

# Texas Board of Professional Engineers (TBPE)

## Structural Engineering Task Force (SETF)

### June 1, 2010 Update

#### BACKGROUND

- ☑ NCEES will replace two 8-hour exams (the Structures I & II Exams) with a 16-hour exam (the PE Structural Exam) in April 2011.
- ☑ TBPE currently licenses those who pass a single 8-hour exam (Civil, Architectural, or Structures I) as PEs. It now must determine the appropriate license for those who pass the new 16-hour exam.
- ☑ At the request of TBPE, the SETF was established to provide advice. The SETF includes representatives of SEAoT, SEI, Texas ASCE, TSPE, and Texas CEC.

#### Structural Engineering (SE) Licensure in Texas?

The SETF advocates changes to the Texas Engineering Practice Act, supplemented with new TBPE Board Rules, in order to establish SE Licensure in Texas for those who select and pass the new PE Structural Exam, as well as for all Texas PEs who currently practice in the field of Structural Engineering.

#### What is SE Licensure?

SE Licensure is the specific regulation of Structural Engineering practice. It can take two forms:

- **Title Act:** TBPE will restrict anyone from representing themselves as a Licensed Structural Engineer unless they hold a Texas SE License.
- **Practice Act:** In addition to the regulations described above, TBPE will restrict anyone from designing certain types of structures unless they hold a Texas SE License. For example, these structures might include Category III & IV Buildings, as defined by the International Building Code, and Multi-Level Interchanges and Exotic Bridges, as defined by the Texas Dept. of Transportation.

Which alternative is best for Texas? Either type of SE Licensure will represent a substantial step forward. The SETF prefers a **Practice Act**, if this is acceptable to all stakeholders.

#### Will a New Engineering Practice Act be Required?

**No!** There will not be a separate Texas Structural Engineering Practice Act. Either form of SE Licensure will only require minor modifications and additions to the current Texas Engineering Practice Act, as well as corresponding modifications and additions to the TBPE Board Rules.

#### Is SE Licensure Necessary?

- Structural Engineering practice is unique in that it involves **more risk** than any other engineering discipline. The **consequences of failure** can result in serious injury, death, and massive economic loss. Every year, there are structural failures with tragic consequences throughout the United States and Texas is no exception.
- Structural Engineering **design and analysis complexity** have increased dramatically. Codes are updated every 3-5 years, encompassing thousands of pages of rules and equations that require the use of advanced computer applications. All structures in Texas must now be designed for earthquakes and high winds. With increased **project complexity**, shorter project schedules, and higher client expectations, the era of occasional or part-time Structural Engineering practice is long past.
- Unlike many other states, the municipalities in Texas typically do not have the resources to perform meaningful in-house structural plan reviews and choose not to require third-party structural plan reviews. Instead, they simply rely on the Engineer-of-Record is a competent Structural Engineer. This does not assure the public of the safety that is inherent in **code compliance**.
- All states with SE Licensure have benefitted through substantially **fewer structural failures** as well as **fewer disciplinary actions** related to Structural Engineering practice.

#### Where is SE Licensure Today?

Illinois began issuing SE Licenses in 1915. Currently, **eleven states** have SE Licensure, representing approximately **30%** of all Structural Engineering practice in the United States.

- Four states have SE Title Acts: Arizona, Idaho, Nebraska, & New Mexico.
- Seven states have SE Practice Acts: California, Illinois, Hawaii, Nevada, Oregon, Utah, & Washington.

As a result of the new NCEES PE Structural Exam, as well as the realities of current Structural Engineering practice as described above, several other states are actively studying the feasibility of establishing SE Licensure. It is anticipated that at least **50%** of all Structural Engineering practice will be regulated through SE Licensure in the near future.

#### Will the Current Practice of Texas PEs be Limited?

**No!** Those who are currently practicing Structural Engineering will be able to continue doing so until their retirement. TBPE will develop rules for transitioning all Texas PEs who currently practice in the field of Structural Engineering. For example, an applicant for transitioning might simply be required to submit an affidavit stating that he or she is currently engaged in the practice of Structural Engineering. The advertised window of opportunity for transitioning might be on the order of 18-24 months, or longer.

#### Will the PE License Change?

**No!** Structural Engineers are proud to be Licensed Professional Engineers. The PE License has always been, and will always be, the primary engineering license in Texas. Its stature will not be diluted in any way. The SE License will be a secondary license acknowledging specialized practice. Thus, the proper designation of a Texas SE will be: **John G. Doe, P.E., S.E.** This individual will be both a Licensed Professional Engineer and a Licensed Structural Engineer in Texas.

#### What's Next?

With the concurrence of SEAoT, SEI, Texas ASCE, TSPE, and Texas CEC, the SETF will author and sponsor a bill to amend the Texas Engineering Practice Act in the 82<sup>nd</sup> Session of the Texas Legislature. The SETF will also advise TBPE in the development of new TBPE Board Rules to implement SE Licensure. This will include the development of the transitioning program. If a Practice Act is established, it will also include the scope of any restrictions that are placed on Structural Engineering practice.

#### Further Information:

For further information, please contact one of the elected officers of the SETF.

#### **Robert Navarro, P.E., SETF Chairman**

Robert Navarro & Associates, Inc.  
124 West Castellano Drive, Suite 201  
El Paso, TX 79912  
Phone: 915-532-1406  
Email: [rnavarro@maenr.com](mailto:rnavarro@maenr.com)

#### **Brian Caudle, P.E., SETF Secretary**

Walter P. Moore & Associates, Inc.  
221 West 6th Street, Suite 800  
Austin, TX 78701  
Phone: 512-330-1270  
Email: [bcaudle@walterpmoore.com](mailto:bcaudle@walterpmoore.com)