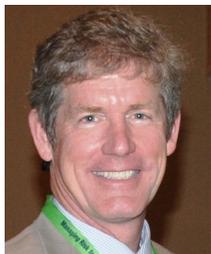


ACEC Tennessee

American Council of Engineering Companies of Tennessee

DECOUPLING THE PROFESSIONAL ENGINEERING EXAM



By: Hal Ballthrop, P.E.

Tennessee Board of Architectural and Engineering Examiners

Most of the quotes and idioms on the subject of “change” imply that change is good, change is growth, change is progress. There are also a few that suggest that change is not always good. A common theme may be that change is not easy. In fact, throughout history change has been a source of a range of human emotions and actions from elation to violence.

Engineers, as members of the learned professions, are educated, trained and practice on the natural sciences (physics), the formal sciences (math) and the applied sciences. Our technical university curriculum is balanced with the inclusion of fine arts, humanities and social sciences. This interdisciplinary approach is set with the objective of helping us know, understand and apply the human impact and influence of our technical professional efforts. This includes protecting and ensuring public health and safety.

Although one may argue that these non-technical courses are or are not necessary in our reduced total hours to graduation, history tells us that contemporary societal convention can affect the principles and practice of many professions. Change is typically not an event but a process as introduction, discussion, administration, observation and subsequent results of change are tracked and studied. This is the case with the consideration of decoupling of the Principles and Practice of Engineering (PE) exam in the Engineering Industry. Decoupling in this context means allowing candidates to sit for the PE exam prior to the historic (conventional) four year post qualifying degree. It is happening and we are in a watch mode in Tennessee.

There are currently seven states (California, Nevada, Kentucky, Illinois, Louisiana, South Carolina, Utah and New Mexico) that allow early exam. This apparently growing advent is compelling the states that do not allow such to examine their statutes, policies and practices on licensure on three fronts: One, what do we require of our in-state resident candidates; two, what do we require of comity applicants; and three, how do we handle in-state

resident candidates if they take the PE exam early in another jurisdiction whether licensed in that jurisdiction or not?

Although no formal action on the part of the Tennessee Engineering Licensing Board has been taken to change current criteria, conversations with the Tennessee Society of Professional Engineers (TSPE), the American Council of Engineering Companies of Tennessee (ACEC of TN) and advisement and opinion by the Tennessee Board of Architectural and Engineering (TN AE Board) Legal Counsel continue. All have been welcome, informative and helpful but also somewhat divided.

Currently, TN AE Board approves applicants to sit for the PE exam in Tennessee if they have graduated from a four-year Accreditation Board for Engineering and Technology (ABET) accredited Engineering Program (or one deemed substantially equivalent by NCEES and our Board Advisor), have taken and passed the Fundamentals of Engineering Exam (FE) and have acquired four years of post-qualifying degree (BS) experience under the supervision of a Professional Engineer. Applicants can earn one year of credit experience for a year of university credited (on their transcript) Co-Op or by holding a MS in Engineering (in addition to the BS in Engineering).

Comity applications have historically been reviewed under the same qualifiers since nearly all jurisdictions followed the same model as Tennessee. Now, we are faced with the consideration of applicants that do not follow the order of accrual of credentials – the timing of taking and passing the PE exam more specifically. TN AE Board Legal Counsel advises that the statutes do not specify order of credential accrual and that we should approve applicants that hold the four criteria even if they take the PE outside the Tennessee model. Further, as the advent of early exam is being availed in more jurisdictions, it is anticipated that we will have in-state resident applicants that have taken and passed the PE exam out of our traditional order that may be a comity applicant or may have taken the exam early in another jurisdiction but did not register as an engineer in that jurisdiction waiting until they accrue the prerequisite experience to apply in Tennessee.

Early PE exam eligibility is anticipated to grow in favor by young graduate engineers. Many of these young Engineering Interns have more retrieval and recall of information that is included

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24 - 25

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DECOUPLING THE PROFESSIONAL ENGINEERING EXAM (CONTINUED FROM PAGE 1)

in PE exam content, have more time to study prior to having heavier work demands and typically less personal responsibilities and family commitments. This is true too as the perception that the PE exam is more academic and less practice. Many teachers of PE exam refresher courses throughout the United States have indicated that their students are simply "cramming" to pass the PE since their post - graduation hiring and assignments. If true, this is likely because Engineering Interns are utilized in more niche specialties (like storm-water, hydraulic modeling, etc.) as opposed to a broader general engineering experience that in times past exposed young engineers to a variety of the discipline specific assignments that would enable better breadth knowledge of engineering practice. Interestingly, reports to date have been inconclusive that passage rates for early exam taking has resulted in a higher passage rate, but this will continue to be monitored. Also, it is interesting to note that most other licensed professions do not require a delay in taking their respective licensing exam. Many do require specific and documented experience verified by licensed professionals like the Engineering profession. It is important to point out that jurisdictions that currently allow early PE exam do still require the years of experience prior to bestowing a license. The same is and will be true in Tennessee as this issue evolves.

There are many thoughts and comments concerning the educational and licensing process of Engineering with one being that the PE exam needs to be "fixed." Both the FE and PE exams are developed, generated and administered by NCEES (National Council of Examiners of Engineering and

Surveying). Content is determined by discipline specific committees of licensed engineers. Gone are the days of pencil and paper exams with partial credit. The current format of the PE exam, being a standardized multiple choice model, is not, according to many, able to gauge the depth of knowledge that has been historically demonstrated to be earned through experience - another example of change with varying resultant opinion. Regardless of the timing of taking of the exam, if the commonly held belief is that the exam is not testing what's intended (principles and practice) then there may need to be more conversation about the content and format of the exam and/or the process of bestowing a license by state boards. One licenser process consideration is an interview with licenser candidates to better gauge principle and practice knowledge.

So, what we can do moving forward is to continue conversations with the Tennessee AE Board Engineering Committee, ACEC of Tennessee and TPSE to ensure a collective and representative voice to our members, the public, NCEES and the Tennessee State Legislature (as needed). We can also continue watching, evaluating and participating in the evolution and change of the engineering licenser process as we do in all things that affect the Engineering profession. Engineers are problem solvers and innovators. Together, through informed constructive measures, any change can include and ensure our collective common goals of protecting the integrity of the profession and subsequently and primarily protecting the public health and safety.

EEA 2016 PROJECT ENTRY LISTS

A2H, Inc.

Industrial and Manufacturing Processes-
Pacific Industries Manufacturing Facility,
Jackson, TN

Amec Foster Wheeler

Structural Systems - INRO White River
Railroad Bridge Replacement,
Elnora, IN

Amec Foster Wheeler

Studies Research and Consulting -
Chattanooga WPA Ditch Program
Phase I, Chattanooga, TN

Atkins North America, Inc.

Transportation - John C Tune Airport
Runway Safety Area, Nashville, TN

Cannon & Cannon, Inc.

Water Resources - Harriman Utility Board
Water Loss Program, Harriman, TN

EnSafe Inc.

Environmental - Henderson County
Stream Restoration, Lexington, TN

EnSafe Inc.

Studies Research and Consulting -
Comprehensive Long-Term
Environmental Action Navy,
Jacksonville (NAS Cecil Field)

Gresham, Smith and Partners

Transportation - TDOT Fast Fix 8 Project,
Nashville, TN

HDR | ICA Engineering

Small Projects - HOI Pedestrian Bridge
Mission Trip, San Esteban, Honduras

FROM THE PRESIDENT

PRESIDENT'S MONTHLY UPDATE [CONTINUED]

Anniversary Awards Banquet and finalizing details for the Event in March...stay tuned.

Government Advocacy

- U.S. House-Senate negotiators are hammering out final dimensions of a long-term highway bill that has eluded us since 2009. ACEC is seeking at least a five-year reauthorization with funding increases in highway and transit programs well above the current baseline. Details are to be completed the end of November, with votes on final passage expected shortly afterwards. As part of ACEC's continuing, aggressive campaign to get this bill over the finish line, we have engaged lawmakers on both sides of the aisle and mounted a full-court PR campaign.
- TN Engineers' PAC sponsored the 2015 House Republican Caucus Fall Retreat at Hermitage Hotel this past month. Several ACEC of TN representatives attended the reception and dinner, and Kasey Anderson and I attended the breakfast and reception with the Committee Chairmen. Several points of emphasis were relayed to legislators including the need to revise the Designer Contract and Fees, Transportation Funding, and our concerns with Privatization.
- ACEC of TN representatives met with TDOT Commissioner Schroer to discuss Transportation Funding shortfalls and general public education on the issue. ACEC and TDOT are concerned about federal funding reductions and how the State is positioned to respond. Also discussed were collaborative public/private training opportunities.
- ACEC of TN held a "Meet and Greet" with legislators in Memphis and Shelby County with several members in

attendance. A similar event will be held in Chattanooga early this month.

- ACEC of TN representatives attended quarterly Quality in Construction meeting with decision makers of the State Architect's Office, University of TN Facilities, Tennessee Board of Regents, State of TN Real Estate Asset Management (STREAM), AIA, AGC, and ABC. The focus of this meeting was a review of the proposed structure and content of the State's RFQ/P project information and Designer Letter of Interest (LOI).
- ACEC of TN reviewed the new State of Tennessee Building Information Modeling standards and in conjunction with AIA met with the State Architect to review impacts to the Designer Contract, insurability, and the State Fee Schedule. Member firms are participating in Pilot projects which assist in the evaluation of the new BIM program.
- ACEC of TN attended the November State Building Commission meeting and noted concern over potential design-build "Performance Contracting" projects. ACEC suggested to carefully consider projects that would appropriately fit design-build delivery method and maintain appropriate QBS for Design Services within these contracts.
- ACEC of TN leaders in conjunction with AIA met with newly appointed Mr. Johnny Stites, Director of Real Estate Process Improvement and Ms. Natalie Hansen, Director of Capital Projects, Dept. of General Services. Both meetings were informative with each party having opportunity to discuss the State's historical and current practices regarding procurement of Designer services, quality of services provided and opportunities for improvement.

HDR | ICA Engineering

Special Projects - R J Corman Railroad Bridge Rehabilitation, Clarksville, TN

Hethcoat & Davis, Inc.

Water Resources - Water System Improvements, Mt. Pleasant, TN

I. C. Thomason Associates, Inc.

Energy - Vanderbilt Powerhouse Conversion, Nashville, TN

K. S. Ware & Associates, LLC

Environmental - West Riverfront Park & Ascend Amphitheater - Brownfield Redevelopment, Nashville, TN

Kimley-Horn and Associates, Inc.

Special Projects - Bass Pro at the Pyramid, Memphis, TN

Kimley-Horn and Associates, Inc.

Studies Research and Consulting - Crossings Circle Transportation Study Spring Hill, TN

LDA Engineering

Water Resources - Kingsport & Downtown Culvert Inspection and Assessment, Kingsport, TN

LDA Engineering

Special Projects - Oak Ridge SSO Program Management, Oak Ridge, TN

Ross Bryan & Associates, Inc.

Structural Systems - University of TN - Student Union Phase 1, Knoxville, TN

RPM Transportation Consultants, Inc.

Small Projects - 46th Avenue and Murphy Road Roundabout and Streetscape, Nashville, TN

S&ME, Inc.

Energy - Marathon Cane Run Slope Stabilization, Louisville, KY

Smith Seckman Reid, Inc.

Waste and Stormwater - Pigeon Forge Wastewater Treatment Plant, Pigeon Forge, TN

Stantec Consulting Services, Inc.

Studies Research and Consulting - CHAMPS, Frankfort, KY

TTL, Inc.

Special Projects - Fast Fix 8, Nashville, TN

Volkert, Inc.

Transportation - Widening of US Hwy. 27 (SR 29) Manufactures Rd.to SR 8, Chattanooga, TN



DECEMBER
2015
INSIDE

- **EEA Project Entries**
- **President's Letter**
- **Decoupling**

FROM THE PRESIDENT

PRESIDENT'S MONTHLY UPDATE



By: John Kenny, PE
President of ACEC of Tennessee

Dear Colleagues –
As we continue to realize that ACEC of Tennessee's value to its membership is so closely aligned with ACEC's (National) mission and value to the membership, we are transitioning this regular article to

one that mirrors ACEC's presidential updates. The format is more of a report regarding monthly activities and we hope that you find it informative.

- ACEC of TN leadership participated in the 2015 Engineer's Conference wrap up session with our partners from TSPE and ASCE. Several suggestions for improvement have been proposed for the 2016 Conference Organizing Committee.
- ACEC of TN's Nashville Chapter partnered with the Society for Marketing Professional Services to highlight local development and had 70+ people at their recent Chapter meeting.
- ACEC of TN's Memphis Chapter held a joint luncheon meeting with TSPE for a legislative update with speaker Kasey Anderson, Executive Director of ACEC of TN.

- ACEC of TN's East TN Chapter collaborated with TSPE for a dinner event "The Complete Professional." The event was geared towards young engineers with three "All-Star" speakers, including Robert Campbell and Harold Cannon, who encouraged them to get involved, communicate with others and give back. More than 80 people attended the event which also included presentation of PE Certificates to newly licensed individuals.
 - The Business Practices Committee completed a brainstorming session on how the profession obtains information to identify threats/opportunities at the national, state and local levels. Additionally, they have developed a plan to notify members when ACEC of TN responds to QBS-related issues.
 - The Environment and Energy Committee had a very productive meeting with George Garden from TDEC, and anticipate partnering with the agency in a comprehensive review of materials.
 - The Leadership PE Committee has been accepting applications for the 2015-2016 Class and should be wrapping up identifying the accepted candidates soon. The program is outlined and promises to be outstanding once again!
 - The Engineering Excellence Awards Committee has been accepting submissions for the 2016 Silver
- Continued Inside....**