#### **BOARD NEWS**

# Colorado Board of Registration for Professional Engineers and Professional Land Surveyors Volume VIII February 1996

#### **Sealing of Unfinished or Incomplete Plans**

As evidenced by some recent cases that have come before the Board, and in conversations with other engineers, it appears as though the sealing of "unfinished or incomplete" plans is occurring more frquently in these "hurry-up" times. There are at least five reasons for this, that I am aware of, and probably more:

- 1. Frequently in design/build projects, plans are prepared in sufficient detail only to the extent necessary to obtain a building permit.
- 2. The engineer may believe that the product of his/her services and, therefore, the completeness of his plans should match the fee so as to ensure profitability on every project. The attitude seems to be that if the client wants to pay half price then all he is going to get is half of a design.
- 3. The engineer is not competent, perhaps preparing designs not in the engineer's area of expertise.
- 4. The registrant seals documents or drawings which were not prepared under the engineer's responsible charge.
- 5. Under the terms of the engineer's services contract, the engineer is required to seal the various phases of the design process such as schematic design, design development, etc.

The Board's position is, quite simply, that if an engineer's seal appears on any document(s), without caveat, then all persons viewing or using such document(s) are entitled to believe that it is complete. If an engineer, for whatever reason, elects to seal a document(s) which the engineer knows is incomplete, then a statement indicating that the document(s) is incomplete and the nature of the incompleteness must appear next to the seal. However, the Board does not believe this is a desirable practice.

It is unlawful to practice outside of your area of expertise. The Board, in assessing an engineer's adherence to the standard of care criteria in his or her area of expertise, does not consider the fee that the engineer received for his or her services to be relevant. Pawning off the design of key structural components to a truss manufacturer does not absolve the engineer of the responsibility for the overall structural integrity of the entire structure.

With regard to the sealing of documents for design/build projects, a quotation from an article written by Ted Wynne, PE, appearing in the Tennessee Board newsletter states quite clearly, "There should be sufficient detail on our final, sealed working drawings to exhibit compliance with applicable codes, and to relieve the installing tradesman or builders from any necessity of making design decisions.

The Board recognizes that plans and specifications for local projects are often prepared by an out-of-state engineer, who, although registered in his or her home state, is not registered in Colorado. Usually, a local engineer is sought out to review the drawings and apply his or her seal. In the opinion of the Board, it is unreasonable and unnecessary to require a Colorado registered engineer (who might also reside out-of-state) to completely redesign the project. If an engineer reviews and seals such documents, the engineer must have thoroughly reviewed the document(s), performed appropriate analyses and confirmed code conformance. Be aware that the Board will, nevertheless, view these documents as if they had been prepared under the responsible charge of the reviewing engineer.

Similarly, for land surveyors, on deposited plats for unfinished projects, a statement declaring that the plat is a preliminary plat must appear with the surveyor's seal.

-Sol Chavez, PE, Chairman of the Board

#### **Welcome To Our Newest Board Member**

Appointed to the Board on July 1, 1995 to replace Phil Peterson, **Wayne Clark**, **PLS**, has an extensive surveying background with over 40 years in the business, the last 17 of which have been with his own firm. He was licensed in 1962 and has worked both in the private sector and with governmental entities. One of the advantages of Wayne's appointment to the Board is his diverse experience in the metropolitan areas of Denver and Colorado Springs as well as the rural areas of southern and eastern Colorado. With that, the Board now affords a balance between Front Range and Western Slope surveying experience.

Wayne's professional activities include memeber and past director of PLSC (Professional Land Surveyors of Colorado), member and past President of the Southern Chapter of PLSC, past member of the El Paso County Regulatory Review Board, and test question preparation for the Colorado State Specific Surveying examination.

We welcome Wayne's balanced perspective.

#### **Board Members**

Chair Vice Chair Secretary	Sol Chavez Mike Drissel Diana Horner Mary Anne Blish Marie Milliken Harry Goff Mark Burroughs Wayne Clark	PE Mechanical PLS PE Structural PE Civil Public Member PE-PLS PE Electrical PLS	Principal, Sol Chavez Engineering Principal, D & H Surveys Principal, Plains Engineering Principal, Aqua Terra Ph.D., Ret. Registered Nurse Principal, Goff Engrg & Surveying Eng. D., Professor, Colo. Tech. Principal, W.K. Clark & Assoc	Colo.Spgs Grd. Junct Denver Denver Denver Durango Colo.Spgs Colo.Sprgs

Public Member Principal, Bookhardt & O'Toole Dawn Bookhardt Denver

# **Survey Quorum Members**

Chair	Mike Drissel, PLS	Vice Chair	Harry Goff, PE-PLS
Secretary	Wayne Clark, PLS	Member	Marie Milliken, Ph.D.

# **Board Staff**

Angie Kinnaird	Program Administrator	894-7784
Brenda O'Connell	Exam Administration	894-7787
Leah Frank	Program Assistant and Office Administration	894-7785
llene Mothershed	Renewals and Reinstatement Processing	894-7789
Wilma Bartel	Applications Processing	894-7791
Judy Quintana	Office Assistant	894-7792
Pat Sullivan	Monument Records Clerk	894-7788
Jim O'Bannon	Administrative Assistant	894-7788

# **Legal Assistance**

G. Charles Robertson **Assistant Attorney General** Investigator

Janet Audette

#### 1996 BOARD MEETING DATES

January 12	February 9	March 8*	April 12	May 10*	June 14
July 12	August 16	Sept. 13*	Oct. 11	Nov. 15	Dec. 13*

Anyone is welcome to attend the Board Meetings. However, please check with the Board office to assure that the time and date has not changed. All meetings begin at 9:30 a.m. and are held in Conference Room 1350B, 1560 Broadway, Denver, Colorado.

<sup>\*</sup> The Survey Quorum will meet during these months and start at 9:30 a.m. The Board Meeting will begin at 11:00 a.m.

#### What's Going On At The Board Office?

The Division of Registrations as a whole is working its way into more sophisticated technology, but not without a lot headaches. We recently converted to a <u>new database system</u> that combines all of our work on applicants, licensees, disciplinary action against licensees, renewals and reinstatements onto one system. In the long run, it will be significantly more efficient than the system we have had, but the short run has its share of glitches, not the least of which is license renewals. As a result, license renewal notices have been going out late. If you are scheduled to receive a renewal notice in the first half of this year and it doesn't arrive as early as usual -- it will and you don't need to call us -- we are aware of the timing issue and are doing our best to work around the problems.

Another step ahead will be the addition of ALIS -- or <u>Automated License Information System</u> -- later this year. That will allow anyone to call into the system and with a touch tone phone be able to find out information about a license such as whether it is active and when it expires. In the long run, this system will allow up-to-the-minute information, in contrast with the annual roster which is outdated by months by the time you receive it.

And last on the administrative front, by year's end, we will assess the value of getting a <a href="https://example.com/home-page">home-page</a> on the Internet for the purpose of providing forms, (such as applications), the laws and rules, and any current developments to the public and to our licensees. The objective would to be able to provide information in a more timely manner and allow our information to be more accessible to the public, licensees and applicants.

-Angie Kinnaird, Board Program Administrator

#### **Surveying A Line**

As a practicing land surveyor in colorado, it's not uncommon to have a land owner call you requesting that you locate only one of his or her property lines. The land owner is not interested in having the entire property surveyed. Their only concern is to make some type of improvement on or close to that line and they need it located. As a professional you need to realize that this is a land survey that the owner is asking you to perform.

The location of a property or boundary line is the practice of land surveying and is therefore subject to the state statutes and Board rules. If you agree to perform this type of survey, it may be a good idea to inform your client that you are performing a land survey and that you are required to comply with state statutes. While performing this survey, state statutes require all aliquot corners used in the survey, either as control or property corners, to be upgraded and monument records filed. You will also be required to deposit a plat, if you set or accept a corner not already part of the public records.

It has been the Board's experience to have surveyors locate only one property line and believe that this is not a land survey. Anytime you are asked to survey a line, keep in mind there are always two parties affected, your client and the adjoiner. Your responsibility as a professional land surveyor is to safeguard life, health and property and to promote the public welfare. That is inclusive of more than just your client.

-Mike Drissel, Chairman of the Survey Quorum and Vice Chairman of the Board

#### **Donations Desired!**

The Library Committee of the Colorado Engineering Council earnestly solicits your tax-free support of continuing education for technical professionals in Colorado. This is a cooperative effort to continue to strengthen and improve the depository of technical books and material in the Business, Science and Government Publications Department of the Denver Public Library.

Your gift supports all aspects of this department, including the development of a computer information network, handbooks, technical textbooks, sample registration licensing examinations and other pertinent material.

Please make contributions to the Friends Foundation, Denver Public Library, 1357 Broadway, Denver, Colorado, 80203.

Your support is vital to the future of engineering professionals!

# Major Changes Are Underway in the FE and PE Examinations

#### Fundamentals Examination (FE)

Effective with the October, 1996 exam, the format of the exam will change. Rather than having all examinees take the same examination, only the morning session will be common to all disciplines. It will consist of 120 problems, each worth one point.

The afternoon session will be discipline-specific with each examinee selecting the examination in one of the following: chemical, civil, electrical, industrial, mechanical or the general engineering section which includes all other disciplines. The afternoon session will consist of 60 questions worth two points each.

#### Principles and Practice of Engineering Examination

At the NCEES Annual Meeting last August, the Member Boards approved a significant change for the PE Examination for the chemical, civil, electrical, environmental and mechanical disciplines. The new format is described as a "Breadth and Depth" examination. The morning half of the examination will test the breadth of knowledge across the spectrum of that discipline, whereas the afternoon session will test the depth of knowledge in a specific sub-area of the discipline. Candidates will choose one of the sub-areas prior to taking the exam. For example, a candidate taking the electrical exam may choose from one of the following sub-areas: power, electronics, control systems, computers, or communication systems.

The new format will be implemented no sooner than April, 1998.

# **Improvement Location Certificates**

It has come to the attention of the Board over the latter half of 1995 that surveyors around the state are performing Improvement Location Certificates in violation of Board Rule XVI, particularly (a) and (j). This rule was adopted by the Board to guide the surveyor in attaining the minimum requirements necessary in performing ILC's. The Board suggests that all surveyors performing Improvement Location Certificates take a closer look at Rule XVI to make sure that you are in compliance with state statutes.

#### **County Compliance With Plat Deposit Law**

A task on which the Survey Quorum of the Board has been focused for the past year is revising and updating the guidelines to Colorado counties on their plat deposit procedures. PLSC sent out a pamphlet to this effect shortly after the deposit law was enacted. However, the procedures are being administered inconsistently from county to county, as you well know. The Board believes that it's time to encourage counties to more closely comply with the directives of <u>C.R.S.</u> 38-50-101 Survey plat - records file and index system - informational purpose.

Thanks to the efforts of Phil Petersen, former Board member, and Harry Goff, who is currently on the Board, we sent out information to the counties in December notifying the county commissioners of the application requirements. We hope to continue to send this information out on an annual basis to overcome the problem of staff turnover. We're also getting help on this situation from the Colorado Association of County Surveyors and their Secretary-Treasurer Warren D. Ward, PLS, who sent a letter to all counties to encourage compliance with the law and offer assistance in implementing the requirements.

# Colorado Geological Survey Presents Conference on March 22, 1996 "GEOLOGICAL HAZARDS AND ENGINEERING PRACTICES IN COLORADO"

The Colorado Geological Survey is sponsoring a conference called "Geologic Hazards and Engineering Practices in Colorado" on March 22 in Colorado Springs. The conference is for engineers, geologists, planners, builders and others who use, design and build structures in Colorado's complex geologic settings.

The conference will be held at the Colorado Springs Country Club from 7:30 a.m. to 5 p.m. One focus of the conference will be case studies that emphasize mitigation related to building in geologically hazardous areas in Colorado. Conference session topics include swelling soils, landslides, debris flows, rockfall, radon, subsidence and hydrocompactive soils. On Saturday, March 23, two half-day field trips will be conducted to sites in Colorado Springs where active or potential geologic hazards can be viewed.

Speakers include Bob Thompson, CTL/Thompson; Jerry Higgins, Colorado School of Mines; Jeff Hynes, Colorado Geological Survey; David Noe, Colorado Geological Survey; Jon White, Colorado Geological Survey; Joe Goode, Entech Engineering; Richard Morris, consultant; Lon Hesla, U.S. Environmental Protection Agency; Rick Andrew, Colorado Department of Transportation; Michael Bukovansky, consultant; Hal Olsen, Colorado School of Mines; and Bruce Stover, Division of Minerals and Geology.

For registration forms and additional information about the conference, call the Colorado Geological Survey at (303) 866-2611.

# **C.R.S. 38-51-107 Required Plats**

As of July 1, 1994, <u>C.R.S. 38-51-107 Required plats</u> changed significantly. Previously, the statute allowed an exemption from filing a plat if monuments that were set or accepted fell within a platted subdivision filed after July 1, 1995. In the current law, however, this is limited only to monuments that you accept, not those that you set. If you set a monument, a plat will have to be prepared and deposited, regardless of whether it is within a subdivision platted after July 1, 1975.

One thing is clear in our research to determine how this change in the law occurred -- it was not intentional! It appears that there was an error in the drafting stage of the law during the Sunset/Sunrise Committee's review and hearings. We were hopeful that we could remedy the problem through the annual Revisor's Bill which addresses typos and mistakes that occur in the law. However, this situation did not meet the criteria for that bill because there was no documentation of the change and it went through the entire legislative session without any objections. The Board plans to address this problem by attempting to draft and introduce a bill in the 1997 Legislative session, although the PLSC leadership has indicated that it will be their aim to get this portion of the statute modified back to what it was previously during this session.

In the meantime, despite the economic burden that it may impose, it is, nevertheless, the law.

#### NAFTA -- What It Means To Engineering In Colorado

The North American Free Trade Agreement (NAFTA) was adopted by the United States, Canada and Mexico in 1993. The part of this agreement that refers to licensing of professionals requires jurisdictions in each country to establish regulations that are not discriminatory or more burdensome for applicants from the other NAFTA countries.

As a result of NAFTA, the National Council of Examiners for Engineers and Surveyors, or NCEES, signed a mutual recognition document -- called the MRD -- in June last year, that encourages each state to consider making an effort to align with the intent of the agreement. In essence, this means that Canada, the US, and Mexico are expected to ensure that professional standards and criteria are objectively related to competence, not more severe than necessary, and not disguised as restrictions on cross-border services.

NAFTA <u>does not</u> in any way override the state's ability to protect the public through the establishment of its licensing laws and it <u>does not</u> overturn any existing state laws. Additionally, NAFTA <u>does not</u> require that states allow professionals from other countries to practice without meeting their licensing laws, even temporarily.

Colorado will have two years to make the necessary changes or take exceptions to what is required. The biggest changes, if we were to put them in place, would be to allow temporary licensure, which some states already do; and, more importantly, we would need to recognize the Canadian and Mexican licensure process as "equivalent" though they differ from ours considerably. Currently, that is the stumbling block.

At the August meeting of NCEES, the Council ratified the MRD conditionally for two years, requiring that an attempt be made to negotiate the requirement of examinations into the agreement as an integral part of the licensure process. At the December Board meeting, the Colorado Board went on record nationally as opposing the MRD in its current form because the requirement for examinations is missing. The Board strongly believes that examinations provide a critical balance to education and experience to assure that those we license meet minimum qualifications.

If Colorado does not "get on the bandwagon" with the MRD, Mexico and Canada may choose to refuse to license Colorado engineers who would like to do work in those countries, thereby short-circuiting their opportunities. On the other hand, accepting the agreement may mean more competition in Colorado among engineers. It is difficult at this time to assess the benefit to the public, which is the foremost concern of the Board.

At the very least, this will be an interesting learning process and only a harbinger of what is to come. How engineers will cross geopolitical lines to become licensed and practice is becoming a very big issue internationally.

# **NEW ROSTERS ARE AVAILABLE**

If you didn't receive a copy of the 1995 Roster in December, please call the Board office at 303/894-7788. You may not know it, but the roster is more than a list of registrants. It also contains the Board Statutes, Rules and Policies for your reference.

#### Pat's Corner - Monument Records

Single witness corners were discussed by the Survey Quorum at a recent meeting and the members agreed that monument records for these corners must show or call out the boundary line on which such a corner must be located. They also directed that all corners, other than original corners, found or set, must have a 2" minimum diameter metallic cap attached.

I would also like to point out that the date of signature must be included with the signature across the seal.

-Pat Sullivan, Monument Records Clerk

#### **DISCIPLINARY ACTIONS**

The following are disciplinary actions taken by the Board since publication of the last newsletter. Thanks to the professional assistance from the Complaints and Investigations Unit and the Attorney General's office, the Board is able to vigorously pursue enforcement of the engineering and surveying licensing laws and rules. Disciplinary files are of public record and if you need additional information regarding any of the actions listed below, please contact Angie Kinnaird at the Board office.

**Ellery A. Biathrow,** PE #29709, had his license <u>revoked</u> based on disciplinary action taken by the State of California for negligent and incompetent civil engineering practice.

**Orason L. Brinker,** PE-PLS #4262, had his surveyors license <u>revoked</u> after a hearing before an administrative law judge and the Board's consideration of the judge's Initial Decision in the matter. The case concerned a significant departure from generally accepted standards in the consideration of collateral evidence when determining whether a corner is lost or obliterated.

**Daryl Z. Crites**, PLS 18450, entered into a **stipulation** with the Board as a result of substandard surveying practice involving a land survey plat and the failure to show certain relevant boundary evidence and areas of conflict. The Board's Order required the correction of the plat to comply with C.R.S. 31-51-102 (1) (k) (1991) no later than August 21, 1995 and the issuance of a Letter of Admonition.

**Gordon M. Hart**, PE #15166, had his license <u>revoked</u> based on disciplinary action taken by the State of California for negligent structural engineering practice.

**Burt E. Hartmann**, PE #5374, was issued a **Letter of Admonition** for practicing with an expired license.

**Larry Intermill**, PLS #12374, was issued a **Letter of Admonition** for failure to comply with Board Rule XIII - Physical Standards for Public Land Survey System Monuments.

**Donell Jeffries**, PE-PLS 3479, was issued a **Letter of Admonition** for practicing with an expired license.

**Paul A. Lenzini,** PLS #11636, was issued a **Letter of Admonition** for failure to comply fully with Board Rule XVI - Minimum Standards for Improvement Location Certificates; specifically, to state specifically or graphically show the evidence used to determine the apparent deed lines and, to show any monuments upon which the ILC was based.

**Martin L. Lopez**, PLS #10102, entered into a **stipulation** with the Board for failure to fully comply with the requirements of 38-51-101 and 38-51-102 C.R.S. (1991) in the performance of a land survey plat. The Board's Order required that Mr. Lopez's license be placed on probation for a minimum period of one year beginning July 21, 1995, or until he has submitted 10 satisfactory land survey plats for review; has completed 40 Board-approved clock hours of continuing education; and, has corrected the work at issue in this action.

**John R. Millett**, PE #23100, was issued a **Letter of Admonition** on the basis of disciplinary action taken by the State of Texas for failure to place his name, serial number, date, PE

designation, or intended purpose on a set of structural engineering design plans which were released for bidding purposes and construction.

**Robert E. Port**, PLS #15321, was issued a **Letter of Admonition** for failure to comply fully with Board Rule 16 - Minimum Standards for Improvement Location Certificates; specifically, to show the deed lines with the boundary dimensions from the deed description or plat and, to state specifically or graphically show the evidence used to determine the apparent deed lines.

**Dinesh P. Sheth**, PE #28475, was issued a **Letter of Admonition** on the basis of disciplinary action taken by the State of Wyoming for misrepresenting his non-engineering qualifications.

Hans Skallan, PLS #9333, was issued a Letter of Admonition for failure to comply fully with Board Rule 16 - Minimum Standards for Improvement Location Certificates; specifically, to show the deed lines with the boundary dimensions from the deed description or plat.

**Donald C. Smith**, Unlicensed, was issued a **Cease and Desist Order** for unlawfully offering to practice petroleum engineering without a license and was fined \$50.00.

**Luke Studer**, PE #14776, entered into a **stipulation** with the Board for negligence and incompetence in the practice of structural engineering. The Board's Order required that Mr. Studer's license be placed on probation for a minimum period of two years beginning July 21, 1995, or until he has submitted 3 satisfactory projects for review; and, has completed a 3-hour senior level graduate course in structural engineering or takes and passes the structural portion of the Principles and Practice Engineering Exam.

**Lowell E. Wenzel**, PE #23314, entered into a stipulation with the Board based on disciplinary action taken by the State of Minnesota for negligence in structural engineering practice. The Board's Order stipulates that Mr. Wenzel's license be <u>suspended</u> for a period of nine months until April 21, 1996 and thereafter be under probation for two years during which time, he must submit proof of his successful completion of the continuing education course and required reading specified by the Minnesota Order; submit copies of all reports issued with or as a result of the peer review program specified by the Minnesota Order; and, notify the Board of any disciplinary action taken by any state in which he holds a license to practice engineering.

HAVE YOU MOVED LATELY? Don't forget to let us know if you change your address!