

The
**Washington
 Board**



Journal

Number 52 • Fall 2013

*Informing Professional
 Engineers and Professional
 Land Surveyors of the events
 and developments that affect
 their professions*

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A Last Word On Computer Based Testing

<http://cvt.ncees.org/>

Registration for the first administration of the NCEES Computer Based Testing for the Fundamentals of Engineering (FE) and Fundamentals of Surveying (FS) exams opened November 4th for exams administered starting January 4, 2014.

If you are or know of an engineer or land surveyor intern (in-training) that is preparing to take either of these exams it is important they be aware of this transition. Pencil and paper format is no longer available. The NCEES has produced considerable information on their website. There, you will find general information, frequently asked questions, exam specifications and exam site locations and procedures.

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Message from the Chair

“The Message from the Chair” is a reflection of the personal opinions and experiences of the Board Chair. Comments in the article may be shared by various members of the Board, but they are not to be interpreted as a policy, position, or consensus of the Board unless specifically indicated.

From Stephen J. Shrope, PE, SE

Changes and Challenges

As the saying goes, “The only thing constant in life is change.” This quote certainly applies to the Board of Registration for Professional Engineers and Land Surveyors (BOR). At the time of my appointment to the Board three years ago, I was under the assumption that the procedures and administration for professional licensure of engineers and land surveyors were well established and without significant controversy. “NOT!” would be today’s response to that view. In fact, with technology advances in recent years and ever increasing scrutiny of engineering and surveying related projects, the potential changes to licensing laws, rules, and their administration may be greater than at any time in the past. As a result, the challenges to Board members and staff are becoming ever more significant.

Current Board members, with their considerable exposure and experience in traditional licensing laws and procedures, have to proactively acquire considerable knowledge of a myriad of technology and industry changes in order to address current issues. The following are condensed descriptions of a number of these issues and concerns that the Board will continue to address at both state and national levels:

Computer Based Testing (CBT)– The now nationally standardized and administered licensing exams for the FE and FS exams will soon be computer based. This is in keeping with 21st century approaches to licensing in other professional fields as well as the more technology oriented applicants. Soon thereafter the transition to CBT will involve branches of the PE exams. Board concerns: Issues of specific state requirements; experience sequence; applicant handling; acceptance procedures.

Continuing Education – With the apparent occurrence and increased publicity of occasional natural or man-made disasters, the pressure on state legislatures by various professional or political entities to implement continuing education for PEs has been considerable. Ultimately, as in many other states, such legislation is likely to eventually pass in Washington State with the oversight details delegated to the Board. Board concerns: Eventual legislative language and requirements; staff resources; comity issues.

Electronic/Digital Seals – Current law calls for a signed seal on certain professional documentation. When written, such laws never envisioned technological advancements permitting exact duplication of seals and signatures as well as development/recording of documentation entirely in electronic format. The Board continues to struggle with some level of guidance on use and acceptability of

News to You

Governer Inslee Appoints New Board Member

On August 19, 2013, Governor Inslee's office announced the appointment of Nirmala "Nimmy" Gnanapragasam, PhD, PE as the



newest member of the Board. Dr. Gnanapragasam is an Associate Professor in the Department of Civil & Environmental Engineering at Seattle University.

She earned her BS in Civil Engineering from the University of Moratuwa, Sri Lanka, and her MS and PhD in Civil Engineering from Northwestern University. At Seattle University, she teaches a wide range of civil engineering courses and has served as faculty advisor for 18 industry sponsored, year-long senior capstone projects. She has served as senior design coordinator of the department since the fall of 2004.

First licensed in civil engineering in January of 1998, Dr. Gnanapragasam has shown a strong and continued emphasis to her students in support of the benefits of professional licensure. As an Associate Professor from a highly recognized engineering university, she has the increasingly important academic perspective as the Board continues to overcome the challenges of evaluating applicants with varied educational backgrounds.

She has been instrumental in establishing the Civil & Environmental Engineering Department of Seattle University; the only school in the nation to have won the Engineering Award from the National Council of Examiners for Engineering and Surveying (NCEES) seven times. The NCEES Engineering Award recognizes engineering programs that encourage collaboration between students and professional engineers. EAC/ABET accredited programs from all engineering disciplines are invited to submit projects that integrate professional practice and education.

Dr. Gnanapragasam is a past president of ASCE, Seattle. She currently serves as the Affiliate Director

of Project Lead the Way (PLTW) for Washington State, a national Science, Technology, Engineering and Mathematics (STEM) program that introduces and promotes engineering in middle and high schools.

Board Vacancies To Open Next Summer

It may seem a bit early, but if you are interested in applying for a position on the Board, it is never too soon. The Governor's office accepts applications throughout the year and considers all eligible candidates for upcoming vacancies.

In the summer of 2014, two members of the Board will be completing their second term of service and a total of ten years as members of the Board. Dan Parker, PE (electrical) and Mel Garland, PLS will be retiring from board service on or after July 9, 2014; they may stay beyond this date if replacements have yet to be appointed.

One engineer and one land surveyor position will be appointed. Eligibility for appointment requires that you:

1. Must have been licensed (in Washington) for at least ten years prior to appointment.
2. Must be a resident of Washington State.
3. Must have been in active practice for the five years immediately prior to appointment.
4. Must be a US citizen.

The application and instructions are available on the Governor's website at <http://www.governor.wa.gov/boards/default.aspx>.

The review of applications by the Governor's office usually starts around the month of April and results in a decision in the month of June or July. This timeline is variable depending upon a variety of factors. The members of the Board and their staff are not directly

involved in screening applicants, however, we may be asked to detail what experience or characteristics are most needed to keep the Board as diverse as possible.

Service as a board member is a position of high responsibility on behalf of the citizens of Washington. Not only does the Board establish and maintain the standards for new licensure but they also are called upon to evaluate the competency and level of professionalism when licensees and applicants are found to have violated rules of professional conduct.

On average, a board member will spend about 3 days per month (8 hour days) performing the work of the Board. It may be attending board meetings, making presentations to stakeholder groups, participating in regional and national meetings of the NCEES, or serving as a technical expert over investigations, exam item writing, and administrative rule development.

It is very important for all members to attend and participate in the Board's business activities. While member roles and responsibilities may vary over their terms of service, all members perform the above work so that no one member carries more than their share.

If you have any interest in applying but have questions before you decide, please contact me at your convenience.

George A. Twiss, PLS, Executive Director
Ph. 360-664-1565 or email: gtwiss@dol.wa.gov.

Changes With The Board Staff

The Business and Professions Division of the Department of Licensing (DOL), in need of a strong leader to take over a complex program area, asked the Board's Deputy Executive Director, Robert Fuller, to serve on a temporary basis until they could complete recruitment for this Administrator position. They recognized Mr. Fuller's strengths in organizational management and administrative law and knew he was well qualified to step in.

He ultimately accepted the temporary assignment and was told it would be for no more than 90 days. The Board was supportive of this opportunity as it allowed Mr. Fuller to experience new challenges, if only for a few months. He was immediately successful and made critical and key decisions that averted potential controversy. His leadership was recognized and rewarded when the Division accepted his application. On July 16, 2013, he

officially became the Administrator for this program.

The Board fully recognized his value to our staff and knew he deserved this opportunity for advancement. The Board provided strong endorsement for his appointment, although his abilities made the final decision almost a certainty.

On November 20th the Board posted the announcement for recruitment of the Deputy Executive Director. The final selection should occur about the first of the year.

Lisa Brown, PE Completes Her Final Year Of Service

As she outlined in her "Message from the Chair" (Spring 2013), Lisa enjoyed her years as a member of the Board. Throughout her ten-plus years, Lisa played a key role as one of the first appointees to the On-site Wastewater Advisory Committee in 1999 when the new licensing program for that profession was just getting started. Working at the Department of Health (DOH) in Spokane on the Large On-site Systems made her a perfect fit to give state DOH perspective on the implementation of the Designer licensing program.

When Carol Fleskes, PE, retired from the Board in 2003 several characteristics made Lisa a prime candidate for her replacement. First, and most importantly, was her experience working for a regulatory program and specifically having knowledge of the techniques and requirements for on-site wastewater system designs. Secondly was that Governor Locke had made it a priority that appointments to governing boards and commissions would have diverse memberships representing the interests and perspectives all of Washington's citizens. In this highly qualified female professional engineer from Spokane, the Governor found the perfect fit.

She would never use a term like "remarkable" in describing herself. But those of us who watched her balance management responsibilities to DOH and the Department of Ecology with her growing family could only marvel at her level of energy and commitment to the Board.

Computer Based Testing Affords The Board An Opportunity To Streamline Processes

On November 4, 2013, online registration opened for applicants to the NCEES Fundamentals of Engineering (FE) and Fundamentals of Surveying (FS) examinations. This marks a significant step toward the initial offering of these exams via computer based testing (CBT), set to launch January 4, 2014. For all state boards this change poses significant challenges to adapt laws, rules, procedures, and instructions that have long been oriented toward paper and pencil exams traditionally offered twice each year.

The Washington Board has historically received about 2400 applications annually for both exams. The vast majority come from students who have graduated or are about to graduate from an accredited academic program in engineering. These applicants had the benefit of an abbreviated application process due to academic accreditation. In processing these applicants, our primary task was to confirm they were students in or had a

degree from a program
accredited by the
Engineering

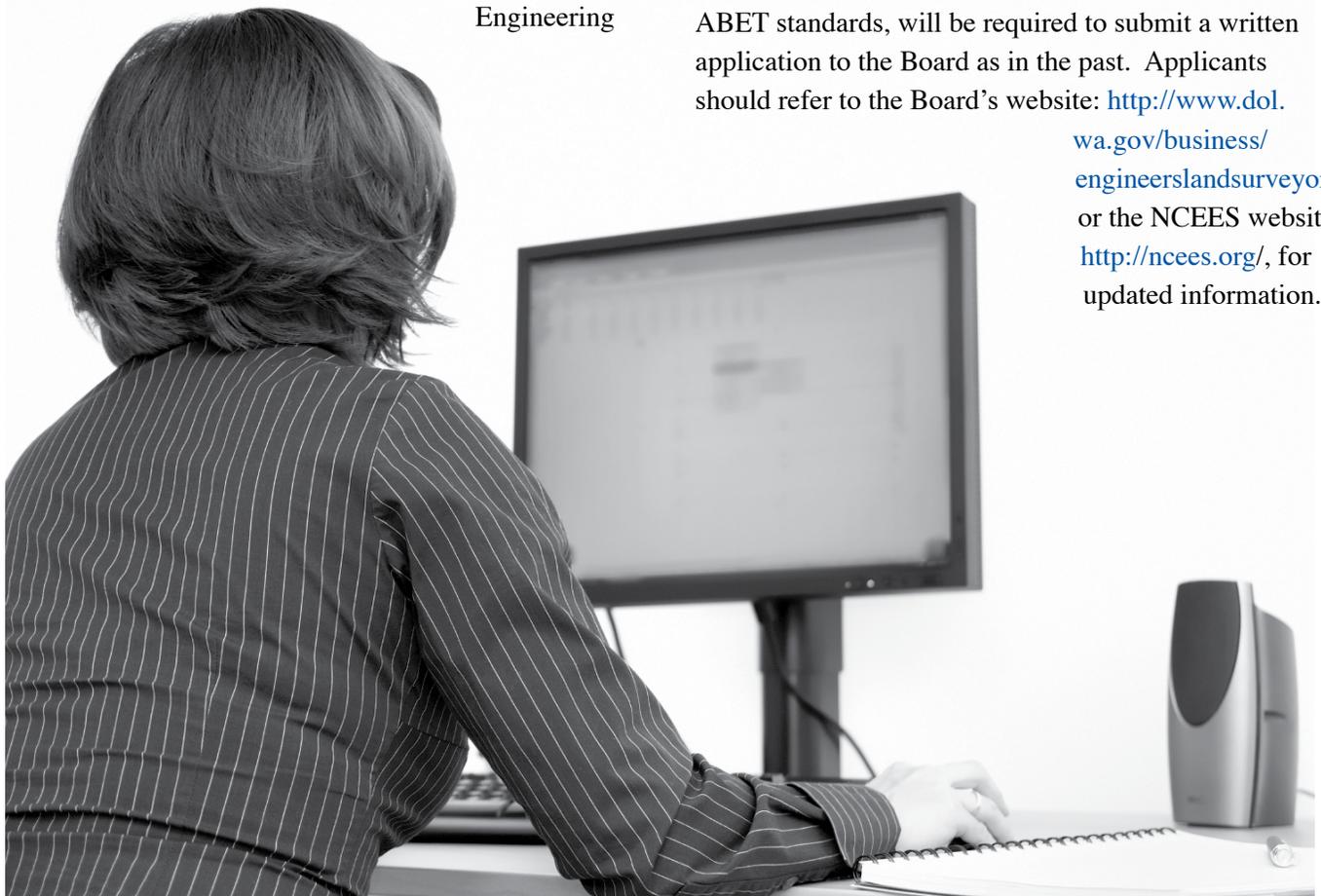
Accreditation Commission of the Accreditation Board of Engineering and Technology (EAC/ABET).

Replacing the twice-per-year exam cycle with CBT affords great value to applicants including simplified online registrations and greater exam access and frequency.

Washington law, however, requires an applicant for either of these exams to be “approved” by the board before taking the exam. To take advantage of online registration, the Board grants those holding an EAC/ABET degree the ability to register directly through the NCEES.

Once an applicant passes the exam, they may obtain their Engineer-In-Training certificate in Washington by applying to our office. Our process independently verifies they have obtained the required degree and passed the exam. This change greatly lowers our processing time for all FE and FS applicants regardless of their educational status. Registration charges applied by the NCEES remain in effect and are payable directly to the NCEES by the applicant.

Any FE or FS applications without the EAC/ABET degree, or other education that requires individual evaluations such as technology programs, non-engineering degrees, and degrees not equivalent to EAC/ABET standards, will be required to submit a written application to the Board as in the past. Applicants should refer to the Board’s website: <http://www.dol.wa.gov/business/engineerslandsurveyors/>, or the NCEES website: <http://ncees.org/>, for updated information.



Lessons Learned!

It comes as a humbling experience to admit a mistake. It is even worse when the mistake has a negative effect on individuals who did nothing wrong and simply did what was asked of them. As licensing boards, our work begins when we respond to the basic question: “Can I have a license to practice engineering?” Exactly how we respond is a rather complex reflection of what the candidate reports they did and what we are able to verify. Our goal is always to be fair and accurate in reaching the point where we can confidently respond.

Well, as the story goes, “Once Upon A Time...” the National Council of Examiners for Engineering and Surveying (NCEES) began approving foreign nations to obtain and administer the FE and PE examinations. Following procedures that involved onsite visits, candid conversations, and written assurances, each nation was granted the privilege of accessing the NCEES exams. The goal, in part, was to foster and introduce some measure of consistency to the qualification of engineers on a global scale. At last count, the council’s exams are available in Canada, Egypt, Emirate of Sharjah, Turkey, Japan, Korea, and Saudi Arabia.

Shortly after the first examinations were internationally administered, the Washington State Board began receiving applications for licensure from those who had taken and passed both the FE and PE exams. Most were from Canada and Japan but we did receive a few from Egypt. The individuals were applying on the basis of comity because they had completed the experience, education and examinations of our basic requirements. The applicants from Egypt also presented documents of their membership in the *Egyptian Syndicate of Engineers (ESE)* as evidence of a professional license.

By early 2012 we had received and evaluated eleven applicants from Egypt who were deemed qualified by the Board for a license via comity. Each of these individuals was respectful of the process and provided what was needed when requested. While we did experience difficulty in responsiveness it was primarily due to the great distance and some political unrest in Cairo. Each

application appeared complete and our approval process did not reveal any points of concern. The documents appeared to represent credentials that were equivalent to the US standards to issue a professional license. We believed, at the time, the candidates from Egypt were qualified and issued each a license to practice engineering as a Washington PE.

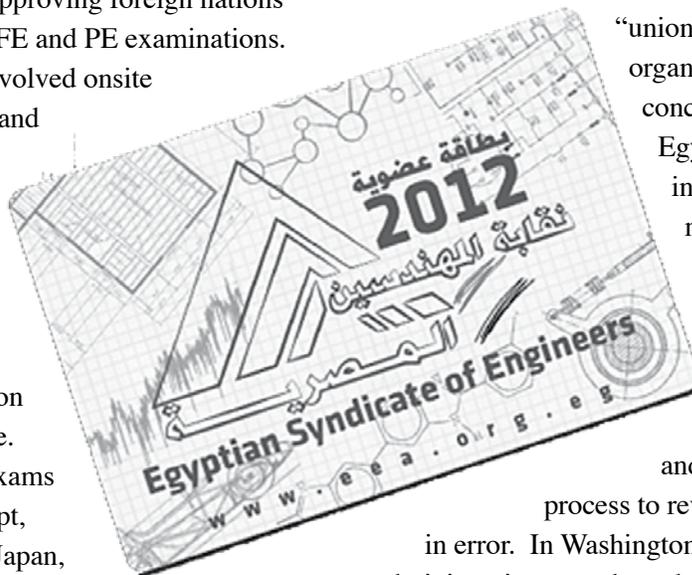
About mid-2012, for reasons now irrelevant, we had cause to look more carefully upon the organizational makeup of the *ESE*. We performed an online search of a variety of websites that discussed the syndicate organization and membership requirements. We also contacted NCEES staff to find out their understanding of the organization. They confirmed that the organization is more closely defined as a “union” or “professional/technical organization.” At that point we concluded the decisions on the Egyptian applicants were made in error. Our mistake: the *ESE* membership credential was not a professional license.

We were now confronted with a problem that needed fixing. We proceeded down a lengthy and complicated administrative process to revoke each license issued in error. In Washington, a licensing authority has administrative remedy and obligation to correct erroneous licensing decisions. That process is more complicated than there is space in this publication to explain. Yet it assures each individual due process and multiple opportunities to participate.

So, with our plan in place, one Board member was assigned responsibility to conduct a detailed review of each applicant’s file. His primary scope was to determine if any information was missing or insufficient in detail. The conclusion was that one license was correctly issued but ten had not provided sufficient detail to support the issuance of a license. His recommendation was that these ten were to receive official notice of our planned administrative action to revoke their license.

What was, more or less, a straight-forward process to communicate options to affected individuals quickly became a “nightmare.”

As you might imagine, it was a difficult process to explain to these individuals the reasons we were notifying



them and asking for information we should have already had. Yet, while understandably frustrated, each was professional and demonstrated remarkable patience. Due to no fault of their own, their status as professional engineers was put in limbo as the administrative process continued. Each applicant provided what documents they could as well as more descriptive information when asked. Their responses were as prompt as possible, given the considerable distance between us and the need for certain notices to be sent by mail. As of April 1, 2013, one has chosen to not contest the revocation, four have been approved to retain their license, five are pending board approval, and one is awaiting initial administrative review.

Lessons learned?

1. The administration of the NCEES examinations to foreign jurisdictions presents a new dynamic to the traditional licensing process.
2. Different countries may have differing definitions of what constitutes a professional license. We are now working on a clear definition that will explain exactly what we mean by a professional license and/or regulatory board.
3. We must continue to honor the integrity of the licensing process. If an error is discovered, no matter how painful, steps must be taken to fix the error.
4. Council staff may not have all the answers, but they can still serve as a valuable resource on how to obtain information.

Executive Director Receives National Award

George Twiss, Executive Director for the Board since 1997, was awarded the Meritorious Service Award by the NCEES in August. Nominated by the Board, the award presentation was part of the closing ceremonies at the Council's annual meeting in San Antonio.

Twiss was first hired by the Board in March of 1986. Since that time he has been board investigator, Investigations Manager, and Executive Director. By the



time he retires in the spring of 2015 he will have served the Board for over 29 years.

In his service record to the NCEES and the Board, Twiss has:

- Served as Western Zone spokesperson to the member Board
Administrators Networking Group 2005-2008
- Western Zone Secretary-Treasurer: 2006-2010
- Western Zone Awards committee 2009-2012
- Western Zone Interim Meeting organizing committee 2010-2011

Chair, member or consultant to:

- Committee on Law Enforcement committee 1987 to 2001
- Electronic Technology Task Force 1998-2000
- Committee on Uniform Procedures & Legislative Guidelines 2001- 2004
- Special Committee on Constitution and Bylaws 2004-2006
- Structural Exam Task Force 2006-2008
- Committee on Finances 2007-2008
- Evaluation of Applications Task Force 2009-2011
- Advisory Committee on Council Activities 2009-2010
- Alternate Licensure Task Force 2009-2011
- Education Task Force 2011-2012
- Committee on Exam Policy and Procedures 2012-2013
- Land Surveyors exam standard setting volunteer 2007

In receiving the award from the NCEES, Twiss was one of only two Board administrators chosen for the award from 22 nominees across the country.

Is Whistleblowing a Job Killer or a Career Killer?

NOTE: The following article is reprinted with permission of PE Magazine, Published by the National Society of Professional Engineers, 1420 King Street, Alexandria, VA 22314-2794, December 2012. The information and opinions reflected herein are those of the author and do not necessarily represent the other members of the Board or agree with past articles the Board has had in the Journal.

BY: Board Member, Neil Norman, PE, CEng, F.NSPE

Our NSPE Code of Ethics is, I believe, the strongest of that of any profession. The National Council of Examiners for Engineering and Surveying, states' engineering licensure laws, and the codes of other engineering technical societies are consistent with the main provisions of the NSPE Code.

This ethical code frequently requires a delicate balancing between our competing and often conflicting obligations.

I.1. Engineers shall hold paramount the safety, health, and welfare of the public in the performance of their professional duties.

I.4. Engineers shall act for each employer or client as faithful agents or trustees.

II.1.d. Engineers shall not permit the use of their name or associate in business ventures with any person or firm that they believe is engaged in fraudulent or dishonest enterprise.

Engineers, who must consider their obligations relative to public safety or business fraud situations, can be faced with the conflict of their duty to be faithful agents for their employers. Many NSPE Board of Ethical Review [BER] cases deal with these conflicts. An employee who communicates outside the authority structure of his or her employer is popularly dubbed a "whistleblower." That label can be damaging and can lead to a loss of credibility for the whistleblower.

When is an engineer obligated to go outside his employer's chain of command to meet obligations to public safety or to avoid fraudulent acts? If an engineer takes this course for personal gain in position, fame, or financial gain, the whistleblower label will probably stick. We all know of engineers who have a pattern of communicating around their organizational hierarchy or outside the organization, often seeking some sort of personal gain. These actions often result in professional damage. This pattern can be a career killer.

In some cases, however, the engineer is eventually forced to communicate outside the employer's chain of command. In BER case 88-6, a city engineer was overruled by an administrator when she tried to promote modifications to the city's sanitary waste management system. Overloading of the system was likely to occur because of the extra loading of



agricultural waste during canning season. She was warned to desist or risk the loss of her job. This responsible engineer decided not to report the problem to the responsible state authorities, although she did notify city council members. The predicted sewage waste overflow did occur some months later.

In the analysis of the case, the BER judged her to have been unethical for not notifying state authorities. If she had gone to the authorities she could have lost her position, but she would have enhanced her standing in the professional community and helped her career. Her primary obligation was to public health and safety, which can't be trumped by job security or agency loyalty.

**NCEES NEWS:
Cleveland
State
University
Wins 2013
NCEES
Engineering
Award**



The winners of the NCEES Engineering Award for Connecting Professional Practice and Education have been named, with the grand prize going to the Cleveland State University Civil and Environmental Engineering Department. The award jury met June 4, 2013, in Clemson, South Carolina, to select the \$25,000 grand prize winner.

The department received the prize for its submission, Design, Funding, and Construction of the August Pine Ridge School/Hurricane Shelter in Belize.

For the project, civil engineering students from the university's chapter of Engineers Without Borders collaborated with faculty, professional engineers, and allied professionals to design and construct a building that would not only provide additional classroom space for a Belize school but also serve as a hurricane shelter for the local community. The jury praised the project for demonstrating the value of collaboration and the challenge of finding improvised, local solutions.

The jury selected five additional winners to receive awards of \$7,500 each:

Northern Arizona University Department of Civil Engineering, Construction Management, and Environmental Engineering

Paper Pulp Sludge Characteristics and Applications

Seattle University Department of Civil and Environmental Engineering

Design Options for a Creek Crossing for a Utility Company

Seattle University Department of Civil and Environmental Engineering

Structural Evaluation and Retrofit of a Warehouse

University of Nevada, Reno Department of Civil and Environmental Engineering

Capstone Design Project—South East Connector

University of Texas at El Paso Department of Civil Engineering

Multidisciplinary Design of a Sustainable, Environmentally Friendly, and Affordable House

The NCEES Engineering Award recognizes engineering programs that encourage collaboration between students and professional engineers. EAC/ABET accredited programs from all engineering disciplines were invited to submit projects that integrate professional practice and education.

In selecting this year's winners, the 10-member jury of NCEES members and representatives from academic institutions and professional engineering organizations considered criteria such as:

Successful collaboration of faculty, students, and licensed professional engineers

Benefit to public health, safety, and welfare

Multidiscipline and/or allied profession participation

Knowledge or skills gained

"Projects like these are innovative ways to teach students about the vital importance of technical competency and ethical practice in the engineering profession," said NCEES President Gene Dinkins, PE, PLS. "We hope they will inspire other engineering programs to introduce similar collaborations."

Cleveland State University was honored at the NCEES annual meeting. Representatives from the winning project received the award on behalf of the university's civil and environmental engineering department at a luncheon on August 23.

NCEES is currently preparing for the 2014 award cycle, and entry information will be available in October. The 2013 NCEES Engineering Award Book will also be released this fall. More information on all of this year's winning projects is available online at <http://www.ncees.org/award>.

Signatures On A Record Of Survey

In our Spring Journal we had an example of a question from a licensee on what signatures are required for a record of survey. It seems that many licensed land surveyors had developed the practice that one signature was satisfactory while others signed in two places; one in the Surveyors Certificate and one over the seal.

This drew some attention and some individuals asked follow up questions that pointed to the variety of ways these requirements were being applied.

To make it simple, the correct application for a surveyor to apply their signature on a Record of Survey is in two places. This is because the signature requirements are defined and established under two separate laws.

First is the Survey Recording Act itself. In RCW 58.09.080 there is the certificate the law requires to be included in the ROS. That certificate, shown here for illustration purposes, specifies certain language and includes the requirement for a signature and seal of the licensee.

SURVEYOR'S CERTIFICATE

This map correctly represents a survey made by me or under my direction in conformance with the requirements of the Survey Recording Act, at the request of _____
in, _____ 20 _____

Name of Surveyor:

(signed and sealed)

Certificate No: _____

Surveyor's Certificate

This certificate must appear on only one page and must be shown exactly as it appears in statute. Perhaps it can be illustrated in a box?

Second are the requirements under the Engineer's Registration Act. In RCW 18.43.070 it states, in part:

Each registrant hereunder shall upon registration obtain a seal of the design authorized by the board, bearing the registrant's name and the legend "registered professional engineer" or "registered land surveyor." Plans, specifications, plats, and reports prepared by the registrant shall be signed, dated, and stamped with said seal or facsimile thereof. Such signature and stamping shall constitute a certification by the registrant that the same was prepared by or under his or her direct supervision and that to his or her knowledge and belief the same was prepared in accordance with the requirements of the statute. **It shall be unlawful for anyone to stamp or seal any document with said seal or facsimile thereof after the certificate of registrant named thereon has expired or been revoked, unless said certificate shall have been renewed or reissued.** [emphasis provided].

Note: Board rule [WAC 196-23-070] requires the signature across the face of the seal.

So what to do? Probably the method most used is to place the seal in the box that contains the certificate. Then, sign both the seal and the signature line under the certificate. This seems the easiest way to satisfy both laws' requirements.

Also, over recent years the Board has noted that the wording of the Surveyor's Certificate by some licensees has departed from the form and content in the Survey Recording Act. Keep in mind that the form and content of the certificate is a statutory requirement and should not be altered.

Financial Support For Survey Advisory Board

For over two years, funding from the legislature limited the Survey Advisory Board (SAB) of the Department of Natural Resources (DNR) from holding meetings and performing technical work in support of the Public Land Survey Office (PLSO).

Earlier this year, the Board of Registration (BOR)

proposed to host SAB meetings in conjunction with regularly scheduled BOR meetings. The plan was to have the BOR cover the cost of one additional meeting room and the personal expenses of SAB members so they could resume their regular meeting obligations. That plan resulted in the inaugural meeting on August 7, 2013. As planned, the SAB conducted its business concurrent and independent of the BOR committees. The joint meeting effort also resulted in convenient opportunities for members of both boards to participate in the meetings of the other.

The BOR will continue to support the SAB's meetings until funding resumes from the legislature. These joint meetings afford interested stakeholders an excellent opportunity to observe the meetings of both the Board of Registration and the DNR's Survey Advisory Board at the same location and date.

NCEES Elects Patty Mamola, PE As President

Patty Mamola, PE, began her term as 2013–14 National Council of Examiners for Engineering and Surveying (NCEES) president at the conclusion of the organization's annual meeting, held August 21–24 in San Antonio, Texas. She is the first woman to hold this position since the organization's founding in 1920.

Mamola has been a member of the Nevada State Board of Engineers and Land Surveyors since 2006. A resident of Reno, Nevada, she is one of the founding principals of the professional engineering firm Bowling Mamola Group. She replaces outgoing president Gene Dinkins, PE, PLS, of South Carolina, who will remain on the NCEES board of directors as immediate past president.

Also during the annual meeting, NCEES members elected David Widmer, PLS., of Pennsylvania president-elect for the 2013–14 term and Gary Thompson, PLS, of North Carolina treasurer for 2013–15.

NCEES welcomed James Purcell, PE, of New Jersey and Daniel Turner, PhD, PE, PLS, of Alabama to its



board of directors as well. Purcell and Turner will serve two-year terms as vice presidents of the Northeast Zone and Southern Zone, respectively.

Rounding out the board of directors are two members serving the second year of their two-year terms: Michael Conzett, PE, of Nebraska returns as Central Zone vice president, and Von Hill, PS, of Utah continues as Western Zone vice president.

When Are Political Donations or Campaign Activities Unethical?

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BY: Board Member, NEIL NORMAN, P.E., Ceng, F.NSPE

In this apparently never ending political season, I have been asked to readdress this important question. Accessing the NSPE Board of Ethical Review cases online, we can see that the BER has considered this question at least 20 times since the first such case in 1962. The cases have been complex and the opinions have often not been unanimous.

NSPE has held a consistent position to encourage all engineers to support political candidates who have demonstrated through their activities a commitment to ethical professional practices and to the support of infrastructure and other issues of importance to engineering. By becoming involved in the political process, we can affect legislative, legal, and regulatory policy. The NSPE Political Action Committee and state society PACs were created to provide vehicles for access to elected politicians to further these ends. Beyond these joint means of access, many engineers know and have worked with political incumbents they want to, and should be able to, support.

Engineering has the strongest code of ethics of any profession. This code has generally been

institutionalized in the laws and rules of state licensing boards. We have zero tolerance for bribery, fraud, and corruption. Yet we are continually shocked to see the publically aired details of violations of these standards by political incumbents. As a result, many engineers are leery of entering the arena to become active in the political process or are even reluctant to participate in engineering PACs.

This lack of enthusiasm for the political process is unfortunate because it is necessary in our republic to enter the fray in order to influence the protection of public health and safety. Elected and appointed government incumbents at all levels make decisions for us. Whether they know it or not, they need our expert knowledge and advice to arrive at sound public policy on technical issues. Through meetings and communications with engineers, they can develop trust in our competence and honesty, and we can positively affect public policy. Those of us who have worked to explain the need for qualifications-based selection to legislators know how difficult that can be and how transient their understanding may be.

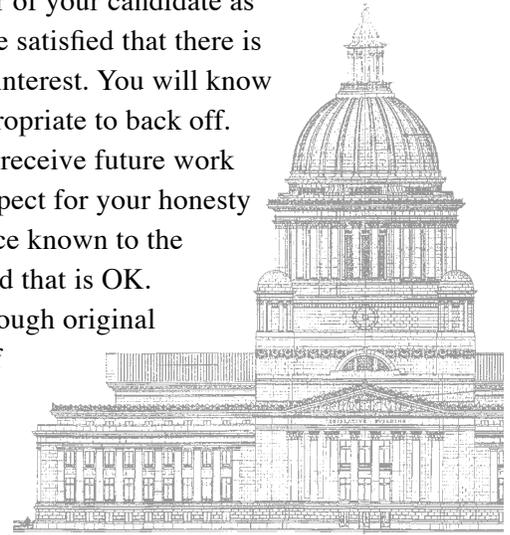
Our ethical codes and the differing state and federal laws dictate the limits to our participation in this process. In the NSPE Code of Ethics, Section II.5.b states that “Engineers shall not offer, give, solicit, or receive, either directly or indirectly any contribution to influence the award of a contract by public authority, or which may be reasonably construed by the public as having the effect or intent of influencing the awarding of a contract. They shall not offer any gift or other valuable consideration in order to secure work....” The laws frequently stipulate limits to political donations, but our decisions beyond legal restrictions must be personal interpretations.

If we have or are being considered for a client relationship with the candidate or if the candidate is in a position to grant us or our firm future work, we are on soft ground. Large cash contributions are not appropriate in these cases.

We should strive for full transparency with our peers, the public, the press, and our own consciences. Use your empathy to see how competitors or project opponents might view your actions. Assume that all details will be publically discussed. Your motivations in providing political support are the key consideration. It is not unethical to belong to a PAC, to make cash contributions, to participate in campaigns, or be an

open supporter of your candidate as long as you are satisfied that there is no conflict of interest. You will know when it is appropriate to back off. You may well receive future work because of respect for your honesty and competence known to the candidate—and that is OK.

NSPE, through original sponsorship of the National Institute for Engineering Ethics, our strong Code of Ethics, and the 500 cases documented by the Board of Ethical Review has been a catalyst to discussion of this question. To dig deeper, access those BER cases on the NSPE Web site. You can also visit the Web sites of the NIEE and Texas Tech University’s Murdough Center for Engineering Professionalism. You will find decades of wisdom documented.



Something To Think About

“Ethics is knowing the difference between what you have a right to do and what is right to do.”

Justice

Potter Stewart

US Supreme Court (1958 – 1981)

Ethics

The Washington Board Journal

Questions & Answers



Land Surveying:

Question:

In a conversation with a fellow land surveyor he told me that he had no responsibility or liability to check the accuracy of survey record documents. He said that if there was an error in the record the surveyor or engineer who created it is responsible even if that error resulted in further erroneous work by anyone using it.

As a surveyor, I feel I need to do some level of checking such work. I have done so believing that I would be subsequently responsible for any errors I perpetuate. Am I correct?

Answer:

You are correct. Professional responsibility carries over to the surveyor who uses erroneous work. The Board's rules that could apply to this situation are:

WAC 196-27A-020

Fundamental canons and guidelines for professional conduct and practice.

(1) Registrant's obligation to the public.

(b) Registrants must be able to demonstrate that their final documents and work products conform to accepted standards.

(e) Registrants shall be objective and truthful in professional documents, reports, public and private statements and testimony; all material facts, and sufficient information to support conclusions or opinions expressed, must be included in said documents, reports, statements and testimony. Registrants shall not knowingly falsify, misrepresent or conceal a material fact in offering or

providing services to a client or employer.

(2) Registrant's obligation to employer and clients.

(a) Registrants are expected to strive with the skill, diligence and judgment exercised by the prudent practitioner, to achieve the goals and objectives agreed upon with their client or employer. They are also expected to promptly inform the client or employer of progress and changes in conditions that may affect the appropriateness or achievability of some or all of the goals and objectives of the client or employer.

(h) Registrants shall advise their employers or clients in a timely manner when, as a result of their studies and their professional judgment, they believe a project will not be successful.

WAC 196-27A-030 *Explicit acts of misconduct.*

(4) Failing to provide relevant information on plans and surveys in a clear manner consistent with prudent practice.

(7) Failing to correct engineering or land surveying documents or drawings known to contain substantive errors.

NOTE: While this question addresses a situation involving the practice of land surveying, the analysis is also relevant to engineering practice.

On-site Designer Licensing:

Question:

Some local building/development officials are asking that a homeowner specify where on their lot the storm water collection facilities will be located. Many times that requirement ends up being added to the OS system design plans that have the stamp of the OS Designer (OSD). Isn't that wrong for an OSD to add this information to their development plan?

Answer:

The Board and the past members of the OS Advisory

Continues next page

Committee have stated in the past that licensed OS Designers should not make any representations or delineations for storm water location under their state license. Their scope of practice, defined in RCW 18.210.010, makes no allowance for the OSD to locate, even approximately, the size and location of proposed storm water facilities. If a professionally licensed consultant is needed by local officials to make that determination, it must be by a professional engineer.

Question:

In the counties I most often practice, I frequently see where system replacements or repairs are performed by installers. A couple of the installers I know are also designers so I have no problem with that. However, one installer in particular does a large number of repairs with full approval by the county. Some that I have seen (after the fact) show that the repair was a significant reconfiguration of the original and included system components not previously included. Why should an installer be permitted to do this?

Answer:

Without knowing all the details on the projects involved it would be difficult to draw any specific conclusions about what you observed and whether there were any acts contrary to state law. Designs can only be done by an On-Site Designer or Professional Engineer. Alterations to an existing system or design should be performed by either a professional or, as in some counties, the design is done under the authority of the Environmental Health Director. If you believe unlicensed practice is occurring then you are urged to bring the details to the attention of the Board.

Engineering:

Question:

I live and practice in the Portland area and recently had an opportunity to visit one of the wind turbines that are so numerous when driving up the Columbia Gorge toward Pendleton. Impressive as they are I am curious about the level of oversight that these structures are subject to by the Board.

Answer:

These structures are mostly in a category of a “machine” even though they are very large. They

are usually fabricated in a manufacturing facility and transported to the site, where it is assembled. For the Board, machinery falls within the “industrial exemption;” RCW 18.43.130 Excepted Services.

However, any machinery, whether it is a wind turbine or an HVAC unit, has certain engineering requirements to be performed to “adapt” the machinery to the site conditions. For these turbines, the anchorages and foundations must be designed by a professional engineer licensed to practice structural engineering in Washington. Wind turbines, of the nature you described, are under the definition of a significant structure defined in RCW 18.43.020 because they usually exceed 100 feet in height. Because of that, a qualified SE must design the site foundation.

Continuing Education...Where Are We?

The most recent Spring Journal contained an article regarding continuing education (CE) and included statistics that some may interpret as support for CE. The article intended to illustrate what the Board has observed since CE was added to land surveying licensing renewals in 2006. It was a look back to reveal what had occurred.

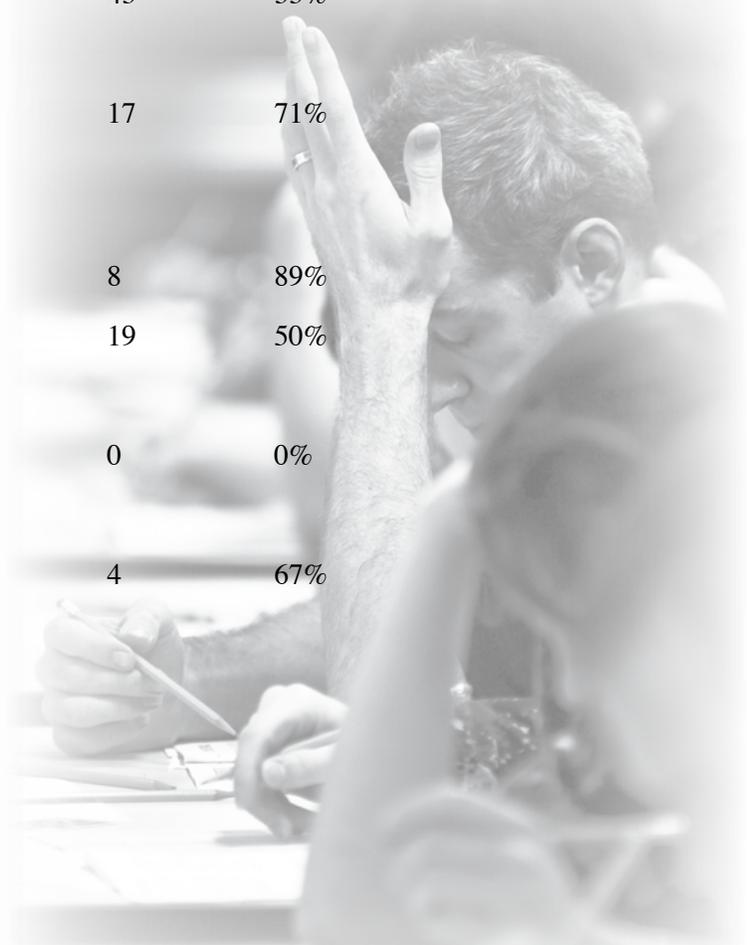
Whether programs for mandatory CE provide strong correlation proving, or disproving, the value of continuing education will be debated for years to come. Individual Board members may or may not support the value of CE; however, as a governing body, the Washington Board has maintained its neutrality on the subject. If enacted by the legislature, the Board is prepared to implement any such program in the best and most effective way possible. In the 2013 legislative session, neither the House of Representatives nor the Senate passed the CE proposal.

If mandatory CE is enacted in the future for professional engineers, it will be when the professional engineering community, representing all areas of practice, has a unified voice of support. The Board will not promote it nor take sides on its value to professional practice.

Examinations

April 2013 Examination Results

	Total	Pass	% Pass
Fundamentals of Engineering (EIT)	756	559	74%
Principles & Practice of Engineering			
Chemical	10	6	60%
Civil	304	128	42%
Electrical	45	28	62%
Environmental	14	5	36%
Mechanical	104	72	69%
NA/ME	8	3	37%
Structural	129	43	33%
Fundamentals of Land Surveying (LSIT)	24	17	71%
Principles & Practice of Land Surveying			
NCEES – 6 Hour	9	8	89%
WA Specific L S (2-hour)	38	19	50%
On-Site Designer	2	0	0%
On-Site Inspector	6	4	67%



Investigations & Enforcement

Statistics of Actions Taken By The Board

JANUARY 1, 2013 THROUGH JUNE 30, 2013

Active investigations as of January 1, 2013	6
Investigations Opened	34
Investigations Closed	25
Active Investigations as of June 30, 2013	15

SUMMARY BY MONTH:

	Complaints Received	Inquiries Received	Investigations Opened*
January	6	1	6
February	5	0	5
March	9	1	9
April	5	1	5
May	9	0	9
June	0	0	0
Totals	34	3	34

**Investigations can be opened by either a complaint or an inquiry received.*

SUMMARY BY PROFESSION AS OF JUNE 30, 2013

	Active Investigations	Legal Status	Compliance Orders
Prof. Engineers	7	0	0
Prof. Land Surveyors	5	0	2
Unlic. Engineers	2	0	0
Unlic. Land Surveyors	1	0	0
On-site Designers	0	3	0
Totals	15	3	2

Legal status refers to the investigations that the Case Manager has referred to legal for violations and the Board Order is in progress of being issued.

Summaries Of Investigations And Actions By The Board

The following case summaries cover the disciplinary actions against licensees from January 1, 2013 - June 30, 2013. In each disposition the Board accepted the recommendations of the case manager, unless stated otherwise. For those cases involving a Board order, each licensee may be monitored for compliance with the conditions imposed in the order.

The summary information provided under "INFORMAL ACTIONS" is provided to educate licensees on events and circumstances that come before the Board for investigation. In those cases no disciplinary action is taken because either the allegations are unsubstantiated, fall outside the scope of jurisdiction of the Board or it becomes unnecessary because of corrective measures taken. Any investigations that reveal clear and convincing evidence of wrongdoing, and where a Board Order is issued, will be listed under "FORMAL ACTIONS".

The decisions of the Board members who work as Case Managers of the investigations are based upon their personal opinions of the severity of the infraction and the best course of action to take to appropriately resolve issues. Interpreting any one or several dispositions as indicative of the Board's view of how all such cases will be handled in the future would be incorrect.

These summaries are not intended to disclose complete details related to any given investigation or action. While every effort is made to ensure accuracy of the information shown, anyone intending to make a decision based upon this information should contact the Board office for details.

INFORMAL ACTIONS:

Case No. 13-01-0006

This investigation was opened following an inquiry from an agency supervisor regarding a survey performed by the respondent, an employee of the agency. The survey is located

in a section partially surveyed by the agency in which the respondent participated (not as a licensed Professional Land Surveyor). The inquiry requested guidance from the Board if the respondent violated Rules of Professional Conduct and Practice.

Following a thorough review of the investigation, the Case Manager concluded the respondent did perform and record a Record of Survey in August 2012 on private property in a section partially surveyed by the agency. The respondent utilized public record, used his own equipment to perform measurements, and was assisted by his son.

The Case Manager felt there was no clear evidence the respondent violated the stated WAC.

Case No. 12-07-0001

This investigation was opened following a complaint which alleged the respondent falsely represented himself in a declaration filed with the court in a boundary dispute case in which the respondent testified as to the location of a particular tree.

Following a thorough review of the investigation, the Case Manager concluded the surveyor did file a declaration with the court dated December 19, 2011. The content of the declaration described the approximate location of a 30" wide ponderosa pine tree as being within a 30' wide easement that his client had the ability to use. The surveyor visited the site and observed the location of the tree but did not survey it to obtain a definitive location. He did, however, observe the tree was within the 30' wide easement because his crew had staked both sides of it.

The Case Manager felt the respondent acted properly given the circumstances and could find no evidence of wrong doing in his actions or any false or misleading statements in his declaration.

Case No. 12-10-0004

In September 2012, the Board was informed by a city that a preliminary short plat boundary was

in conflict with a Record of Survey recorded in 2004. In October 2012, a formal investigation was opened.

An excess of approximately six feet existed in a subdivision plat recorded in 1871. Each surveyor used a different method to determine the location of lot lines. Neither survey showed the entire block (in this case, entire row of blocks), or an explanation of the basis for determination of the property lines. After the investigations were opened, both Professional Land Surveyors had discussions with one another concerning this problem. The 2004 Record of Survey placed the excess footage in the most easterly block judging that the plat "Description," gave the footage of only that block, as "more or less." The preliminary short plat had used a proportion method throughout the blocks.

The Case Manager asked the Respondent to prepare an amended Record of Survey of his 2004 survey for his review and approval prior to recording. The amended Record of Survey should, "show all monuments... utilized for the determination of property lines. All found and record dimensions shown as well as all record surveys utilized for property line determination. If any use lines (fences, buildings, etc.) were utilized, their location and description. A narrative describing the methods and reasoning for determining the property lines established."

The respondent prepared an amended Record of Survey. The Case Manager noted the effort the respondent made in the preparation of the Amended Record of Survey. The respondent was informed to record the Amended Record of Survey. With the recording of the Amended record of survey, the Case Manager recommended to close the case.

Message from the Chair

electronic/digital medium. Board concerns: Validity and security of seals/signatures; flexibility of electronic/digital medium to meet needs of both practitioners and regulatory agencies; continued evolving technology.

Foreign Applications – With US exams becoming more of a professional standard in many countries along with ABET accreditation of many foreign university engineering programs, requests for licensure in Washington and other states has increased substantially.

Board concerns: Comity and new applicant issues with education records as well as type, sequence and validation of experience; cultural differences potentially affecting understanding of U.S. licensure.

Structural Examinations – Last year, Washington, as well as other affected states, adopted the NCEES, 16-hour exam for licensing of Structural Engineers. As expected, there are still some kinks to work out. Board concerns: Adequacy of testing to address specific Washington State seismic and critical structures requirements.

Technology Impacts – No one questions the “light speed” at which technology changes, affecting our everyday lives. Similarly the Board is faced with new issues regarding such changes as they may affect newer applicants and licensees. Board concerns: Communication medium (web site, journal, facebook, other?); equipment technology effect on definitions and limits of responsibility of specific licenses; proposed, new exam/license designations.

Board Budget – Even though it is self-supported through licensee fees, the Board administratively is

positioned within the State Department of Licensing and is thereby subject to policies and direction from the Governor’s office. In the last two years, such direction has adversely affected the budget and operation of the Board. Board concerns: Potential continued budget impacts on Board operations and licensee fees.

Board Membership and Administration – This year we also respectfully say goodbye and thank Lisa Brown, PE for her ten years of dedication to the Board and also welcome the Governor’s new appointee, Dr. Nirmala Gnanapragasam, PE. Regarding Board membership and as noted on the page one sideboard, the Board is not only facing a somewhat unprecedented turnover of members in the next two years, but several of the senior administrative staff members are also on the cusp of retirement after many years of service. Such challenges certainly can be met, but can complicate resolution of longer term issues.

I would hope that this brief list offers everyone some idea of what BOR is facing in its prime mission of licensing qualified professional engineers and land surveyors in the state of Washington, while also undertaking significant updates to laws and rules affecting all licensees. The complexities and nuances of some of these issues are at times daunting. The members of the Board and staff are committed to addressing these and other challenges. Your help, through your ideas and active participation in meetings and workshops, is of critical importance to our success. You can best keep in touch with us via email: Engineers@dol.wa.gov.

Schedules

Examination Schedule

Spring 2014 Administration

Examination	Type	Examination Date	Application Deadline
Agricultural, Chemical, Civil, Electrical, Environmental, Industrial, Mechanical, Naval Architecture and Marine Engineering	NCEES	Friday April 11, 2014	Wednesday January 15, 2014
16-hour Structural	NCEES	Friday & Saturday April 11, 2014	Wednesday January 15, 2014
Land Surveying (6-hour)	NCEES	Friday April 12, 2014	Wednesday January 15, 2014
Land Surveying (2-hour)	State	Friday April 11, 2014	Wednesday January 15, 2014
On-Site Wastewater Designer / Inspector Certification	State	TBD	Wednesday January 15, 2014

Calendar

The following is a proposed calendar of the Board's meetings, and participating events for the first half of 2014. The dates and locations noted for Board and Committee meetings are subject to change without notice.

February

4 – 6

NCEES Board Administrator' Meeting
Scottsdale, AZ

19 – 20

Committee and Special Board Meetings
SeaTac, WA

March

5 – 8

LSAW Conference
Marysville, WA

April

16 – 17

Committee and Special Board Meetings
SeaTac, WA

May

9 – 10

Board Workshop
Leavenworth, WA

15 – 17

NCEES Western Zone
Lincoln, NB

June

18 – 19

Annual Board Meeting
SeaTac, WA



Board of Registration for Professional
Engineers and Land Surveyors
P.O. Box 9025
Olympia, WA 98507

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