top 100 Best Places for Business and Careers in the nation for 2014. Among these were several Florida cities, including West Palm Beach (54), Orlando (67), North Port (69), Tampa-St. Petersburg (72), Jacksonville (75), Cape Coral (81), and Gainesville (84). The study was based on perceived business climate, taking into account the cost of business, education, and job growth. These cities offer rich communities for new businesses, technology, job growth, and continuing education. Engineering firms do their part to help communities thrive and contribute to the diversity and wealth of opportunities that attract new residents and help existing ones grow. Firms such as Jones Edmunds & Associates Inc., which was recently awarded the 2014 Professional Development Award by the Florida Institute of Consulting Engineers (FICE), add to this mix, supporting the professional development and continuing education of its staff. Serving Florida's communities for 40 years, the firm has offices in Gainesville, Jacksonville, Tampa, Winter Haven, Titusville and Sarasota, with a new office on its way in the Lake Worth/Palm Beach area. It employs over 140 professionals, all of whom reside in Florida. With a focus on service and knowledge, Jones Edmunds’ community outreach efforts encourage and enrich engineering throughout Florida.

“Our conscientious effort to grow and foster a strong professional development program is one of the many ways we give back to the communities we serve—providing competitive job and growth opportunities for existing and incoming Florida residents,” says Gretchen Loyd, Human Resources Director. “Knowledge is one of our three core values as a company. As such, we make the pursuit of continuing education a top priority. Our programs help support continuing education. We also have a Leadership Development Program that boosts skills and cultivates the talents of our future leaders.”

Jones Edmunds University offers its employees continuing education custom-designed to best serve their clients.

In November 2008, Jones Edmunds launched the Jones Edmunds University, which is recognized by the Florida Board of Professional Engineers as a continuing education provider. The University helps formally encourage continuing education and tailors the training to best serve their people and their clients. Their programs build company knowledge by encouraging staff to engage in continuous learning and participate actively in associations that expand knowledge in the industry. “Our goal is to provide top-notch training for our employees to help them reach their professional and personal goals. We believe by offering a wide variety of training courses, our employees will become stronger, well-rounded professionals, which will help us better serve our clients and the communities we work in,” says Mike Rickman, Health & Safety Officer, who is also responsible for the University’s curriculum development and coordination. To date, the University has awarded over 7,000 professional development hours, of which over 3,000 have been earned by registered professionals.

Jones Edmunds hosts a visiting scholar program in which state, regional, national, and international experts are invited to present research to the firm. They engage in small group discussions with professionals in their specific area of expertise. These sessions allow staff to gain a deeper knowledge in the particular area and then apply that knowledge to projects serving communities throughout Florida.
An Investment in Education: Commitment to Service and Community Outreach

The FICE Professional Development Award is specifically designed to recognize firms that are considered to be the best “industry model” for the professional development of their technical staff and that encourage their engineers to participate in professional and technical societies, civic activities, and continuing education. Active participation in technical societies and organizations is also key to inspiring and mentoring students in engineering.

Receiving the FICE Professional Development Award is a natural reflection of the firm’s commitment to fostering knowledge and service internally. In turn, this commitment has motivated staff involvement in community outreach. Another one of the firm’s core values is service. As such, employees are encouraged to take on leadership roles in their communities and participate in civic organizations and events. Jones Edmunds also serves as a corporate sponsor and volunteer to several civic organizations. Announcements regarding upcoming opportunities to participate in civil organizations and events that Jones Edmunds sponsors are made accessible to employees. The firm’s corporate mission is to improve the quality of life for the people they serve, and their employees take this message to heart beyond their daily responsibilities at the office. Many Jones Edmunds employees devote time to nonprofit work, volunteer in the community, and participate in AE industry-related organizations.

For example, Tim Cully, Gainesville Environmental Sciences Department Manager, dedicated over 500 hours of volunteer time on weekends and evenings to building a charter school. Last year Mountaintop Ministries in Lake City completed construction of Belmont Academy, a new charter school, in Columbia County for grades K–8. Belmont Academy also provides pre-K and a virtual online high school. The school was built by volunteers, and Tim’s experience in construction came in handy—he helped with layout and quality control (laying out wall locations, checking dimensions), as well as participating in the physical construction effort. His whole family, including his two sons and two sons-in-law, were involved. “It was a great project—everyone had the chance to be part of the whole thing from conception (starting in 2012) to construction,” he said. Being a geologist by trade, he also guest-taught several elementary classes during their science curriculum’s “Rocks and Minerals” section, and continues to volunteer for occasional weekend handyman services at the school.

Environmental Sciences Department Manager
Tim Cully (right) and a teacher at Belmont Academy.

Every year, Jones Edmunds’ staff participates in a variety of outreach projects at office locations throughout the state. These include donation drives for teachers and students in need of school supplies, supporting schools throughout Florida. Their staff participates as science fair judges each year, as well as for other educational activities such as serving as a sponsor for FES MATHCOUNTS® and being a part of the University of Florida’s FES Chapter Résumé Critique to help students prepare for future careers in the field of engineering. Several Jones Edmunds employees are also involved in providing mentoring and/or sponsor scholarships for children through programs such as Communities in Schools (CIS) and the Education Foundation’s Take Stock in Children program. Steve Laux, a vice president at Jones Edmunds, says, “Take Stock in Children is a great program. It provides deserving children from low-income families an opportunity to earn a scholarship. I am in my third year as a mentor, and it helps students learn good study habits and prepare for college.”

“It is an honor and a pleasure to bring this level of recognition to our firm and the communities we serve as a whole. We value the power of knowledge and strive to support the technical, professional, and personal advancement of our staff and improve the communities we serve,” says Rick Ferreira, CEO. “Our investments today help shape the future of our people and our quality of life.”

About the Author:

Ken Vogel, PE is a Senior Vice President with Jones Edmunds & Associates Inc., with 27 years of experience in civil and environmental engineering. He also serves as the Office Manager of their Gainesville office. Ken is an active member of FES and serves as a board member of Florida Engineers Political Action Committee (FEPAC).
Robert E. “Bob” Scarbrough, PE

Bob Scarbrough, PE, organizer and charter member of the FES Myakka Chapter, passed away September 29, 2014. Bob spent most of his professional career as an electrical engineer for FP&L in the Sarasota area. He was the first Myakka Chapter State Director from 1975-1978. He was the first FES Fellow Chapter member (1987).

The family requested that memorial donations be made to the Florida Engineering Foundation. To donate, email shawn@fleng.org.

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Attention: Veronica Davis, Human Resources Director
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Meet Your Young Engineers

To ensure the future of the Society and the engineering profession, the FES Communications Advisory Committee is committed to inspire leadership, professional society activities; and to recognize evidence of technical competence, community and humanitarian activities, and educational achievements. With this in mind, Journal FES features members age 35 and younger. We hope you enjoy hearing about their journey into this noble profession.

What made you decide to pursue engineering as a career?
I had a very difficult time with deciding on my college major. I had different interests and enjoyed all subjects in school. Math had always come especially naturally to me, so I liked the idea of using math in my career, but I wasn’t interested in teaching. My older brothers had both gone into engineering. From them I learned that engineering required a lot of math and physics, my two favorite subjects. I gave it a try and found my calling.

What field of engineering did you study in college, and have your studies prepared you for your current position?
I started out as an environmental engineering major. I thought it had something to do with helping the environment. Wrong. Fortunately, I liked it and stuck with it. My college offered a dual-degree program with civil engineering for just a few more classes, so I added that degree to expand my career opportunities. My studies have definitely prepared me for my current position. Engineers are problem solvers, and studying engineering taught me how to do that.

Which college did you attend?
University of Miami (1997-2001). I wanted the personal attention that a private university offered. Contrary to popular belief, UM is a small, private school with less than 10,000 undergrads. I also didn’t want to attend a technical college because I wanted the option of changing majors without transferring, just in case I hated engineering.

What obstacles have you faced in the start of your career?
As a young woman in engineering, I found that I had to prove myself more than my male counterparts. This really surprised me. It didn’t help that an early supervisor would introduce me to clients as his “assistant,” which made them think that I was a secretary and not an engineer. This perception just made me work harder, and I’m now well established in the field. Occasionally when I tell someone not in the industry that I’m an engineer, I get the response of “Really? Good for you.” Yes, really.

Have you had a mentor in the field, and if so, how have they helped you grow or realize your career path?
I’ve had several. My earliest mentor taught me drainage analysis and design, and also taught me project management when I was only one year out of college. He gave me the opportunity to prepare contracts and manage projects long before I became a professional engineer. The skills and experience of those early years gave me a very solid background in project management, which is the focus of my current career. My most recent mentor is another female engineer. She has challenged me and given me opportunities to grow. We also share the bond of being mothers and often talk about the importance of the work/life balance.

Are you actively involved with your local FES chapter and what advantages do you see in being involved with FES?
Yes. FES is a valuable networking tool. I am also heavily involved in our local MATHCOUNTS® competition. I first volunteered three years ago, and was in awe of these middle school students. I decided to join the MATHCOUNTS® committee so that I could be further involved. The Northeast Florida competition is one of the largest in the state and country, so a lot of planning goes into it. I was Head Scorer last year and am incoming co-chair. This is one of the most rewarding things I do for the association.

What type of activities are you interested in outside of engineering?
I love spending time with my 5-year-old son Aaron, my 2-year-old daughter Madelyn, and my husband of eight years, Dan. Any day we have together is a good day. We spend a lot of time playing outside and swimming in our pool. I am also an avid reader and have recently taken up running.

Where do you see the future of engineering and its impact on the world/society?
The amazing thing about engineering is that we will always be needed. Anything that is created requires engineering, and that is an awesome impact to the world. I’m in transportation and lately there has been a lot of news about “driverless” cars. New infrastructure will certainly be needed for that technology, and engineers will be at the forefront.

Where do you see yourself in five years?
I love working at RS&H, and in five years I’d like to be in a leadership position with the firm.
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### Distance Learning

**Available Online or in DVD Format**
- Florida Laws and Rules
- 2010 Florida Building Code Update
- Effective Use of Daylighting
- Engineering Pitfalls in Stormwater Design
- Essential Elements of Building Green
- Project Management Basic Training
- Stormwater System Hydraulic Design
- The Project Management Professional (PMP)

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**On-Demand Webinars**

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<td>Post Recession in the Workplace</td>
<td>Informational Non-technical</td>
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</tbody>
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