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FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

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Connection

RECENT RULE CHANGES FOR Special Inspectors of Threshold Buildings

Florida Statute 553.71(11), ***Building Construction Standards– Definitions*** defines a threshold building as one that is greater than three stories or 50 feet in height, or that has an assembly occupancy classification that exceeds 5,000 square feet in area and occupant content greater than 500 persons.

In accordance with **Florida Statute 553.79(5)a**, ***Building Construction Standards—Permits; Applications; Issuance; Inspections:***

"The enforcing agency shall require a special inspector to perform structural inspections on a threshold building pursuant to a structural inspection plan prepared by the engineer or architect of record. The structural inspection plan must be submitted to and approved by the enforcing agency prior to the issuance of a building permit for the construction of a threshold building. The purpose of the structural inspection plan is to provide specific inspection procedures and schedules so that the building can be adequately inspected for compliance with the permitted documents. The special inspector may not serve as a surrogate in carrying out the responsibilities of the building official, the architect, or the engineer of record. The contractor's contractual or statutory obligations are not relieved by any action of the special inspector. The special inspector shall determine that a professional engineer who specializes in shoring design has inspected the shoring and reshoring for conformance with the shoring and reshoring plans submitted to the enforcing agency. A

fee simple title owner of a building, which does not meet the minimum size, height, occupancy, occupancy classification, or number-of-stories criteria which would result in classification as a threshold building under F.S. 553.71(7), may designate such building as a threshold building, subject to more than the minimum number of inspections required by the Florida Building Code.

The fee owner of a threshold building shall select and pay all costs of employing a special inspector, but the special inspector shall be responsible to the enforcement agency. The inspector shall be a person certified, licensed, or registered under Chapter 471 as an engineer or under Chapter 481 as an architect.

The architect or engineer of record may act as the special inspector provided she or he is on the Board of Professional Engineers' or the Board of

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FBPE FLORIDA BOARD OF PROFESSIONAL ENGINEERS *Connection*

WHAT'S INSIDE...

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FBPE Department NEWS

In This ISSUE

FROM THE EXECUTIVE DIRECTOR

It Was a Very Good Year!

Looking back on the last year at FBPE, we have made some great improvements and continue to move forward to provide vital services to those in the engineering profession.

Along with enhancements to the FBPE website, making it even more user-friendly and easier to navigate, we have implemented a workflow system that will enable us to move into a paperless work environment. Through the use of Laserfiche®, FBPE staff now works all exam and licensure applications in a digital format, thereby allowing for automatic permanent digital retention following completion of the file review. This process has greatly improved productivity and decreased the possibility for errors.

During the past year, FBPE has made strides to reach out to the engineering community via appearances at conferences and university events. FBPE staff was able to attend the annual BOAF and FES Conferences this past year, as well as make contact with engineering students at the ***2012 ASCE Southeast Student Conference*** and the ***2012 Fall Engineering Day*** at FSU/FAMU. FBPE has plans to continue outreach efforts well into 2013 with visits to Embry Riddle, UCF, FIU and USF during E-Week in February, as well as participation at the ***2013 Southeast Student Conference*** in Miami, Florida. Our goal is to reach out to young people to promote licensure and the engineering profession.

You should also have noticed major changes to the *FBPE Connections* newsletter during the past year. We have endeavored to provide more relevant information this year and involve current Board members. You will notice that we have five new Board members, who have shown to be a great benefit to the group.

William Bracken, P.E. and Kenneth Todd, P.E. attended the 2012 NCEES Annual Meeting in St. Louis, Missouri in August, along with Chairman John Burke, P.E. Beginning January 1, 2013, Warren Hahn, P.E. will be the new Chair of the FBPE Board and William Bracken, P.E. will become the new Vice Chair.

The staff here at FBPE looks forward to the coming year as we complete another renewal cycle and license a brand new group of engineers following the October examinations. During the coming year, FBPE will prepare to move into a new era of testing with the introduction of the NCEES computer based testing for the fundamentals examination. We believe this new form of testing will allow FE candidates to have more flexibility regarding when and where they take their test and allow FBPE analysts to complete applications in a more timely fashion.

The staff at FBPE wishes everyone a safe and happy new year!

Zana Raybon
FBPE Executive Director

Chairman's Corner

Thanks for the Memories!

As I come to the end of my tenure as Chair of the Florida Board of Professional Engineers, I would like to reflect on my last nine years as a Board member. It has been extremely rewarding to lead this very talented and dedicated group of men and women as their Board Chair for the past four years and I appreciate having had the opportunity to serve. It has taken cooperation and hard work from the entire group to accomplish the goals of the Board and I have always been able to count on my fellow Board members and the FBPE staff to get the job done.

I would like to thank past Board Chairs Henn Rebane, P.E., and Bob Mathews, P.E., for their guidance as I started my term as Chair. I would also like to thank Dr. Christian Bauer, Ph.D., P.E., David Charland, P.E., S.I., and Warren Hahn, P.E., for serving as Vice Chairs during the last four years. Others who have offered invaluable service to the Board during my tenure were: Carrie Flynn, former FBPE Executive Director; Frank Rudd, FES/FICE Executive Director; Charlie Geer, P.E., FES/FICE Representative; Kimberlee DeBosier, P.E., FEMC Board Chair; Roger Jeffery, P.E., former FEMC Board Chair; Robert Lombardo, P.E., former FEMC Board Chair; Gary Kuhl, P.E., former FEMC Board Chair, and Ernest Cox, III, P.E., former FEMC Board Chair.

John C. Burke, P.E.
FBPE Chair

A combination of several of the aforementioned individuals joined me in making up the FEMC Board Operations Committee, a group dedicated to the management and administration of the Board office. Through the efforts of this committee, we have seen a host of positive changes over the past several years. The Board office has progressed from several large meeting books in rolling suitcases to iPads with uploaded meeting books, from printed newsletters to online comprehensive newsletters issued on a regular basis, from a difficult to navigate website to an effective, easy to navigate, more polished looking website, and from hard copy licensure and case review to digital review of licensure applications and prosecutorial cases.

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Noteworthy News

With a New Year Comes New Changes

With the ending of 2012, FBPE regrets the conclusion of several Board member's terms and wishes to acknowledge their valued service to the Board and the State of Florida. Former Chair John C. Burke, P.E., who fills the electrical seat, David Charland, P.E., S.I., who fills the structural seat, Christian Bauer, Ph.D., P.E, who fills the industrial seat, as well as Mary Young, who fills one of the Public seats, will all be leaving the Board of Professional Engineers.

Mr. Burke completes his second term serving as the FBPE Chair and will continue to serve on the Board until he is replaced. Mr. Burke is a licensed electrical Professional Engineer with Hazen and Sawyer's office located in Jacksonville, Florida.

Mr. Burke possesses over 43 years of experience in planning, design and project management of power, control and instrumentation systems associated with water and wastewater facilities. His capabilities range from concept through final design, and extend to construction management and power systems analysis. Upon replacement, Mr. Burke will continue to work as a licensed engineer for Hazen and Sawyer.

Mr. Charland, Regional Director for TRC Worldwide Engineering, Inc., from Ft. Lauderdale, Florida, has served as a Board member for two consecutive terms since April of 2005, including FBPE Vice Chair in 2010 and as the FEMC Probable Cause Panel (PCP) Chairman.

Mr. Charland possesses over 50 years of engineering experience including structural engineering design and project management of municipal facilities, high-rise office buildings, hotels and resorts, aviation facilities, educational facilities, libraries, correction centers, heavy marine, roads, bridges, building restoration, industrial plants, and parking garages, and practically all types of structures encountered in the field of civil engineering.

Mr. Charland attended his final meeting with the Board in December of 2012 and will continue to pursue his career as a licensed engineer and special threshold inspector in the State of Florida.

Ms. Young, Director of the Ziff Career Services Center for the University of Miami's School of Business, and from Coral Gables, Florida, has served on the Board since October of 2008. A former IBM executive, Ms. Young has held a variety of leadership positions and is known for her work in the inner city promoting technology, engineering and business careers for women and girls. She also serves as a lecturer and civic engagement consultant to the University of Miami's Undergraduate School of Business.

Ms. Young will attend her final Board meeting in February of 2013 and then plans to pursue further public service in her local municipality.

Although he will continue to serve until replaced, Board member, Christian Bauer, Ph.D., P.E., has also completed two terms of Board service since his appointment in April of 2005 and served as Vice Chair in 2009. Dr. Bauer has faithfully chaired the Educational Committee for most of his tenure and has proven to be a tremendous asset with the review of educational requirements for examination and licensure. Dr. Bauer, who fills the industrial seat, is a former Professor at the University of Central Florida in Orlando, Florida and is a licensed industrial engineer.

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(Continued from page 3) - Thanks for the Memories

On the national front, I have had the opportunity to participate at meetings and conferences held by the National Council of Examiners for Engineering and Surveying (NCEES) as well as serve on the NCEES Law Enforcement Committee. Engineers and surveyors at these meetings have discussed such issues as the Masters vs. Bachelors +30 requirement for minimum licensure education, the industrial exemption for PEs, the new computer based test (CBT) for FE candidates and the new 16-hour structural exam. NCEES began this past year offering the two-part, 16-hour structural exam and will launch the CBT in January of 2014. FBPE has made several changes to our rules in order to accommodate the changes to these exams.

Other topics we continue to address include a structural engineer (SE) designation in Florida, fire protection responsibility rules, requirements for special inspectors of existing threshold buildings, and the production of publication materials to assist PEs in clarifying the rules pertaining to the electronic signing and sealing of engineering documents.

Thank you again for allowing me to serve as Board Chair.

(Continued from page 4) - With a. New Year Comes New Changes

As each of the aforementioned individuals moves to the next phase in their careers, we would like to acknowledge the new appointments of Warren G. Hahn, P.E. as the FBPE Chair and William C. Bracken, P.E., S.I. as the FBPE Vice Chair, which is effective as of the Board meeting held in December 2012.

The FEMC Board will also be losing one of its members – Roger L. Jeffery, P.E. Mr. Jeffery has served two terms on the FEMC Board acting as the Board Chair from 2008-2009 and again from 2011-2012. He lives in Orlando, Florida, and is currently employed at AMEC Environment & Infrastructure. He has extensive experience in project design for a full range of publicly and privately funded projects including commercial, institutional, high-rise residential and governmental work. Project designs include structural steel, composite steel, reinforced concrete, post-tensioned concrete, pre-cast concrete, wood and specialty components. In addition to design he has experience with inspections, condition reports, and professional opinions for lending institutions, condominium associations, management companies, real estate firms, attorneys and insurance companies.

Mr. Jeffery was appointed in June 2005 and his term ended on October 31, 2012. Board member Kimberlee DeBosier, P.E. has been appointed as the new FEMC Chair and Jeff Arey, P.E. as the FEMC Vice Chair.

We look forward to working with the newly appointed Chairs and Vice Chairs and on behalf of all of the FBPE staff and other Board members, we wish to express our gratitude for the invaluable service these individuals have provided by serving on each of these Boards, as well as, their dedication to their profession. We wish each continued success in their future endeavors and they will all be missed!

MORE NOTEWORTHY NEWS ON PAGES 12 AND 24 !

Mark Your Calendar!

January 2013

1	FBPE Office Closed—New Year's
8	Application Review & PCP Meeting
11	FEMC Board Ops Conference Call
18	Ratification Conference Call
21	FBPE Office Closed—MLK Day
29	FAMU/FSU College of Engineering Day
31	FAMU/FSU College of Engineering Corporate Networking Night

February 2013

7	FAU Spring 2013 Career Day & Technical Fair
13-14	FBPE Board Meeting
17-22	UCF E-Week & Anniversary Celebrations
17-23	National Engineers Week
22	FIU Annual Engineering Expo
22-23	USF's 41st Annual Engineering Expo

March 2013

14-16	2013 ASCE Southeast Student Conference
15	FEMC Board Ops Conference Call
19	Application Review & PCP Meeting

Board meetings and other scheduled activities can also be found on our calendar located on the Home page of www.fbpe.org.

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Architecture and Interior Design's list of persons qualified to be special inspectors. School boards may utilize employees as special inspectors provided such employees are on one of the professional licensing board's list of persons qualified to be special inspectors.

The licensed architect or registered engineer serving as the special inspector shall be permitted to send her or his duly authorized representative to the job site to perform the necessary inspections provided all required written reports are prepared by and bear the seal of the special inspector and are submitted to the enforcement agency."

According to **F.S. 553.79 5(c)**, the board shall, by rule, establish a qualification program for special inspectors and shall compile a list of persons qualified to be special inspectors. Special inspectors shall not be required to meet standards for qualification other than those established by the board, nor shall the fee owner of a threshold building be prohibited from selecting any person qualified by the board to be a special inspector. The architect or engineer of record (EOR) may act as the special inspector, provided he or she is on the list of persons qualified to be special inspectors. School boards may utilize employees as special inspectors, provided such employees are on the list of persons qualified to be special inspectors.

The licensed architect or engineer serving as the special inspector shall be permitted to send his duly authorized representative to the job site to perform the necessary inspections provided that all required written reports shall be prepared by and bear the seal of the special inspector and those written reports shall be submitted to the enforcement agency.

The Board recently amended the qualifications to be a special inspector and his or her duly authorized representative. The rule changes were implemented to provide two tracks to become a special inspector and to allow that person to utilize the designee of his or her choice provided that person meets the requirements discussed below. The aforementioned changes have been bolded, italicized and noted in red.

The licensed architect or engineer serving as the special inspector shall be permitted to send his duly authorized representative to the job site to perform the necessary inspections provided that all required written reports shall be prepared by and bear the seal of the special inspector and those written reports shall be submitted to the enforcement agency.

Changes to Rule 61G15-35.003-Qualification Program for Special Inspectors of Threshold Buildings

The minimum qualifying criteria for Special Inspectors of Threshold Buildings, also referred to as Threshold Inspectors, established by the Board shall be as follows:

Proof of current licensure in good standing as a licensed professional engineer in the State of Florida, whose principal practice is structural engineering in the State of Florida or ***whose principal practice is in performing structural field inspections on threshold buildings***.

Licensed professional engineers whose principal practice is structural engineering shall also have three years of experience in performing structural field inspections on threshold buildings and two years of experience in the structural design of threshold buildings after having achieved licensure as a professional engineer. Such experience shall be within the seven years preceding submission of the application. For the purpose of these criteria, structural design shall mean the design of all structural components of the building and shall not be limited to specific structural components only, such as foundations, prestressed or post-tensioned concrete, etc.

Licensed professional engineers whose principal practice is structural field inspections shall have five years of experience in performing structural field inspections on threshold buildings within the preceding seven years prior to submission of the application and possess certification in each of the following: advanced concrete inspection, advanced structural masonry inspection, advanced post tensioning, basic structural steel and basic soils from a nationally recognized entity such as ACI, ICC, Florida Concrete and Products Association, and Post Tensioning Institute, Florida DOT CTQP or equivalent.

61G15-35.004-Common Requirements to All Engineers Providing Threshold Building Inspection Services as Special Inspectors

For each threshold building, a notice shall be filed for public record, bearing the name, address, signature, date and seal of

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the special inspector, certifying that the special inspector is competent to provide the engineering services for the specific type of structure.

Special Inspectors utilizing Authorized Representatives shall insure the Authorized Representative is qualified by education, experience and/or training to perform the duties assigned by the Special Inspector and shall maintain responsible supervisory control over the representative pursuant to Chapter 61G15-18.011(1) F.A.C. The Authorized Representative shall have a minimum of two (2) years of relevant experience under the direct supervision of a Special Inspector. Special Inspectors shall be in responsible charge of the work of the Authorized Representative, including reviewing reports and spot checks.

Inspectors shall institute quality assurance procedures to include, but not be limited to, requiring unscheduled visits, utilization or relevant check lists, use of a Daily Inspection Report and insuring that the Special Inspector or the Authorized Representative is at the project whenever so required by the inspection plan.

Florida Statute 553.79 ***Building Construction Standards—Permits; Applications; Issuance; Inspections***, the enforcement agency shall require that, on every threshold building:

The special inspector, upon completion of the building and prior to the issuance of a certificate of occupancy, file a signed and sealed statement with the enforcement agency in substantially the following form: *"To the best of my knowledge and belief, the construction of all structural load-bearing components described in the threshold inspection plan complies with the permitted documents, and the specialty shoring design professional engineer has ascertained that the shoring and reshoring conforms with the shoring and reshoring plans submitted to the enforcement agency."*

All shoring and reshoring procedures, plans, and details shall be submitted to the enforcement agency for recordkeeping. Each shoring and reshoring installation shall be supervised, inspected, and certified to be in compliance with the shoring documents by the contractor.

All plans for the building that are required to be signed and sealed by the architect or engineer of record contain a statement that, to the best of the architect's or engineer's knowledge, the plans and specifications comply with the applicable minimum building codes and the applicable fire safety standards as determined by the local authority in accordance with this chapter and chapter 633.

No enforcing agency may issue a building permit for construction of any threshold building except to a licensed general contractor, as defined in **F.S. 489.105(3)(a)**, or to a licensed building contractor, as defined in **F.S. 489.105(3)(b)**, within the scope of his or her license. The named contractor to whom the building permit is issued shall have the responsibility for supervision, direction, management, and control of the construction activities on the project for which the building permit was issued.

For More Information

You can access all of the **Florida Statutes** including those mentioned in this article by visiting the official website of the Florida Legislature at ***http://www.leg.state.fl.us/Statutes/index.cfm***.

For the most current provisions included in **Chapter 471**, **Florida Statutes** and the **F.A.C. Rules 61G15-18** through **61G15-37** as they relate to the practice of engineering in the State of Florida, go to FBPE's website at ***http://www.fbpe.org/legal/statues-and-rules***.

This article was written by FBPE Board member ***Tony Fiorillo, P.E., CGC, LEED, AP.*** *Mr. Fiorillo is the President of ECS – Florida, LLC, and serves on the Board of Directors for its parent company ECS, Ltd located in Northern Virginia. He is a licensed Professional Engineer and a Certified General Contractor in the State of Florida, and also possesses P.E. licensure in several other states.*

Mr. Fiorillo is currently serving his first term on the Florida Board of Professional Engineers.

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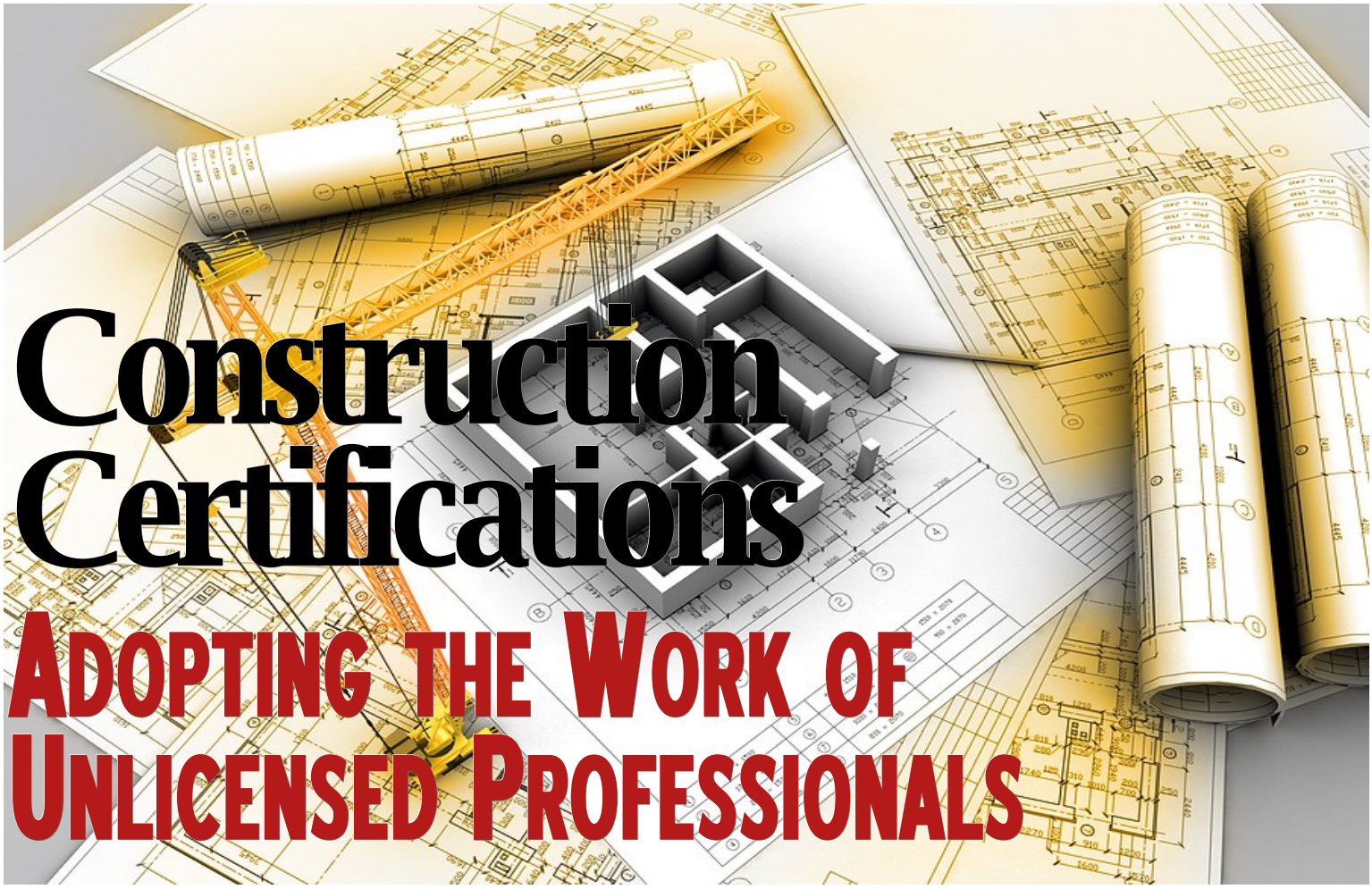

Construction Certifications

Adopting the Work of Unlicensed Professionals

This article is the third in a series intended to address the practice of engineers providing construction certifications. This particular article focuses on engineers providing construction certifications on projects that include delegated engineering provided by an unlicensed design professional. This scenario differs from the previous scenarios in that this scenario may not include the work of a second licensed engineer.

Delegated Engineering

Within Florida, an engineer of record for any project is afforded the ability to delegate portions of his or her design to a specialty or delegated engineer. A delegated engineer is specifically defined within **F.A.C 61G15-30.002** as *"**a Florida professional engineer who undertakes a specialty service and provides services or creative work (delegated engineering document) regarding a portion of the engineering project**."* This definition also states that *"**The delegated engineer is the engineer of record for that portion of the engineering project**."*

FAC 61G15-30.002 Definitions Common to All Engineer's Responsibility Rules. *A delegated engineer usually falls into one of the following categories:*

(a) An independent consultant.

(b) An employee or officer of an entity supplying components to a fabricator or contractor, so long as the engineer acts as an independent consultant or through a duly qualified engineering corporation.

(c) An employee or officer of a fabricator or contractor, so long as the engineer acts as an independent consultant or through a duly qualified engineering corporation.

So when the permit plans or specifications indicate "*DESIGNED BY OTHERS*" and "*NOT IN THIS CONTRACT*" or include notes such as "*TO BE CERTIFIED BY A FLORIDA ENGINEER*", this is an indication that the engineer of record for the project has delegated that portion of his or her design to a specialty or delegated engineer. The problem arises when the delegated engineer turns out to be an unlicensed design professional.

Unlicensed Design Professionals

Not all engineers are licensed to provide engineering. In other words, while the delegated engineer may be licensed in another state, if that professional is not properly licensed to provide engineering services in the state of Florida he or she is considered to be unlicensed. This point is made quite clear in **Florida Statute 471.003** and **471.023**.

471.003 Qualifications for practice; exemptions. - *No person other than a duly licensed engineer shall practice engineering or use the name or title of "licensed engineer," "professional engineer," or any other title, designation, words, letters, abbreviations, or device tending to indicate that such person holds an active license as an engineer in this state.*

471.023 Certification of business organizations. - *(1) The practice of, or the offer to practice, engineering by licensees or offering engineering services to the public through a business organization, including a partnership, corporation, business trust, or other legal entity or by a business organization, including a corporation, partnership, business trust, or other legal entity offering such services*

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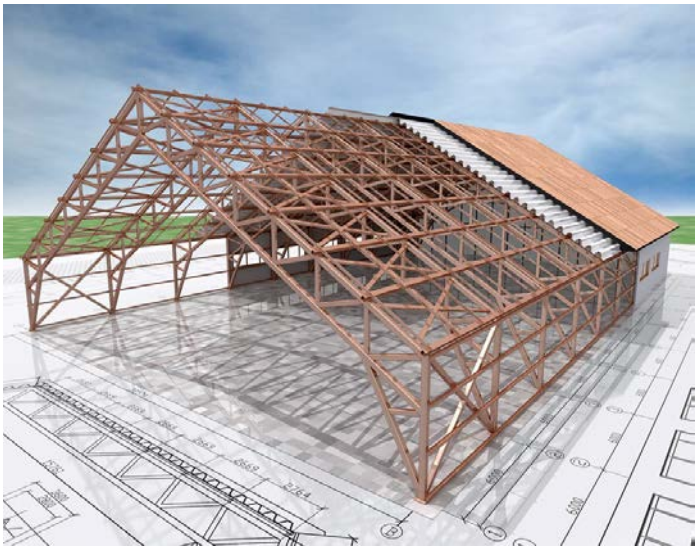
to the public through licensees under this chapter as agents, employees, officers, or partners is permitted only if the business organization possesses a certification issued by the management corporation pursuant to qualification by the board, subject to the provisions of this chapter.

One example would include the design of a specialty item bearing the signature and seal of an "out of State" engineer that is not properly licensed to practice in the State of Florida. This example could include precast concrete light poles, doors and/or roofing appurtenances (steeples & domes) that are designed and manufactured by an out of state company with no Florida product approvals.

Another example would include designs performed by an unlicensed individual. This example would include the design of a pre-engineered roof truss system. Within the pre-engineered roof truss industry most truss plans and individual truss drawings are initially developed by unlicensed truss designers. Once designed, the individual truss drawings are then reviewed, signed and sealed by a truss engineer who assumes no responsibility for the global truss system layout.



Provided the layout of the trusses and the individual truss reactions match what is depicted on the engineer of record's plan set, there may not be an issue. If however, the global truss system layout and/or the individual truss reactions differ from what is depicted on the engineer of record's plan set then an issue may exist.

Review of Delegated Engineering

This article focuses on construction certifications provided by an entity other than the engineer of record. It is however worth noting that within Florida the engineer of record has a responsibility to request and, when provided, review delegated engineering documents. This requirement is found within **F.A.C 61G15-30.005**.

61G15-30.005 Delegation of Engineering Documents: Obligations of the Engineer of Record. - (2) *An engineer of record who delegates a portion of his design responsibility to a delegated engineer shall require submission of delegated engineering documents prepared by the delegated engineer and shall review those documents for compliance with his written engineering requirements and to confirm the following:*

(a) That the delegated engineering documents have been prepared by an engineer.
(b) That the delegated engineering documents of the delegated engineer conform with the intent of the engineer of record and meet the written criteria.
(c) That the effect of the delegated engineer's work on the overall project generally conforms with the intent of the engineer of record.

Unfortunately cases arise where the engineer of record is removed from the project after his or her plan set is permitted and is never afforded the opportunity to review the delegated engineering documents. The challenge comes in when after dismissing the engineer of record from the project, the contractor hires a second engineer to "oversee" and ultimately "certify the project" and any outstanding delegated engineering documents contain deviations or deficiencies (such as being provided by an unlicensed professional).

Construction Modifications & Deviations

As discussed within this series, once a permit is properly issued based on the work of a particular engineer that engineer becomes the engineer of record. As was also discussed within this series, any conflicts or departures from those permitted plans require that the engineer of record be consulted. This point is reinforced within **Chapter 1 Section 107** of the **Florida Building Code.**

FBC 107.4 Amended Construction Documents. *Work shall be installed in accordance with the approved construction documents, and any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents.*

So, for the purpose of this discussion, when a certifying engineer reviews and accepts delegated engineering documents, fails to consult with the engineer of record, and those delegated engineering documents contain any deviation or deficiency (such as being provided by an unlicensed professional), the certifying engineer may be guilty of a number of administrative infractions. Specifically, the certifying engineer may be guilty of: improper successor engineering, providing untruthful or misleading statements, or omitting relevant and pertinent information that could lead to a fallacious conclusion on the part of the building department. In addition, the certifying engineer may also become responsible for the delegated engineering**.**

Conclusion

Therefore when an engineer, serving as a certifying engineer, provides a construction certification stating that the project was constructed in accordance with the plans and specifications, that engineer must also make sure that all delegated engineering has been properly addressed.

As a postscript to this article, while researching this topic I had an opportunity to speak with a number of engineers almost all of whom reported being subjected to comments from contractors like: "*Why can't you just go ahead and certify the other engineer's work, my last engineer used to do that all the time."* Perhaps the response to this is to add: *"… until he lost his license."*

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*This article was submitted by FBPE Board Vice Chair **William C. Bracken, P.E., S.I**. Mr. Bracken is the President and Principal Engineer for Bracken Engineering located in Tampa, Florida. He is a licensed Special Inspector and Professional Engineer in the State of Florida.*

Mr. Bracken is currently serving his first term on the Florida Board of Professional Engineers.

When Sound Engineering & Design is the Goal…Awards Will Follow

For those not in the know, ENERGY STAR is a building status design and operating system. It uses EPA ratings measuring performance of building design (then the operation of that building) compared to "typical" buildings, with the goal of reaching an improved energy efficiency percentage rate above a "typical" building. The sun is also an energy star.

Similarly, LEED (Leadership in Energy and Environmental Design) is a voluntary, consensus-based, market-driven program that provides third-party verification of green buildings. For commercial buildings to earn LEED certification, a project must satisfy all LEED prerequisites and earn a given number of points on a LEED rating system scale. Leeds is also a city in England.

Both of these programs and processes, and others, are commendable and are encouraged. With them, you can have a more energy efficient and greener project. Green is good. Energy efficiency is better. Both are best.

Some of these programs and processes are mandatory for public buildings. Like it or not, it's for our own good.

Clearly, designing and engineering buildings to be energy efficient and green is an admirable goal. However, if we let obtaining "points" or "improved percentage" get in the way of solid design and engineering practice, we can sometimes get ourselves into trouble. Not that there aren't enough ways for an engineer to get into design trouble.

During the design phase of a facility just recently completed, the energy efficiency engineer, in order to obtain the necessary percentage for a certain energy efficiency classification of design, strongly suggested (read: directed) the Engineer of Record to downsize the capacity ratings of certain HVAC equipment. This was done, against the Engineer of Record's (belatedly) better judgment. This is now at the top of the "Lessons Learned" list of this engineer. You guessed it. The HVAC system allegedly underperformed and allegedly required remediation. As you can tell by the legal lingo: Big trouble!

Just because you're not a mechanical engineer, don't think you're immune from getting caught up in this trap. Energy efficient and green building rating systems can affect all engineering disciplines. Energy efficient and green design can involve the following:

Project Sites: site selection, development density & community connectivity, brownfield redevelopment, alternative transportation, site development, storm water design, heat island effect and light pollution reduction.

Water Conservation: innovative wastewater technologies, water efficient landscaping, and water use reduction.

Energy Use & Efficiency: enhanced commissioning, optimize energy performance, on-site renewable energy, enhanced refrigerant management, measurement & verification and green power.

Construction & Resources: recycled content, regional materials, building reuse, construction waste management, materials reuse, rapidly renewable materials and certified wood.

IAQ: low-emitting materials, outdoor air delivery monitoring, increased ventilation, construction IAQ management plan, indoor chemical & pollutant source control, controllability of systems, thermal comfort and daylight and views.

Attempting to carry out any or all of the previously mentioned design criteria in your engineering efforts is very commendable. However, compromising sound engineering judgment to placate award seekers, and then hoping that everything turns out OK is usually short sighted. Hope can be fleeting.

It is better to endeavor to make your design energy efficient and green by "*baking in"* sound engineering principles from concept formulation through project completion.

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*This article was submitted by newly appointed FBPE Board Chair **Warren G. Hahn, P.E.** Mr. Hahn possesses over 50 years of engineering experience and is a registered mechanical and electrical engineer with Hahn Engineering, in Florida, Wisconsin, North Carolina and Georgia. He is currently serving his first term with the Florida Board of Professional Engineers.*

THE IMPORTANCE & VALUE OF JOINING A PROFESSIONAL ASSOCIATION

An extensive network of peers is a vital element to a successful career as a professional engineer. As a member of an association, you are part of a community of engineers who draw upon its resources, which include a full-time staff and numerous organized committees at the local and state levels. Thousands of professional engineers (PEs) rely on associations to stay current on issues such as licensing, education, employment, ethics, legal and liability issues, and more.

FOUNDED 1916 Florida Engineering Society

fice florida institute of Consulting Engineers

American Council of Engineering Companies of Florida

Professional Engineers in Private Practice of Florida

Advocating for the collective interest of engineers in Florida is what separates the Florida Engineering Society (FES) from other professional associations. FES is the only society working to educate policy makers, protect, and promote engineering in Florida. To do so, FES maintains a strong and effective voice with the legislature. It is important that the engineering profession show a strong and united presence to Florida decision-makers. Professional Engineer Legislative Days is the foremost legislative conference for Florida's engineering industry, hosted by FES and the Florida Institute of Consulting Engineers (FICE). They offer professional engineers the opportunity to promote and defend key issues at the Capitol. During this event, you will have a chance to visit the Capitol and meet with your Florida representatives and senators. You will gain political allies who will produce legislative results for engineers statewide. FES and FICE coordinate this annual event to protect the engineering profession and inform its members with workshops and newsletters.

Professional organizations provide you with specific information on future trends. They publish journals, newsletters, directories and websites with invaluable information on up-to-date issues and developments in your profession. Some, such as the Florida Engineering Society (FES), also coordinate professional and leadership development conferences combined with industry-related trade shows. Social media such as member-only Facebook and LinkedIn groups are all excellent ways you can get and stay connected.

For your continuing education, professional associations offer a number of affordable seminars, webinars and products that allow you to grow your technical expertise, improve your leadership skills, and help keep your career on track. Licensed professional engineers are required to earn eight professional development hours (PDHs) of FBPE-approved continuing education during the biennium cycle of March 1, 2011 through February 28, 2013. These eight PDHs must include four hours of Laws & Rules of Chapter 471 and 61G15 F.A.C. and four hours of Areas of Practice.

We all know that when the job market starts to resurrect, prospective employers seek out individuals whose field knowledge is not solely dependent on licensure, and association memberships are excellent supplements to your resume. Membership in professional associations conveys to an employer that you are dedicated to your field of study. Joining just to put the organization's name on a resume is useless; become active with your local chapter and/or at the state or national level.

In these challenging economic times, FES membership gives you an edge and offers what you need to keep your career on track. From job listings to opportunities to market yourself, FES provides the connections and resources you need to help you succeed, and ensure you can jump any hurdles in your way. Some of what is offered includes job board and salary surveys.

Associations also provide a venue to become involved in your local community, such as offering and facilitating opportunities for volunteering and leadership in ways that use your unique expertise.

Florida MATHCOUNTS®

Among its other activities, FES has sponsored Florida MATHCOUNTS® since its origination in 1983. The MATHCOUNTS® Competition Program is a national middle school coaching and competitive mathematics program that promotes mathematics achievement through a series of fun and engaging "bee" style contests. The program exists in all 50 states plus U.S. territories and the Department of Defense and State

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Department schools. FES strives to make this competition more exciting and fun, with greater numbers of students, each year. FES aids in coaching, coordinates special guest speakers, volunteers, recognition for the participants; awarding top teams and individuals with trophies, scholarships, and cash. The winning state team also participates in two FES-sponsored retreats in preparation for representing Florida on an all-expense-paid trip to the national competition. All of this would not be possible without the support of FES member volunteers.

The Florida Engineering Leadership Institute (FELI) was created with the mission of transitioning engineering professionals into community professionals and leaders within our societies, communities, and workplaces—an important step in realizing our ultimate goal of professional engineers helping to shape society worldwide. Through its initial 10-month class, FELI enhances the leadership skills of its participants and sets out a clear path to putting these skills into practice serving our profession and communities. FELI also provides networking across current and past classes, serving as an outreach group to business and community leaders. By fostering interaction that puts training into practice, FELI achieves its mission to "*Transform Leadership Opportunities into Reality*."

Check with your alumni associations, academic institution, or employer for a list of prominent organizations that would be beneficial for your professional growth to join. The Florida Engineering Society is unique in that this association promotes and defends the professional interests of all engineers in the state of Florida. To learn more about joining FES, call 850- 224-7121.

About FES and FICE: *The Florida Engineering Society consists of six practice sections that cover the scope of engineering involvement with broad fields of practice. The practice sections are engineers in private practice (FICE), government, education, industry, and construction. Projects engineered by FES members vary from the Skyway Bridge to homeland security; from Doak Campbell Football Stadium to Everglades restoration; from biomedical research to the highways we drive.*

This article was submitted by ***Frank Rudd, CAE, CMP****, Chief Executive Director of the Florida Engineering Society (FES) and Florida Institute of Consulting Engineers (FICE) (a/k/a ACEC of Florida and Professional Engineers in Private Practice). Frank is a native Floridian with over 20 years of association management experience.*

Since 2001, Frank Rudd has grown the statewide association of Professional Engineers to nearly 3,400 members through seven geographical regions and 19 chapters. A graduate from Florida State University, a certified association executive, and certified meeting professional, Frank has been working for FES and FICE to strengthen the engineering profession by promoting engineering licensure and ethics, enhancing the Professional Engineer image, advocating and protecting PEs' legal rights at the state level, providing continuing education opportunities, and publishing news of the profession. Frank Rudd has served as President of the State Society Executive Council with NSPE, and the National Association of Engineering Council Executives (NAECE).

Noteworthy News continued...

FBPE Announced a Winner of RunSmarter® Award

Laserfiche® recently announced its 2012 RunSmarter® Award Winners, and FBPE was selected as one of the 28 domestic and international Laserfiche® users representing multiple industries, such as commercial, education, financial services, government, healthcare and justice systems.

Each of the 2012 winners represent the evolving use of Laserfiche® and include organizations that have configured the use of the application as a foundation for shared services, introduced mobile electronic content management (ECM) solutions into the workforce and used Laserfiche® to enable better customer service.

Prior to implementing Laserfiche®, FBPE's record management system lacked standardization, documents were stored in multiple locations both physically and electronically, and allowed for duplicate record keeping, making document retention and retrieval laborious and time consuming. With the implementation of Laserfiche®, FBPE has created one central repository for any and all documents including the ongoing effort of converting some 70,000 engineer records stored on microfiche; eliminated the multiple file types, formats and naming standards being used; automated the initial application intake and board review process; made all documents searchable by any key word; and can now generate reports and statistics on all record activity. For more information about FBPE's Laserfiche integration, read our *Employee Spotlight* article on **Amanda Day-Janecek** and **Katherine Anderson**, who have spearheaded this endeavor. For a full list of all of the RunSmarter® Award winners go to ***http://www.laserfiche.com/NewsPortal/?p=12086***.

Laserfiche® is a software that allows for dynamic content management, workflow, records management, document imaging and webforms. LaserFiche® allows for the ability to retain the flexibility and portability of paper documents while adding the benefit of digital storage. Workflow and Quickfields are additional features of the Laserfiche® software that enable automation of the current business process. For more information on Laserfiche® you can go to their website at ***http://www.laserfiche.com/en-us****.*

RECORDS RETENTION– NEW UPDATE

*In the October edition of **FBPE Connection**, the Florida Board of Professional Engineers published an article titled: "Records Retention: What am I required to keep and how long am I required to keep it?" This update is offered as a follow-up to that original article based on a recently voted rule change.*

As previously reported, the Florida Administrative Code 61G15 contains two separate provisions which require licensees to retain records, **61G15-22.008** and **61G15-30.009**. The Board voted in their December 2012 meeting to amend the rule **61G15-30.009** as it applies to the **Retention Of Engineering Documents**. The proposed rule change reads as follows:

> ***61G15-30.009 Retention of Engineering Documents.*** *At least one copy of all documents displaying the licensee's signature, seal which is legible to the reader, date, and all related calculations shall be retained by the licensee or the licensee's employer for a minimum of three years from the date the documents were sealed. These documents shall be maintained in hardcopy or electronic format.*

This proposed rule change is not intended to change the requirements of the rule but merely to clarify its intent. **61G15-30.009** still requires each licensee to keep at least one copy of all documents which originally bore the licensee's signature, seal and date. In addition these copies are still to be kept for no less than three years from the date the documents were sealed.

The rule change was made so as to afford licensees greater options when storing documents. Specifically, documents that were originally issued in hard copy and embossed do not necessarily need to be maintained as an original embossed hard copy. While an additional embossed hard copy can be maintained, the rule change formally makes it acceptable to graphite over the embossing on the original and keep only a xeroxed or scanned copy.

The rule change was voted on and approved by the Board in its December 2012 meeting. The rule change must however go through the administrative process before it can be made effective. It is anticipated that this rule change will be in force sometime in early 2013. Regardless, because this rule change is merely a clarification the enforcement of **61G15-30.009** will not change.

In closing the Board wishes to reiterate the previous word of caution, the loss of electronically stored information resulting from the loss of a computer does not alleviate the licensee from his or her obligation to retain documents. Computer back-ups and offsite storage of electronically stored documents is highly recommended.

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*This update was submitted by FBPE Vice Chair **William C. Bracken, P.E., S.I**. He is a licensed Special Inspector and Professional Engineer in the State of Florida.*

2012 Florida Infrastructure Report Card

The Florida Section of the American Society of Civil Engineers (ASCE) officially released the 2012 Report Card for Florida's Infrastructure on October 24, 2012. The press release event was hosted by the ASCE Miami-Dade Branch and was held at the 94th Aero Squadron Restaurant in Miami, Florida with Miami International Airport as a backdrop. The event was attended by over 130 ASCE members, state and local industry leaders and the media.

The Report Card release ends the development phase of updating the Florida Infrastructure Report Card which was originally developed in 2008. This update was performed in order to provide a current fact-based assessment of the state's infrastructure in an easy-to-understand format. The Committee made up of 20 professional civil engineers representing both the public and private sectors spent the past 24 months researching and analyzing data per infrastructure category in order to appropriately evaluate the current condition, capacity and future needs assessment. Regrettably, most of the category grades have stayed the same or have gotten worse since the original 2008 report.

GRADES

B-	AVIATION
B	BRIDGES
D-	COASTAL AREAS
D	ENERGY
D+	FLOOD CONTROL
C	HIGHWAYS
C	PORTS
D+	SCHOOLS
C	STORMWATER
C	TRANSIT
C	WATER AND SEWER

The Florida Section of ASCE released the original Report Card for Florida's Infrastructure in 2008. Regrettably most of the category grades have stayed the same or have gotten worse since that time. More specifically the following grades got worse since the original release in 2008: Coastal Areas dropped from a C+ to a D-; Energy from a D+ to a D; Flood Control from a C to a D+; Stormwater from a C+ to a C; Transit from a C+ to a C and Water and Sewer from a B- to a C.

"*Florida ports, Florida roads, and Florida bridges are all responsible for bringing goods in and out of our country,"* said Eric Czerniejewski, Executive Director and Chair of the 2012 Report Card Committee. *"As a state, we have fallen behind in building a modern infrastructure system that will be sustainable in a post-recession economy*."

The Florida Report Card was created as a public service to the citizens and politicians of the state to inform them on the infrastructure needs in their community. By using grade school report card letter grades, civil engineers have used their expertise to condense complicated data into easy to understand analysis. Now that the report card has been updated, a copy can be found on the ASCE Florida Section website, www.fla-asce.org.

The evening release was highlighted by individual comments from some of Florida's elected officials and heads of public works and Departments of Transportation. United States Congressman Mario Diaz-Balart (FL House District 21) provided a video of prepared statements thanking the Report Card Committee for the time spent updating these infrastructure grades and our efforts advocating to "*Raise the Grades*" for these important quality of life issues. In addition, informative comments were also shared by Gus Pego, FDOT District 6 Secretary of Transportation; Alfred Lurigados, Miami-Dade Expressway Authority Executive Deputy Director and Director of Engineering; Ralph Casals, Interim Town Manager for the Town of Cutler Bay; Mark Collins, Director of Capital Improvements and Public Works for the Town of Davie; and Matthew D. Ubben, President of Florida for Better Transportation.

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Another goal of the process is to give political leaders the ability to compare and contrast grades on different categories of infrastructure so they can make better decisions on where to commit budget resources. That is a significant part of the project, because it is extremely difficult for public officials to make decisions without all the facts. The Society has once again given them the tools they need to make better decisions.

"*Florida is a critical part of our national infrastructure system,"* said Maria Fernandez - Porrata, Chair of the Florida Section Government Relations Committee. *"If our state cannot improve its infrastructure, then not only Floridians, but families across the country are going to see prices rise, GPD shrink and our economy become stagnant*."

The ASCE was founded in 1852 and is America's oldest national engineering society. Their mission is to provide value to its members and partners, advance civil engineering and serve the public good. To carry out that mission, ASCE advances technology, encourages lifelong learning, promotes professionalism and the profession, develops civil engineer leaders and advocates infrastructure and environmental stewardship.

Much gratitude is extended to the following members that stepped up and led the research for each of the Report Card Categories.

⇒ ***Aviation***- Joe Glowacki, P.E.
⇒ ***Bridges***- James Giancaspro, Phd, P.E.
⇒ ***Coastal Areas***- Peter Moore, P.E.; Adnan Javed, P.E.
⇒ ***Energy***- Ana DeMelo, P.E.
⇒ ***Flood Control***- Adnan Javed, P.E.
⇒ ***Highways***- Chris Garlick, P.E.
⇒ ***Ports***- Todd McLeod, P.E.
⇒ ***Schools***- Sarah Matin, P.E.
⇒ ***Stormwater***- Ben Chen, P.E.; Jose Lopez, P.E.
⇒ ***Transit***- Tonya Mellen, P.E.
⇒ ***Water and Sewer***- Prasad Chittaluru, P.E.; Jason Haeseler, P.E.

The Government Relations Committee is seeking additional volunteers going forward to help in phase two of this effort, promoting the finished product. The following events will be integral in this second phase:

1. 02/05/2013 - PE Days at the Capitol in Tallahassee
2. 03/05/2013 - State Legislature begins 60-day session
3. 03/19/2013 - ASCE Legislative Fly-In - Washington D.C. (ASCE National 2013 Report Card Release)
4. 06/25/2013 - FL Association of Counties Annual Conference
5. 08/15/2013 - FL League of Cities Annual Conference

If you are interested in helping out as part of this important initiative, please contact the Executive Director and Chair of the 2012 Report Card Committee, Eric S. Czerniejewski at ***eczerniejewski@gmail.com*** or the Government Relations Committee chair, Maria Fernandez-Porrata at ***mfporrata@marlinengineering.com***.

As mentioned before, please visit the Florida section of the ASCE to view the report card in it's entirety at ***www.fla-asce.org*** or click on the image below.

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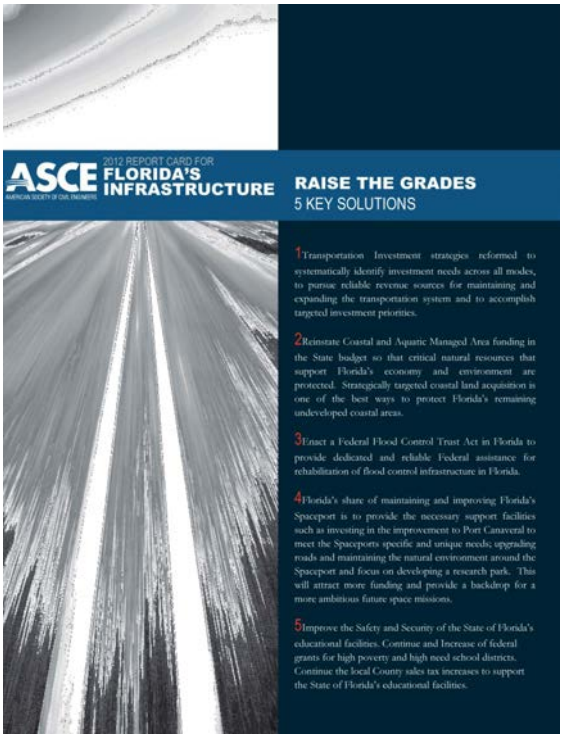

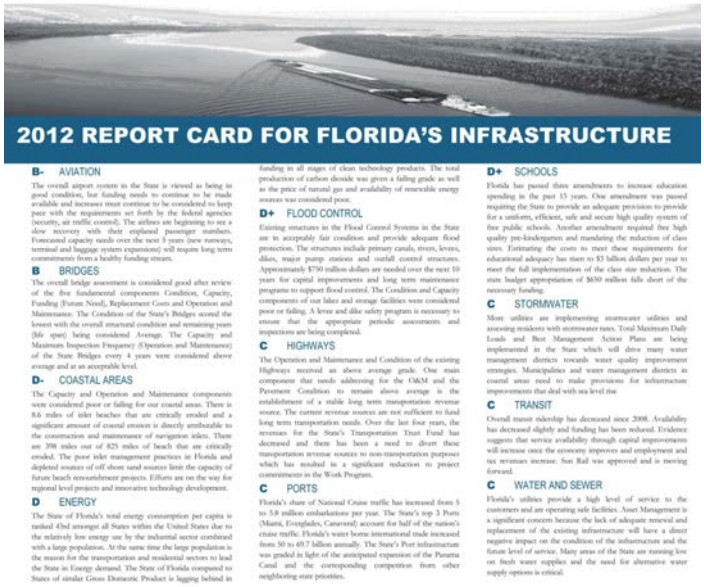

Imminent Threats to Public Safety

Imminent threats to public safety from the constructed environment are not as rare as one might think.

One example of an imminent threat to public safety would include a damaged overhead sign that upon inspection is found to be supported by a single fastener that is actively failing. This case would fall under the heading of ***Dangerous*** as found within the ***Florida Existing Building Code***.

> ***DANGEROUS.*** *Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:*
>
> ***1.*** *The building or structure has collapsed, partially collapsed, moved off its foundation or lacks the support of ground necessary to support it.*
>
> ***2.*** *There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under service loads.*

Another example would include aluminum 12 and 14 gage distribution (romax style) wiring within a building that has copper post fixtures attached to it. While this type of distribution wire was permitted by the building code in the early 1970's, it has since been banned and when used to service copper post fixtures has been determined to represent an imminent fire hazard.

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Yet another example would include establishing the presence of ***Structural Damage*** as defined within Florida's statute ***627.706(2)(k) 4***. Determining structural damage as defined within ***627.706(2)(k) 4*** requires that "… *the building, or any portion of the building containing primary structural members or primary structural systems, being significantly likely to imminently collapse …"*

> ***627.706(2)(k) 4.*** *Damage that results in the building, or any portion of the building containing primary structural members or primary structural systems, being significantly likely to imminently collapse because of the movement or instability of the ground within the influence zone of the supporting ground within the sheer plane necessary for the purpose of supporting such building as defined within the Florida Building Code;*

The Professional's Obligation

When a licensed professional encounters a situation where a real and imminent threat to public safety is found to exist, that same professional has to honor his/her obligation under ***F.A.C. 61G15-19.001(4)*** and ***F.A.C. 61G15-19.001(6)***. Specifically, licensed engineers in the State of Florida are required by Administrative Code to utilize due care and maintain due regard for acceptable standards of engineering principles. In other words, when a licensed engineer becomes aware of a real and imminent threat to public safety, that professional is required to point out and make known the threat. In addition, licensed professionals have an obligation to make sure that the appropriate parties are notified.

> ***F.A.C. 61G15-19.001(4)*** *A professional engineer shall not be negligent in the practice of engineering. The term negligence set forth in Section 471.033(1)(g), F.S., is herein defined as the failure by a professional engineer to utilize due care in performing in an engineering capacity or failing to have due regard for acceptable standards of engineering principles.*
>
> ***F.A.C. 61G15-19.001(6)(l)*** *A professional engineer shall not commit misconduct in the practice of engineering. Misconduct in the practice of engineering as set forth in Section 471.033(1)(g), F.S., shall include, but not be limited to: If his engineering judgment is overruled by an unqualified lay authority with the results that the public health and safety is threatened, failure by a professional engineer to inform his employer, responsible supervision and the responsible public authority of the possible circumstances;*

Notification

Therefore, at a minimum the licensed professional has an obligation to inform his/her employer and the party providing responsible supervision (most often the owner). If however, the licensed professional has reason to believe that his or her opinion will be overruled and/or ignored resulting in the public health and safety being threatened, then the licensed professional is required to notify the responsible public authority (most often the Building Department, fire department or health department) of the real and imminent threat to public safety.

Whether a structure meets the requirements of ***Dangerous*** as found within the ***Florida Existing Building Code***, or is found to contain aluminum 12 and 14 gage distribution (romax style) wiring with copper post fixtures attached to it, or a structure is found to meet criterion ***#4*** of ***Structural Damage*** as defined within Florida's statute ***627.706(2)(k)***, or some other threat to public safety, licensed engineers within the State of Florida have an obligation to inform their employer, the party providing responsible supervision and when appropriate the responsible public authority of the threat.

To report a violation please contact Wendy Anderson, Investigator in the FBPE Legal department at (850) 521-0500 or via email ***wanderson@fbpe.org***.

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*This article was submitted by FBPE Board Vice Chair **William C. Bracken, P.E., S.I**. and Board member **John C. Burke, P.E**.*

Mr. Bracken is the President and Principal Engineer for Bracken Engineering located in Tampa, Florida. He is a licensed Special Inspector and Professional Engineer in the State of Florida. Mr. Bracken is currently serving his first term on the Florida Board of Professional Engineers.

Mr. Burke is a licensed electrical Professional Engineer with Hazen & Sawyer's office located in Jacksonville, Florida. Mr. Burke just completed his second term as FBPE's Chairman but remains a member of the Board.

EMBRY-RIDDLE'S AEROSPACE ENGINEERING PROGRAM

Named Best in Nation for 13th Straight Year

For the 13th consecutive year, the *Best Colleges* guidebook published by *U.S. News & World Report* ranks Embry-Riddle's undergraduate aerospace engineering program No. 1 in the nation and has named Embry-Riddle No. 13 out of 128 Southern universities granting mainly bachelor's and master's degrees.

Highlights of the rankings of more than 1,600 accredited four-year schools in the United States are posted at ***www.usnews.com/colleges***.

In the specialty category of "***Best Undergraduate Aerospace/Aeronautical/Astronautical Engineering Programs at Schools Whose Highest Degree is a Bachelor's or Master's***," Embry-Riddle's Daytona Beach, Florida campus took first place for the 13th year in a row and the University's Prescott, Arizona campus ranked No. 3 for the 10th year in a row.

In another specialty category, "***Best Undergraduate Mechanical Engineering Programs at Schools Whose Highest Degree is a Bachelor's or Master's***," Embry-Riddle's Daytona Beach campus took 12th place.

Additionally, in the broader category of "***Best Undergraduate Engineering Programs at Schools Whose Highest Degree is a Bachelor's or Master's***," Embry-Riddle's Daytona Beach campus moved up one spot to No. 10, its sixth time in the top 10, and the Prescott campus was ranked No. 17, its sixth time in the top 20.

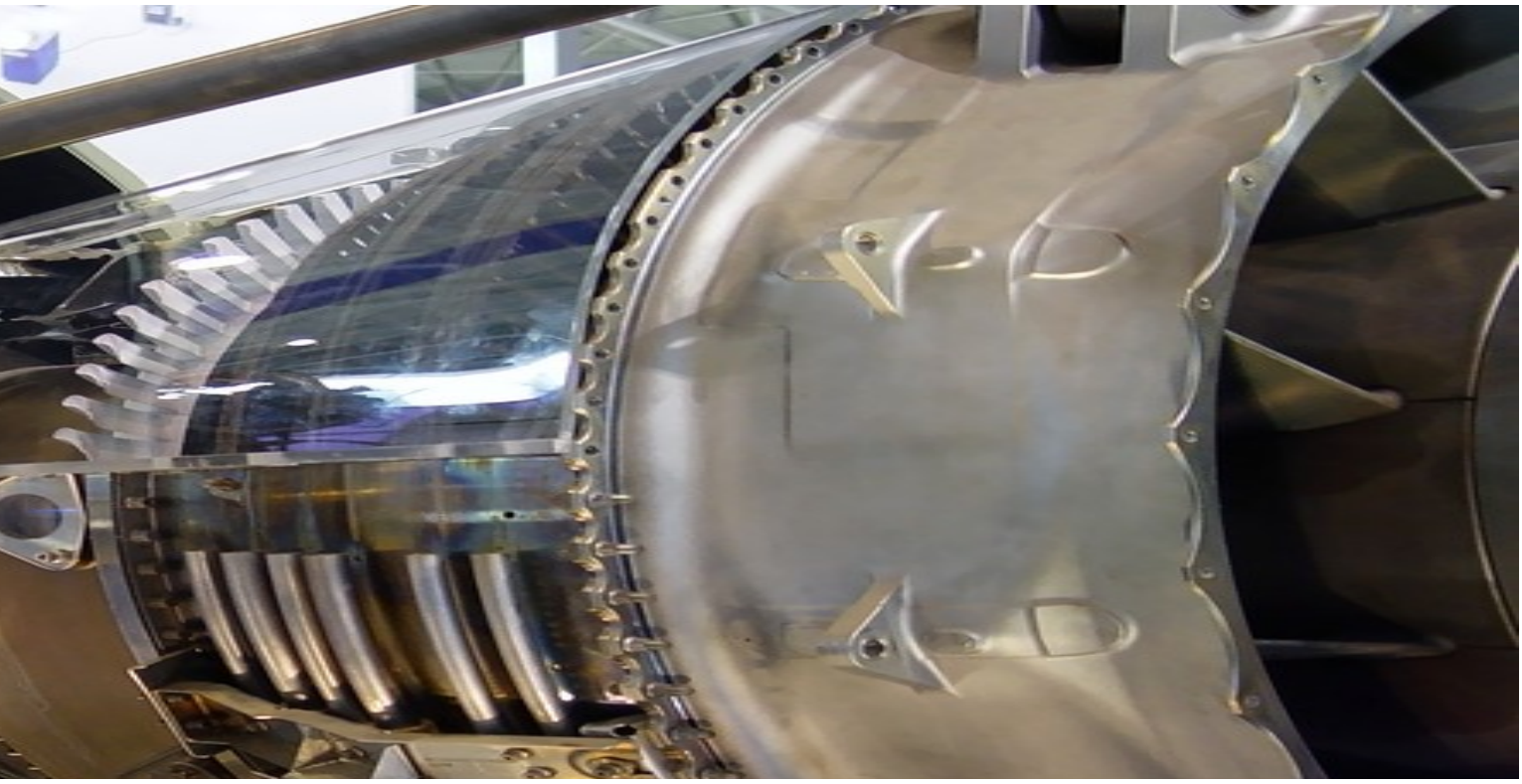
"*I'm very proud of the College of Engineering faculty at both of our residential campuses for achieving these impressive rankings*," said Embry-Riddle President John P. Johnson. "*Their emphasis on getting students involved in hands-on applied research makes Embry-Riddle the best choice for individuals seeking careers in aerospace engineering and sciences*."

Embry-Riddle offers the following engineering programs: Bachelor's degrees in aerospace engineering, civil engineering, computer engineering, electrical engineering, engineering physics, mechanical engineering and software engineering; master's degrees in aerospace engineering, electrical/computer engineering, engineering physics, mechanical engineering and software engineering; and a doctoral degree in engineering physics.

Also of note, this year's *Best Colleges* guide named Embry-Riddle's Daytona Beach campus No. 13 in the category of "***Best Regional Universities (South)***," a ranking of 128 institutions that grant primarily bachelor's and master's degrees. This marks the 11th straight year that Embry-Riddle has placed among the top 25 schools in this category.

Methodology

The pool of eligible schools for the engineering rankings is based on accreditation by ABET Inc. (the Engineering Accreditation Commission of the Accreditation Board for



Engineering and Technology formerly known as the Accreditation Board for Engineering and Technology), which evaluates college and university programs in applied science, computing, engineering and technology. The rankings are based on the judgments of engineering deans and senior faculty, who rate each program they are familiar with. A few engineering schools with small doctoral programs, such as Embry-Riddle, are placed in the bachelor's and master's category.

The rankings of the regional universities are based on reputation (25 percent), graduation and retention rates (25 percent), faculty resources (20 percent), student selectivity (15 percent), financial resources (10 percent) and alumni giving rate (5 percent).

EMBRY-RIDDLE Aeronautical University™

Embry-Riddle Aeronautical University (ERAU), the world's largest, fully accredited university specializing in aviation and aerospace, is a nonprofit, independent institution offering more than 40 baccalaureate, master's and Ph.D. degree programs in its colleges of Arts and Sciences, Aviation, Business and Engineering. Embry-Riddle educates students at residential campuses in Daytona Beach, Florida, and Prescott, Arizona, and through the Worldwide Campus with more than 150 locations in the United States, Europe, Asia, and the Middle East.

All engineering degree programs on the Daytona Beach campus are accredited by ABET (the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology). ABET, Inc. (formerly the Accreditation Board for Engineering and Technology) is the recognized accrediting agency for college and university programs in applied science, computing, engineering and technology. ABET accreditation is assurance that a college or university program meets the quality standards established by the profession for which it prepares its students.

The university is a major research center, seeking solutions to real-world problems in partnership with the aerospace industry, other universities and government agencies. For more information on Florida's Embry-Riddle College of Engineering visit their website at ***http://daytonabeach.erau.edu/coe/index.html****. You can also follow ERAU on Twitter at* ***Twitter (@EmbryRiddle)*** *and Facebook at* ***facebook.com/EmbryRiddleUniversity****. Expert videos are located at* ***YouTube.com/EmbryRiddleUniv****.*

If you are interested in the 2013 *Best Colleges* guidebook which appeared on newsstands on September 18, 2012, the book can be ordered at ***www.usnews.com/usnews/store/college_compass.htm***.

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LEGAL FOCUS Department

Recent Engineer Discipline

In the last few months, the Board has formally approved the following enforcement case based on the Florida Statutes and Rules applicable at the time of the violation. Included is a brief description of the licensee's violation and discipline imposed by the Board.

Thomas D. Plotts, P.E.
License No. 66075
Case No: 2011055019

The Administrative Complaint alleged that Licensee sealed, signed and dated three pages of engineering design documents for an aluminum swimming pool screen enclosure. The engineering documents were materially deficient engineering documents which resulted in engaging in negligence in the practicing of engineering. Specifically, it was alleged that Licensee failed to comply with Sections 106.1.1, 1603.1 and 1604.2 of the 2007 Florida Building Code as well as Rules 61G15-30.002(1), 61G15-31.003(1), 61G15-31.001 and 61G15-31.002(1), (5), Florida Administrative Code. Some of the deficiencies noted were: connection for the ends of the diagonal roof bracing elements was not detailed in the permit drawing; failure to design the elements of the screen enclosure in accordance with strength requirements, etc. Additionally, the Licensee, as the structural engineer of record, is professionally responsible for producing a document that complies with the applicable portions of the Responsibility Rules.

Ruling: A Final Order was issued on 10/19/12 accepting a Settlement Stipulation, imposing the following: Licensee's license will be placed on "inactive status". Licensee waives any right to reactivate the inactive license and will make no attempt to reactivate the license. Licensee further agrees that the inactive license will not be renewed in February 2013 and will become delinquent as a result of non-renewal. Licensee further agrees that, upon the delinquent license becoming null and void after the closing of the 2015 renewal cycle, Licensee will never reapply for licensure as a Professional Engineer or Certificate of Authorization holder in the State of Florida.

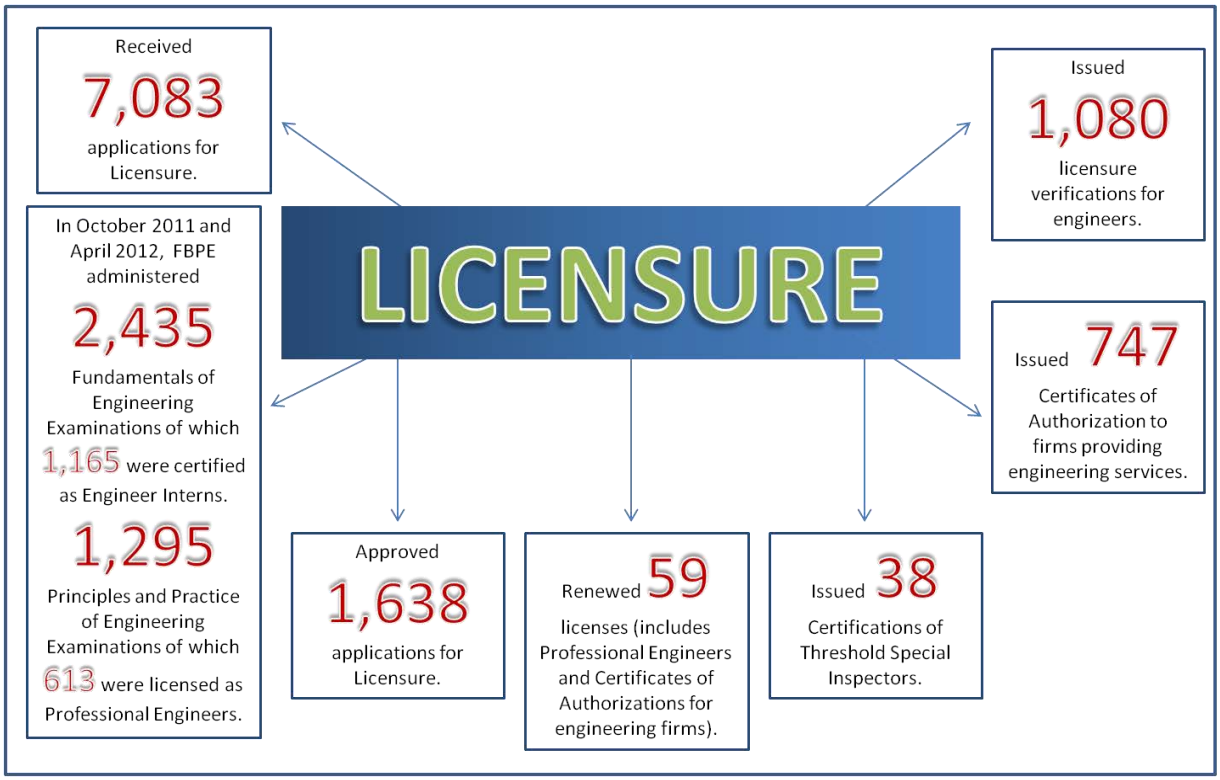
Violation: Section 471.033(1)(g) Florida Statutes and Rule 61G15-19.001(4), F.A.C.

You can access the final orders for these cases and other recent engineer disciplines on our website under the Legal section at http://fbpe.org/legal/disciplinary-actions. If you are unsure if an engineer has been disciplined you can verify their license on www.myfloridalicense.com. Information on public cases in which an engineer has been disciplined can be obtained by sending an email request to publicrecords@fbpe.org.

Disclaimer: *FBPE would like to note that every effort has been made to ensure the accuracy of discipline information; however this should not be relied upon without verification from the Board office or website. It is possible that names of companies and individuals listed may be similar to the names of parties who **HAVE NOT BEEN** disciplined or had compliant actions taken against them, so we encourage you to review licensee information on www.myfloridalicense.com, contact our office or make a public records request should you have any specific questions regarding disciplinary actions. Public records requests can be sent to publicrecords@fbpe.org.*

FBPE & FEMC ACCOMPLISHMENTS
2011-2012

In support of FBPE's efforts to handle licensing engineers in the State of Florida and enforcing engineering licensing laws, FEMC accomplished the following during the July 1, 2011 - June 30, 2012, contract year. You can find more information about our contract requirements, accomplishments, quarterly and annual reports in the *Corporate* section of our website at ***www.fbpe.org***.



Enforcement

Processed 150 complaints regarding engineering practice, of which 134 were found to be legally sufficient.

Filed 32 Administrative Complaints in cases where the Probable Cause Panel found probable cause to believe a violation of the Engineering Practice Act had occurred.

Dismissed 43 cases with a finding of no probable cause.

Issued 38 Final Orders against Professional Engineers.

Imposed $71,888.92 in Fines and Costs.

Issued 4 Licensure Revocations & 2 Voluntary Relinquishments.

Issued 6 Suspensions & 7 License Restrictions.

Dismissed 11 cases with a Letter of Guidance.

Special Recognition

FBPE would like to congratulate all of the candidates that successfully passed the October 2012 NCEES Fundamentals of Engineering and the Principles and Practice Exams.

We wish them much success as they move towards the next step in their engineering careers!!!

Elvin Abellana
Banan Abu Hannoud
Melissa Ackert
Daniel Acosta Seara
Ghislain Adandedjan
Yuriel Addine
Christine Adler
Armando Aguiar
Evelyn Aguilar Videa
Charles Albanese
Raul Alessandri
Robert Algoo
Michael Allen
Travis Allen
Tomas Almonte
Andres Alva
Marisel Alvarez Amado
Amaka Amalu-Anderson
Michael Amari
Jesus Amundarain
Patience Anastasio
Angelo Anastopoulo
Nicole Anderson
Alfredo Andres
Zoey Angulo
Pierre Apollon
David Aponte
Stephen Apple
Dani Aramouni
Davorn Archer
Adrian Armas
Ricardo Arnau
Humberto Arrieta
Bilal Assaad
Jeanine Athias
Thomas Atkins
Andy Avalos
Alexandra Aydelotte
Ashraf Badir
Brandon Bagoo
Jaryd Bailey
Laura Balboni
Lyndsey Baldyga
Carol Ballard
James Barber
Kristopher Bard
Rachel Barnett
Robert Barrett
Matthew Barrie
Bodler Barthelemy
Patrick Barthelemy
Brett Bartz
Andrew Bass
John Batavich
Stephen Batog
Matthew Battani
Daniel Bauerkemper
Bradley Bauknecht
Brooke Baumann
William Beard
Kevin Beery
Maurizio Benedetti
Zubeda Bentley
Thomas Bernard
Danielle Bertini
Derek Bieber
Steven Biles

David Biruk
Zachary Black
Paul Bladow
Phillip Blaiklock
Shaine Junice Blanco
Shawn Blitz
Keith Bogart
Caleb Bolin
Scott Bolton
Jason Bondurant
David Borys
Timothy Boschmans
Robert Bosso
Nicholas Botts
Ian Brady
Thomas Branch
Zach Brannon
Brett Brantley
James Brantley
Sabrina Bratsch
Patrick Brengle
Dominic Brocco
Erik Brown
Matthew Brown
Tiffany Brown
Casie Brown
Derek Brylanski
Brendan Brzoska
William Buehn
Edward Bugel
Chuong Bui
Daniel Buidens
Trevor Burch
Gabriel Burden
Eric Burkett
Jessica Burkman
Ruth Burney
Eric Burnie
David Busot
Jose Busquets
Jose Bustamante
Jorge Calabria
Hande Caliskan
Claudia Calvo
Richard Camino Perez
Damon Campbell
Jose Campuzano
Carlo Canezo
Michael Cangialosi
Thomas Cantin
Jonathan Cantwell
Krisha Capeto
Courtnay Cardozo
Daniel Carnley
Scott Carraro
Juan Carrillo
Adam Carroll
John Carroll
Mark Carter
Michael Carter
Christopher Carusiello
Mark Castano
Yanko Castellanos Ibanez
Nick Cattoi
John Cawthron
Rae Celestine-Honore
Ricardo Cevallos Loaiza

Max Chang
Benjamin Charles
Troy Chasteen
Hassan Chaudhary
Mitchell Chauncey
Abdullatif Chehab
Tarik Chehab
Weizhi Cheng
Gregory Chin Loy
In Ho Choi
Christopher Clark
Stephen Clarke
John Claytor
Laura Clemens
Steven Clements
Daniel Cline Jr
David Coggin
Justin Cole
Krishna Cole
Timothy Collazuol
Austin Coller
Eugene Collings-Bonfill
Adam Collins
John Collins
Joseph Collins
Shaun Connor
Ernesto Contreras
Trishelle Copeland-Johnson
Richard Corbett
Alexandre Cordeiro
Yamile Cordero
Robert Cork
Nicholas Coutu
Jeremy Covey
David Crites
Matthew Crosby
Raphael Crowley
Mason Cummings
Patrick Cummings
Daniel Curtis
Patricia D'Annunzio
Whitney D'Annunzio
Charles Dallas
David Daniels
Brock Daniels
Roya Darioosh
Timothy Darms
Natasha Darre
Serzhena Dashidondokova
Kyle Davis
Susan Davis
Carlos Dawson
Sean Day
Leonard De Angelo
Joseph de Armas
Fernanda De Figueiredo
Isaac De Gracia
Luis de la Maza
Brian Dekrey
Monica Delgado
Parvesh Deonarinesingh
Salvatore DePaolis
Shimelis Dessu
Kristin Devine
Matthew Devito
Celyn Dezmain
Joniel Diaz

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Ryan Diaz
Jose Diaz Tejera
Evelyn Dicks
Kevin Dimarzio
Philip Dirkse
Ryan Doczy
Cristina Dos Santos
Robert Dowling
Gregg Dubinsky
Brittany Dugan
Cory Dunbar
Andrew Duncanson
Alan Dunlavy
William Durie
James Duryea
Tyler Dykes
Andrew Ebendick
Maria Angelica Echavarria Gregory
Kevin Eckel
Ahmed El-Aassar
Hossam Elfeky
John Ellis
Scott Ellis
Matthew Ellis
Naser Elsbihi
Andrew Engelmeyer
Robert Erestain
Eduardo Escudero
Raoaa Essa
Tonya Estwick
Robert Eustice
David Evanko
Scott Evarts
David Eyebiokin
Derick Farfan
Robert Farkas
John Feeney
Andres Feliciano
Stephen Ferguson
Daniel Fernandes
Enrique Fernandez
Nicholas Fernandez
Jason Ferra
Amanda Ferree
Colin Ferris
Hugo Ferstadt
Renee Figueroa
Alyssa Filippi
Michael Finch
Jonathan Finegold
Dominick Fiorentino
Kevin Firestone
Jacob Fisher
Camilo Fita
Matthew Forhan
Richard Foster
Aaron Fournier
Stephen Fowler
Stanley Franklin
John Franklin
Linzy Franks
Billy Fraser
Rubben Frenel
Justin Fries
Alfred Frith
Kimberly Frith
David Frodsham
Jorge Fuentes
Jesus Fuentes Lopez
Hector Fung
Fred Gabuya
Joseph Gadah
John Gaddis
Adrienne Gady
Nikolai Gage
Victor Gallo
Brett Gallrein
Michael Galoci

Andrea Garcia
Beatriz Garcia
Robert Gaylord
Tharu George
David Gerber
Bradley Gersh
Ziad Ghalayini
Janty Ghazi
George Ghorayeb
Tyler Gidden
Angello Giuria
Timothy Gleason
Raymond Goenaga
Virginia Goff
Sally Goldman
Jorge Gomez
Glynnis Gonzalez
Luis Gonzalez
Natalia Gordiyenko
Joshua Gordon
Shawn Gorman
Kushala Gowda
Natrevia Gradney-Mitchell
Kurt Graf
Landon Grantham
Shawn Gravois
Robert Gray
Kevin Green
James Gregitis
David Guerra
George Guirguis
Nugegodage Gunasekera
John Gutierrez
Scott Gutowski
John Hagan
Christine Hall
Shane Hamilton
Jonathan Hammond
Marshall Hampton
Christopher Han
Shawn Hansen
Heath Hardy
Anna Harlson
Zachary Harper
Jayson Harrison
Lindsey Hartsfield
Brandon Haycock
Thomas Hecker
Christopher Hee
Jessica Heiny
Derek Hendrie
John Henriksen
John Herbert
Ryan Hermann
David Hernandez
Edelberto Hernandez
Henry Hernandez
Wesley Hernandez
Ethling Hernandez
Daniel Hertz
Charles Heyligen
Christopher Hickson
Cory Hill
Jacob Hippler
Danni Hirsch
Matthew Hodges
Karine Hoffman
James Hoffman
Maurice Hogg
Natalia Hoogesteijn
Kenneth House
Gregory Hubbell
Logan Huber
George Huddleston
Hewrald Humes
Brett Humfleet
Melissa Hunnefeld
Daniel Hunter

Daniel Huntt
Robert Hurlbert
Kinan Husainy
Wes Hutchison
Minh Huynh
Leon Icaza
Brett Infanti
Giovanni Intagliata-Hooker
Hibai Iriondo
Travis Iverson
Joel Ivey
John Iyoyo
Borhan Jaberi
John Jackson
Priyanka Jagtap
Steve Jaime
Jenna Jakes
Shereen Jamil
Jordan Jayashekaramurthy
Nina Jean-Louis
Michael Jeffery
Curtis Jeffries
Dustin Johns
Bradley Johnson
Ryan Johnston
George Johnston
Marion Jones
Mark Jones
Mickey Jones
Toney Jones
Steven Jordan
Daniel Jordan
Francisco Javier Jordan
Mukesh Joshi
Bryan Kalb
Harkiran Kaur
Phillip Kauzlarich
Tonya Kay
John Keane
David Keith
William Kelleher
Ben Keller
Kyle Kellogg
Aaron Kemper
Amir Keshavarz
Omar Khan
James Kickliter
Krystle Kimmons
Blake Kinney
Stefan Knowles
Dean Koggan
Brian Kolak
Sinisa Kolar
Christian Kottar
Daniel Kovacs
Matthew Kowalski
Zachary Kowalski
Wesley Kraft
Wyatt Krapf
Joshua Kroll
Brittny Kubie
Daniel Kuhn
William Kuhn
Brett Kuziak
Przemyslaw Kuzlo
Kevin Lachat
Geoffrey Lacost
Tiffany Lai
David Landing
John Lanier
Steven Lansrud
Alexander Larson
Brice Latham
Alfredo Layrisse
Florin Lazar
Stefani Leavitt
Mario Ledesma
Daniel Lee

Lin Seng Lee
Raciel Leiva
Jose Leon
Estela Leon Aguilar
Brooke Leonard
Scott Leopold
Kyle Leuner
Allison Lewis
Nigel Lewis
Isaac Lima
Shiqing Lin
Javier Lira
Andrew Lloyd
Gregory Lloyd
James Lloyd
Britt Lockey
Gene Losito
Alireza Lotf
James Lottes
Caitlin Lundell
Mark Luscuskie
Ricky Ly
Robert Maday
Michael Madison
Carl Madsen
Marquese Maduro
Joel Allan Makau
Bohdan Maksymyuk
Tyler Malmborg
Stephan Marcella
Corey Marchman
Nicholas Margarone
Lindsey Marks
Christopher Martinez
Nelson Martinez
Joseph Massimo
Carlos Mata
Patricia Mata
Carmine Matarazzo
Jason Matiacio
Kevin Matiko
Alejandro Maulini Alonso
Luis Maury
Peter McFadden
Frank Mcmahon
Troy Mcnatt
Aaron McPhail
Kinzie McPherson
Ximena Medina
Jennifer Meisenhelder
Eddie Mejia
Jared Mellein
Ramachandran Menon
Robert Mercado
Thomas Mertzlufft
Jonathan Metscher
Matthew Mihalovits
Nicholas Milazzo
Benjamin Miller
Corey Miller
Dennis Miller
Douglas Miller
John Mills
Alexander Milz
Kyungnan Min
Steven Minakami
Ryan Mitchell
Steven Mitchell
Matthew Mitts
Antonio Mohamed
Nelson Mojarena
Manuel Monreal
Daryl Montooth
Christopher Moody
Christopher Morecroft
Peter Moretuzzo
Ryan Morse
Jeremy Morton

Elizabeth Moses
Alex Moye
Nathan Mozeleski
Alan Mrvica
Jaime Mudrich
Brendan Mullaney
Juan Muller
William Murray
Derek Murray
Mohammed Muzammil
Kyle Myers
Sahand Nasseri
Andres Navarro
Vanessa Negron
Timothy Nelis
Andrew Nelson
Glenn Nelson
Pranaya Neupane
Zlatan Nezic
Miriam Nguyen
Kelly Nicholas
Sean Nicholl
Georges Nicolas
Andy Nieto
Rainier Nivet Chan Pak
Joshua Nolin
Jorge Novoa
Pedro Nunez
Robert Nystrom
Russell O'Connell
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Oscar Oliva
Colleen Orr
Daniel Ortiz
Marcel Padilla
Mariano Palacios
Carlos Palacious
Jennifer Palmer
Alejandro Palomino
Michael Pannapacker
David Paquin
David Paredes
Juan Parodi
Jesse Parrish
Don Pasteur
Shan Patel
Manan Patel
Mehul Patel
Brian Peek
Mirna Pehar
Ryan Pellarin
Sergio Pena
Craig Peplinski
Joshua Perez
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Andrew Petersen
Zachary Pfeiffer
Marcos Pinares
Nicholas Pine
Joseph Pishnery
Benjamin Pitchford
Ioannis Polematidis
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Mayler Porro Vasquez
John Porter
Jacob Porterfield
Jindrich Potucek
Evan Prado
Christopher Princivil
Gary Priolo
Matthew Prior
Francisco Puig
Tania Quesada
Brandon Quig
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Sean Ram

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Latest News

Latest News

from NCEES advancing licensure for engineers and surveyors

This page contains a brief overview of recent news releases by NCEES concerning items that may be of interest to our engineering community. These updates published here are intended to be only a brief description so we encourage you to visit www.ncees.org for full releases and their latest and most up-to-date information.

New Records Requirement Approved by NCEES

The NCEES board of directors recently designated the organization's Credentials Evaluations service as the official educational credentials evaluator for its Records program. Beginning December 1, 2012, all NCEES Records applicants with degrees earned outside the United States from programs not accredited by ABET must have their educational background evaluated by NCEES Credentials Evaluations. Evaluations performed by any other service will no longer be accepted.
The board of directors approved the new requirement at its November 2012 meeting.

A NCEES record contains the documentation needed for comity licensure, the process by which someone licensed in one state applies for licensure in another jurisdiction. This includes college transcripts, exam and employment verifications, and professional references. NCEES collects and stores this information and then submits it to a state licensing board on the individual's behalf when he or she applies for comity licensure.

NCEES Executive Director Jerry Carter explained the reason for the change: "*The majority of our member licensing boards only accept an NCEES evaluation when reviewing a licensure candidate, so this change will better meet the requirements of the state boards. We also hope that having a unified method for evaluations will improve the NCEES Records application process for our candidates and save them valuable time.*"

This change will not affect pending applications submitted prior to December 1.

2013 Approved Calculator List Announced

NCEES has approved the following list of calculators for use in the April and October 2013 exam administrations:

- ⇒ **Casio:** All fx-115 models. Any Casio calculator must contain fx-115 in its model name.
- ⇒ **Hewlett Packard:** The HP 33s and HP 35s models, but no others.
- ⇒ **Texas Instruments:** All TI-30X and TI-36X models. Any Texas Instruments calculator must contain either TI-30X or TI-36X in its model name.

Calculators not included within the above descriptions are not permitted in the exam room. Examinees possessing unapproved calculators during the administration of an exam are subject to dismissal from the exam site.

Examples of specific calculator models from the approved list and other exam-related information are available at ***http://ncees.org/exams/calculator-policy/***.

Noteworthy News continued...

MCCi Reveals FBPE as Excellence Award Winner

Each year MCCi awards three clients who have demonstrated excellence through the use of MCCi's solutions. Applicants are required to demonstrate how their use of a MCCi solution has simplified their business processes and saved both time and money along the way. All entries are judged by MCCi staff members during the judging process, they focus on specific results such as decreased environmental impact, time savings, costs savings, improved transparency, and process automation. The top three are then voted upon and the awards announced to MCCi's entire client base of more than 500.

FBPE's submission on how it incorporated the Laserfiche® application into its business workflows and processes stood out above the rest due to their adept leadership in implementing a solution that improved their internal record retention and retrieval system while proving to save the organization both time and money.

MCCi ExperienceExcellence

MCCi is a subsidiary of Municipal Code Corporation (MCC), which has been serving local governments for over 50 years. In 1998 they began implementing solutions in local government offices to help solve their own records management needs and today have evolved to provide these solutions for numerous organizations in local, state and federal governments, as well as in the commercial sector. In addition their range of solutions has expanded to include Enterprise Content Management, Legislative Management, Business Process Management, Electronic Records Management, and scanning and indexing file conversion services. For more information about MCCi visit their website at ***http://www.mccinnovations.com/***.

Employee Spotlight

In each issue of FBPE's Connection we would like to take a moment to acknowledge those individuals whose contributions and outstanding work are directly responsible for the success of FBPE and FEMC.

As mentioned previously in the *Noteworthy News* section of this issue, FBPE was the recent recipient of two awards, the Laserfiche® Run Smarter Award® and MCCi's Excellence Award. FBPE's eligibility for winning these awards has much to do with the labors of two of its employees, ***Amanda Day-Janecek*** and ***Katherine Anderson***.

Amanda's primary responsibilities are as FBPE's Controller Assistant, however, after serving 6 years with FBPE, she has also worked as a Licensure Analyst processing NCEES P.E. endorsement and certificate of authorization applications, handled P.E. exam and re-exam applications and been an integral part of the renewal process. In her current capacity as the Controller Assistant she manages all receipts, deposits and refunds of monies to FEMC and FBPE related to applications, renewal, and general administrative accounting. She also maintains all vendor records, as well as all office supplies' inventory. With Amanda's knowledge and expertise with the LicenseEase system on both the licensure and accounting side it was a natural fit for her to join efforts with Katherine, our Scanning and Records Supervisor to begin the implementation of the Laserfiche® application for the organization.

Pictured from left to right are: Katherine Anderson and Amanda Day-Janecek

Katherine began her employment with FBPE about two years ago as a part time Legal Assistant before moving into a full time position as a Scanning Technician then into the records and scanning supervisory position. Katherine's primary responsibilities include accurately recording and storing all information received from applicants, executing the Florida Laws and Rules examination materials to all new applicants, and overseeing the retention and disposal of archived records from each department.

It became apparent that we were in need of a new way to manage the way we stored and retrieved records not only to handle public record requests but to more efficiently process applications and manage legal and financial documentation. The organization's main issues with the old archival system had much to do with how many paper and microfiche documents were being stored; the many different types of files, duplicate records, the inconsistent naming conventions being used and the inability to do proper key word searches.

Laserfiche® is a software that allows for dynamic content management, workflow, records management, document imaging and webforms and allows the flexibility and portability of paper documents while adding the benefit of digital storage. Workflow and Quickfields are add-ons to the Laserfiche® software that enable automation of the current business process.

Initially Laserfiche® was being used as an archiving system to store closed legal files. Once the project of scanning all closed files was complete, the move to electronically storing the thousands of licensure records began. All previously stored paper files were then input and the process to "go paperless" got started. Amanda and Katherine have been instrumental in developing the actual workflows and Quickfields so when documentation is scanned in the system automatically reads the information and either creates a new record or updates an existing one, then notifies the appropriate analyst that the file is available to be processed. In addition to this, every record is the same file type and using OCR (optical character recognition) allows for any document to be searchable by name, social security number, licensure number, or any key word.

Amanda and Katherine continue to complete this initiative in phases and provide training and develop training manuals for both FBPE and FEMC staff and board members. To date, over 101,627 records are stored in the system to include over 81, 874 engineer licensure records. As they both continue to complete this project, Amanda and Katherine are in the process of finishing a series of Laserfiche® Certified Professional Program (CPP) courses to advance their content management skills and become our resident technical experts on the application and all of its capabilities going forward.

We thank both Amanda and Katherine for their continued professionalism and all their efforts in continuing to automate and streamline our work processes and provide useful and quality service and training to all members of the organization.

What's on the Minds...of Students?

Students are often criticized by seasoned engineers, who expect students to possess enough knowledge and skills (hard and soft) to be ready for the full practice of engineering. They are expected to learn the same theory as their predecessors, plus more recent advancements and modern tools and software. I think that decades-ago graduates forget what they didn't know when they were fresh out of school and that it takes years to become an expert, and their apprehensions about their new career and life as an engineer have since been replaced by other pressures. So, I would like to let students, particularly those who are near to graduation, tell you what's on their minds.

To uncover this, I recently incentivized (by offering extra credit, of course) about 50 senior-level civil engineering students to answer the questions: "***What advice would you ask from an engineer?***" and "***What concerns you most about your future career as an engineer?***" I surprised myself by asking the first question, because I usually tell students to not listen to other people's advice – but to be willing to listen to others' experiences, and then make up their own minds about what might be best for them. I asked the question anyway, because I thought that it would prompt open and sincere responses about what's weighing most heavily on them.

Some students answered with multiple concerns. Many of their responses related to the near future and were as expected: about 23 were concerned with finding a job, the economy, or being marketable or competitive. Fourteen wanted to know the value of getting a master's degree in engineering or business administration. But many more of their responses revealed a desire to be great engineers and to respect the profession, and they seemed to already understand the limits of their education and the need to keep learning.

School vs. Practice?

Whispering a reminder of how I once felt, 22 students' comments were related to what they have learned in school. Half of those -- almost verbatim -- were curious about the difference between school and practice, and how hard it is to transition into the work environment. They were curious about computer software they should know,

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cross-disciplinary skills they need, and anything they did not learn in school that perhaps they should have. The most candid, and perhaps my favorite, comments showed uncertainty about their own abilities: What if I am given a task and don't know how to do it? What if I have to ask too many questions on the job? Do I know enough? How do I keep learning?

Eight were unsure of what discipline to pursue, or if they wanted to work for a large or small firm, but 7 were already thinking heavily about the P.E. exam and obtaining licensure. (This is wise: You never know where your career might lead you. Once you earn it, it will follow you wherever your path leads you.)

Career and Life Concerns

Fourteen expressed concern about being able to handle the responsibilities of an engineer, including keeping the public safe with their designs and the risk of being sued.

Achieving work-life balance, as well as time and stress management, was on the minds of at least a dozen – females and males alike. Another dozen asked questions that hint at a concern that engineering might be boring: What excites you most about your job? Did you choose the right profession? How can I merge my other interests with engineering?

About a dozen wanted to know the key to being a good or successful engineer, and how to advance in their careers. A handful carry heavier burdens: a desire to positively impact their country or the world, and a worry about the effects of globalization on engineering practice.

Answers

Rather than offering answers to these concerns, **I submit to soon-to-be graduates:** Engineers manage to design and build useful and beautiful things, and while doing so, protect the public's health, safety, and welfare. I have a sneaking suspicion that many of them had and still carry similar worries as you do.

To the employers of our soon-to-be and recent graduates: Be mindful of your previous life as a student, and recognize that our new engineers do think about their place in, and responsibilities to, the profession. It is your duty to encourage them, empower them, and teach them "why" and not just "how". It might mean letting down your defenses and telling them what's on *your* mind. Our new engineers are capable and deserving of your guidance, and they are craving it.

To service-minded engineers who visit colleges and interact regularly with students: Thank you for enriching their academic experience and giving them a glimpse of the practice of engineering. Your involvement also helps us educators better prepare students for the profession. For me, keeping close ties with local engineers keeps practical issues fresh in mind, and makes me reminisce and reflect on my previous life as a practitioner before joining academia.

My department is fortunate to have the support of a few such engineers, most of whom set an awesome example by doing service and being involved in organizations such as the Florida Engineering Society and the American Society of Civil Engineers. I like to think that they understand the importance of serving our profession, or maybe they are fulfilled by helping others, or it gives them a feeling of importance, or they have the heart of a teacher. It doesn't matter; what I do know is that these engineers influence our students' thinking about their future profession and what they have to offer it.

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*This article was submitted by FBPE Board member **Michelle D. Rambo-Roddenberry, Ph.D., P.E.** She is Associate Professor at the FAMU-FSU College of Engineering and a licensed Professional Engineer in the State of Florida.*

FLORIDA INTERNATIONAL UNIVERSITY

Discovery Lab Telebots Could Help Disabled Officers, Veterans

FBPE acknowledges that many of our engineering colleges and universities are making great strides in research and development and with permission from FIU's College of Engineering and Computing we are reprinting the following article. This article is a great example of how engineering really does impact the health and safety of the public and our communities.

Jeremy Robins wants to use robots to bring disabled law enforcement officers back to the force.

To bring his idea to life he's given researchers at FIU's Discovery Lab $20,000 of his own money and secured the loan of two custom-built robots from the Institute for Human and Machine Cognition (IHMC) valued at nearly $500,000.

Pictured from left to right are Professor Jong-Hoon Kim, director of the Discovery Lab; Professor S. Sitharama Iyengar, director of FIU's School of Computing & Information Sciences; Jeremy Robins, a lieutenant commander in the U.S. Navy Reserves; and Professor Nagarajan Prabakar.

Robins, a lieutenant commander in the U.S. Navy Reserves, describes himself as someone from a service-oriented family who is "always looking for new challenges." While serving in Afghanistan, Robins had an idea to help disabled police and military veterans reconnect with the work force while simultaneously combating crime. His idea is to use telerobotics, the combination of telepresence and robots, to allow disabled police and military vets to serve as patrol officers.

According to the Veterans Administration, there are more than 181,000 Afghanistan and Iraq War veterans collecting disability benefits today. Many of these veterans are unemployed. In addition to military vets, thousands of police are forced to retire every year because of disability. Telebots could change all that.

"*We want to use telebots to give disabled military and police veterans an opportunity to serve in law enforcement,"* explained Robins. *"With telebots, a disabled police officer will be capable of performing many, if not most, of the functions of a normal patrol officer – interacting with the community, patrolling, responding to 911 calls, issuing citations. Telerobotics has already begun to make its way into the worlds of medicine, business and the military. Extending it into law enforcement is simply the natural progression of things*."

Thanks to Robins' help, IHMC (a major grant-funded robotics institute headquartered in Pensacola, Florida) has agreed to loan FIU two robots built for its Urban Warrior Robot (UWR) program, a $2 million Defense Advanced Research Projects

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Agency (DARPA) initiative. With the help of UWR project lead Jerry Pratt as well as the rest of the IHMC team, robots originally conceived for war will now be filling a whole new purpose in life fighting crime and keeping our communities safe.

As exciting as FIU students now having two military-grade robots to work with is the idea that brought them here. After doing some initial research and learning more about FIU's Discovery Lab, Robins, who has a degree in law but no background in engineering, put his idea in writing in an email to Professor Jong-Hoon Kim, director of the lab at FIU's School of Computing & Information Sciences. The lab was created last spring and is aimed at developing products for the marketplace.

Professor Jong-Hoon Kim (pictured fifth from left), director of the Discovery Lab at FIU's School of Computing & Information Sciences, stands with students and one of the donated robots that are being adapted for the project.

Kim admits he was surprised to receive Robins' email. It's not everyday someone with no prior affiliation with the university offers to make a gift and presents you with a great idea of what to do with the money.

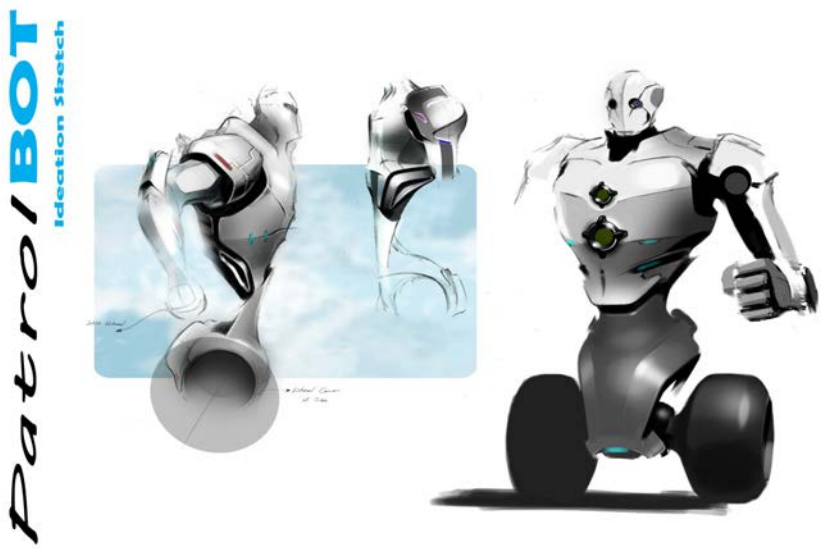
"*So we met face to face and we realized he's a good guy with a good heart, and it gave us a good feeling about this project,*" Kim said. "*So, we got interested and wanted to get started*."

Kim immediately shared the email with the school's director, Professor S. Sitharama Iyengar, and Professor Nagarajan Prabakar. This, they all agreed, is just the sort of project the lab was interested in developing.

"*Jeremy is the principal person, the idea came from him,"* Iyengar said. *"Hats off to him. He is a great citizen. Somebody giving $20,000 and saying let's do it, that's really something. The next step is how do we build it? Whatever amount of resources it takes, we'll take care of it."*

College of Engineering and Computing Dean Amir Mirmiran said the story about how this particular project came about is a testament to the impact of the lab in such a short period of time.

"*FIU's Discovery Lab is truly an innovation sandbox where our most creative faculty and students are applying their out-of-the-box thinking to tackle real problems with smart solutions at affordable costs,*" Mirmiran said.



Early design sketch of telebot being developed at FIU's Discovery Lab.

Robins is now working with faculty and students in the Discovery Lab to develop an initial prototype based on the research done by IHMC. Preliminary sketches have been drawn up and discussions are ongoing with other universities and private companies regarding possible collaboration on the project.

A group of students from FIU's Discovery Lab was waiting for Robins and Kim when they arrived with the IHMC robots in the very early morning hours. The students have divided into teams to address the various aspects of adapting the robots to this project, including mobility, communications, video and interface capabilities.

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The students' enthusiasm for the project is obvious as they work on the robots and tackle the various hurdles involved in seeing it through to its intended purpose.

"*It's also very nice to actually help out our vets and disabled officers,"* said Justin Rodriguez, a fourth-year student. *"They do so much for us and they certainly deserve second chances. So this is definitely a nice opportunity to do something for them.*"

They're looking at telebots offering community policing in high-density public spaces in addition to performing surveillance activities in sensitive areas such as ports and nuclear facilities. The prototype will incorporate video, audio and sensory capabilities, Prabakar explained.

"*We want to look at something that's affordable and can also be deployed so that people can use it,* Prabakar said. *"That's a very important part of this. We want to make sure that the cost is affordable for police departments and others."*

The revolutionary thing about this project, Robins said, is that instead of using robots to take a human out of the workforce, they're using robots to allow a person back into the workforce.

"*We'll be using a technology to allow a person to perform a job they would otherwise be unable to perform or not permitted to perform,"* he said. *"These men and women joined the police and armed forces in order to serve their country, but now because of injury that ability has been diminished. I don't know how to fix a severed spine, but restoring that ability to serve, and specifically the ability to serve in law enforcement—that I think we can fix*."

A video of the proposed telebot project can be viewed on YouTube at ***http://www.youtube.com/watch?v=lhb8Kr-nTuw***.

For more information about FIU's College of Engineering and Computing go to their website at ***http://www.cec.fiu.edu/***.

About the FIU College of Engineering and Computing: *Florida International University's College of Engineering and Computing is South Florida's leading engineering education resource.*

The College offers a complete range of fully accredited engineering baccalaureate, master's and doctoral degree programs in biomedical, civil and environmental, electrical and computer, and mechanical and materials engineering; construction management; and computing and information sciences. With close to $20M of external funding, research is an integral part of the College's mission and its success. The College is committed to diversity, and is the largest producer of Hispanic engineers, and one of the top producers of African-American engineers and females with doctoral degrees in engineering.

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NOTICE

Have an article of interest or a significant acknowledgment that affects our engineering community and education establishments here in Florida?

You can contact the FBPE to consider re-publishing in our quarterly publication, on our website or Facebook page.

Send an email to the FBPE Website and Publications Coordinator at ***smccoy@fbpe.org*** or ***webmaster@fbpe.org***.

Engineers Week 2013 February 17–23

National Engineers Week begins **February 17, 2013 and extends through February 23, 2013**. This year's theme "***Celebrate Awesome***", celebrates YOU - engineers, engineering students, and technicians—and all of the amazing things you do everyday to make the world a better place.

The Foundation's signature program, Engineers Week celebrates the positive contributions engineers make to society and is a catalyst for outreach across the country to kids and adults alike. Engineers Week is part of many corporate and government cultures and is celebrated on every U.S. engineering college campus.

Founded in 1951, Engineers Week is one of the oldest engineering outreach efforts in the United States. It focuses on increasing public understanding and appreciation of engineers' contributions to society.

The National Engineers Week Foundation portfolio of programs include:

⇒ *DiscoverE Educator Awards* - The DiscoverE Educator Awards shine a spotlight on the educators who are inspiring tomorrow's innovation generation.

⇒ *Discover Engineering Family Day* - Held each year at the National Building Museum in Washington, D.C., this action-packed event consistently draws 8,500+ attendees. Over 29 exhibitors and 300+ volunteers, kids and their families build ziplines to safely deliver marbles, explore buoyancy via tinfoil boats, and learn about waves via a giant wave tank, and much, much more.

⇒ *DiscoverE Visits*® -More than 55,000 engineers work with 5,500,000 students and teachers in elementary through secondary schools and after school programs each year through classroom visits and extracurricular programs, using educational materials provided by the National Engineers Week Foundation.

⇒ *Global Marathon-Women in Engineering & Technology: Get Inspired. Be Informed. Change the World.* (March 6-8, 2013) -Free online forum for every woman in E&T.

⇒ *Introduce a Girl to Engineering Day*® (February 21, 2013) - Each year "Girl Day" gives thousands of women engineers, with support from their male counterparts, the chance to directly mentor more than one million girls and young women in grades K through 12.

⇒ *National Engineers Week Future City® Competition* - Operating in 37 regions, Future City works with 1,300 schools and after schools and reaches 35,000 students in a semester-long program. This effective program challenges 6th, 7th, and 8th grade students to design a city 150 years into the future.

⇒ *New Faces of Engineering*- Recognizing the accomplishments of young engineers is the goal of this program. Established in 2003, over 450 engineers have been featured in print and online. These engineers, age 30 years or younger, have shown outstanding abilities in projects that significantly impact public welfare or further professional development and growth.

⇒ *New Faces of Engineering College Edition* - College Edition recognizes the best and brightest 3rd, 4th, and 5th year engineering students, whose academic successes and experiences in the engineering field have positioned them to make an impact.

For more information about e-week and how you can obtain your Engineers Week volunteer kit visit their website at ***http://www.eweek.org/EngineersWeek/EngineersWeek.aspx***.

LICENSURE RENEWAL ENDS FEBRUARY 28, 2013

Licenses for all current and active Florida engineers are set to expire on February 28, 2013. If you have not already renewed your license we encourage you to do so before that date to ensure that your license does not lapse or become delinquent.

You can renew your license on-line or via U.S. mail, although we strongly recommend on-line license renewal because it's both immediate and secure. If you opt for submitting your renewal by U.S. mail, your paperwork and fee must be received by FBPE no later than **January 17, 2013**.

You can access all information related to license renewal from our website. Go to ***www.fbpe.org***, select "***Renew Your License***" from the Homepage and you will be directed to the section where you can review instructions for renewal, print paper forms, or access a presentation with step by step directions.

If you have any questions, concerns or are experiencing issues obtaining an activation code or linking your license, please contact us at **(850) 521-0500** and select "***Renewal***" to update your record.

USF
UNIVERSITY OF SOUTH FLORIDA

engineeringexpo

The College of Engineering at the University of South Florida (USF) will hold its ***41st Annual Engineering Expo*** on **February 22-23, 2013**, in Tampa, Florida. This two-day open house event seeks to educate K-12 students on the importance of science, technology, engineering and math (STEM) within their lives and to encourage more students to pursue careers in these fields. This event showcases the College of Engineering, its academic departments, research labs across campus, student associations and exhibits from local engineering firms.

The expo has grown from 9,000 to 18,000 students in the past few years representing over 30 different student groups both locally and within the state. This event has proven to not only be an excellent educational opportunity, but also a meaningful way for companies and organizations to give back to students through demonstrations of the latest innovations in engineering and technology, while increasing visibility in the USF and Tampa Bay communities. Attendees learn numerous engineering practice and principles, and participate in demonstrations involving robotics, electricity, geology and chemistry, just to name a few. In addition to the exhibits, students can also observe a laser light show, magic show and electric car race. All of these interactive activities allow students and guests to understand the importance of how STEM is used in their everyday lives. For more information about last year's expo such as types of exhibits, participant lists, or picture galleries, visit USF's website at ***http://expo.eng.usf.edu/*** or go to their facebook page at ***https://www.facebook.com/usfengineeringexpo***.

Participating as an exhibitor is free; however sponsorship is a key benefactor in the success for this type of event. There are many levels of sponsorship in which you can help broaden the horizon of Florida's next generation of future engineers, so if you or your company is interested in attending or participating as a sponsor, please complete the registration form located at ***http://expo.eng.usf.edu/sponsors.php***.

The Florida Board of Professional Engineers will be in attendance at this event and is pleased to support USF and all Florida colleges and institutions that are committed to promoting math, science and technology especially as it relates to the practice of engineering.

USF UNIVERSITY OF SOUTH FLORIDA | College of Engineering

The University of South Florida is a high-impact, global research university dedicated to student success. USF is classified by the Carnegie Foundation for the Advancement of Teaching in the top tier of research universities, a distinction attained by only 2.2 percent of all universities. The Carnegie Foundation also classifies USF as a community engaged university. It is ranked 44th in total research expenditures and 34th in federal research expenditures for public universities by the National Science Foundation. USF serves 47,000 students in Tampa, St. Petersburg, Sarasota-Manatee and Lakeland.

For more information about the USF College of Engineering go to ***http://www.eng.usf.edu/index.asp***.

FIU | Engineering and Computing
FLORIDA INTERNATIONAL UNIVERSITY

Engineering Expo 2013

Many schools will be participating in ***National Engineers Week*** and FIU is no exception. The ***FIU CEC Engineering Expo 2013***, a community outreach event organized by the Engineering and Computing College at FIU, will be held on **Friday, February 22, 2013**, in Miami, Florida. This event, celebrating its 12th year running, has become a legacy event for students at the college and the community. It is an annual event where all departments, all student professional societies and all research labs work together to make the event a huge success.

The Engineering Expo is an exciting and dynamic educational experience to engage and expose our local schools and colleges to the wonders of science and engineering. By doing so it is the school's hope to stimulate interest in mathematics, science and technology for future generations.

On the day of the event, over 1,400 students from Miami-Dade and Broward County Schools (elementary, middle and high schools) come to the FIU Engineering Center for an inter-active, multi-faceted program lasting 5 hours. The event starts with opening ceremonies that include a color honor guard, stirring call to action by the Dean and an inspiring speech by a special guest speaker.

After the opening ceremony, groups of 20 students are led by undergraduate engineering student volunteers to visit the various research and teaching labs and participate in "hands on" events and contests.

On the day of the Engineering Expo:

- ⇒ The College of Engineering and Computing research and learning labs will be open for tours;
- ⇒ The FIU engineering student societies plan and execute engineering contests and events with a "hands on" approach to teaching and learning;
- ⇒ The activities, resources and the pedagogic methods used to promote interest in mathematics, science and engineering will be available to visiting educators throughout the event.

The Engineering Expo offers free admission to all invited guests, so if you are interested in attending, sponsoring or volunteering at the ***FIU CEC Engineering Expo 2013***, please contact Stephanie Strange at ***sstra001@fiu.edu***.

Members of FBPE will be in attendance at this event as well as other similar collegiate events being held during E-Week. FBPE's goal is to begin a more visible approach to supporting both the efforts of Florida's engineering colleges and universities and their efforts to encourage STEM in all of our K-12 schools throughout the state. For more information about FIU's upcoming expo and to view a video of their last event go to their website at ***http://www.osas.fiu.edu/outreach/the-engineering-expo-2010/***.

FLORIDA A&M UNIVERSITY - FLORIDA STATE UNIVERSITY
COLLEGE OF ENGINEERING

Spring 2013 Engineering Day

The Florida Agricultural and Mechanical University (FAMU) and Florida State University (FSU) College of Engineering will be hosting its 3rd ***Engineering Day*** on **Tuesday, January 29, 2013**, on campus in Tallahassee, Florida. Engineering Day is a career exposition for students to meet employers and search for full-time, co-op and internship opportunities in the engineering field with companies, non-profit and government agencies.

This event draws many companies offering engineering and industry related services within the areas of Aerospace/ Defense, Energy, Transportation, Utilities, Construction, land planning, urban redevelopment, computer hardware and software, electronics and water resources. FBPE will be attending this event for the second time continuing its efforts to educate graduates and undergraduates on the Fundamentals of Engineering (FE) Exam application process and its requirements. The FE exam is typically the first step in the process to obtaining a Professional Engineer license and will be available in 2014 in computer testing based (CBT) format only.

It is the goal of FBPE to make itself available to answer any questions or concerns future exam takers may have about the requirements or process in taking the F.E. exam here in the state, in addition to making the organization more visible to those companies or entities within the engineering community. FBPE has developed several presentations related to the importance and value of obtaining professional licensure within Florida in addition to explaining Florida's laws and rules as it relates to the practice of engineering and is available to all who are interested. You can find all information as it relates to applying for licensure as well as the latest actions of the FBPE on our website at ***www.fbpe.org***.

For more information about this event or to register as a vendor or sponsor go to the FAMU/FSU College of Engineering website at ***http://www.career.fsu.edu/expos/engineering/***.

The countdown has officially started for this year's ***2013 ASCE Student Southeast Conference***. The Conference Committee and the ASCE Student Chapters from both Florida International University and the University of Miami are teaming up to host this year's event taking place **Thursday, March 14, 2013 through Saturday, March 16, 2013**, in Miami, Florida. With an anticipated attendance of over 1,000 students from Florida, Alabama, Georgia and Tennessee coming together to compete in a selection of competitions, this conference is set to be yet another memorable and impactful experience for all.

Members of FBPE will be in attendance serving as judges and volunteers for some of the competitions as well as, having an information booth available to help attendees and answer student's questions concerning licensure as an engineer in Florida.

As the event draws closer it is important to note that this conference is an excellent opportunity for students to come together and participate in various civil engineering-related competitions. Unlike most "conferences," this is comprised of 15 different competitions, most notably the Concrete Canoe and Steel Bridge. Other competitions include concrete testing, wind engineering, balsa tower, geotechnical engineering, hydraulics and many more. With these activities, students are able to apply knowledge learned in the classroom towards real-world applications.

If you are interested in supporting this event and the many student ASCE chapters' efforts to foster their continued growth to the next phase of their careers, you can sign up to judge or volunteer at ***http://www.ascesoutheastconference2013.com/judges*** or become a sponsor by completing the application through their website at ***http://www.ascesoutheastconference2013.com/sponsorship***. You can also find more information on facebook at ***https://www.facebook.com/ASCESoutheastStudentConference2013***. If you have any questions about the conference, please feel free to contact the coordinators directly at ***ASCEconference@gmail.com***.

Descriptions of the events and pictures from FBPE's attendance at the 2012 ASCE Student Conference held in Tallahassee, Florida can be accessed on our website at ***http://fbpe.org/your-fbpe/events-and-conferences/2012-asce-conference***.

Florida Board of Professional Engineers looks forward to attending and helping in this great venture.

(Continued from page 23)

Howard Ramirez
Javier Ramirez
Noel Ramirez
Harry Ramnath
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Valmiki Rasul
Shabbir Ratansi
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Xuebing Zheng
Tarik Zunic

2013 Exam Dates

P.E., P.S., & S.E. Vertical

April 12, 2013
October 25, 2013

F.E., F. S., & S.E. Lateral

April 13, 2013
October 26, 2013

For more information about the next exam cycle requirements go to ***www.ncees.org***.

UCF E-Week & Anniversary Celebrations

The University of Central Florida will be celebrating its 50th anniversary along with the College of Engineering and Computer Science (CECS) celebrating its 45th anniversary during the upcoming E-Week on February 17, 2013 through February 23, 2013. Like many of the other schools we mentioned in this issue a number of events are planned for students, alumni and members of the local community, all in an effort to celebrate and promote engineering.

Some of the activities planned for the week are:

⇒ **02/18/2013- *CECS Club Showcase***
CECS student organizations showcase all that their clubs have to offer.

⇒ **02/19/2013 - *CECS Engineer's Parade***

⇒ **02/20/2013 - *CECS Engineer's Fair***
All CECS student organizations coordinate hands on engineering activities for attendees. Participants will have the opportunity to play putt putt golf on a student built course, test airplanes constructed by students, race remote control cars, sit behind the wheel of student built formula one cars and even walk on water with a non-newtonian fluid presentation. Free popcorn, sodas and other giveaways will be available at this event.

⇒ **02/21/2013 - *CECS Alumni/Student Networking Night***
Help celebrate UCF's 50th at this business casual mixer event! CECS student and alumni come together to celebrate engineering and make important connections for the future. Hosted by the CECS Alumni Chapter.

UCF
COLLEGE OF ENGINEERING & COMPUTER SCIENCE

⇒ **02/22/2013 - *CECS Engineer's Formal***
Eat, drink and dance yourself Black & Gold at this semi-formal engineer's ball. Hosted by the UCF Society of Women's Engineers (SWE).

You can access more information about these events and other happenings at UCF CECS at ***http://www.cecs.ucf.edu/about/collegeevents***.

UCF's College of Engineering and Computer Science (CECS) offers many different programs for its students. CECS offers 10 undergraduate programs, 14 master degree programs, and 9 doctoral degree programs. For more detailed information about these programs and the school, go to their website at ***http://www.cecs.ucf.edu/.***

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FBPE is committed to protecting the interest of public health and safety by properly regulating the practice of engineering.