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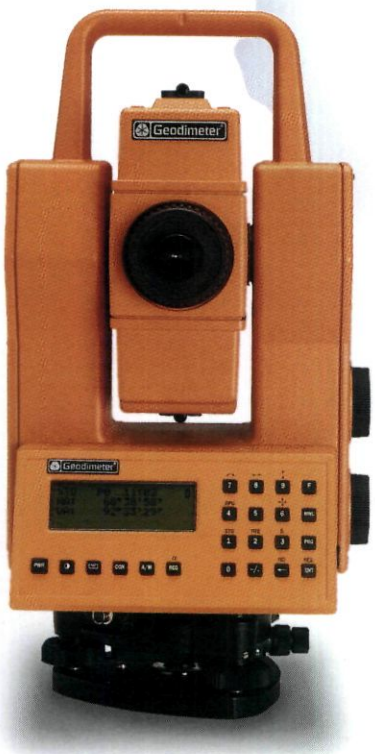

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The California Surveyor

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"Recognizing that the true merit of a profession is determined by the value of its services to society, the California Land Surveyors Association does hereby dedicate itself to the promotion and protection of the profession of land surveying as a social and economic influence vital to the welfare of society, community, and state."

"The purpose of this organization is to promote the common good and welfare of its members in their activities in the profession of land surveying, to promote and maintain the highest possible standards of professional ethics and practices, to promote professional uniformity, to promote public faith and dependence in the Land Surveyors and their work."

PERSONNEL

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All articles reports, letters, and contributions are accepted and will be considered for publication regardless of the author's affiliation with the California Land Surveyors Association, Inc. Contributions submitted on floppy diskette medium are encouraged. For compatibility, disks should be 5.25 or 3.5 inch, MSDOS (IBM compatible) format. We can accept ASCII text files or word processor files from the following programs: WordPerfect or Microsoft Word.

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Articles, reports, letters, etc., received after the above mentioned date will be considered for the next edition.

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Robert Stumpf - Calpine Survey Circa 1977.

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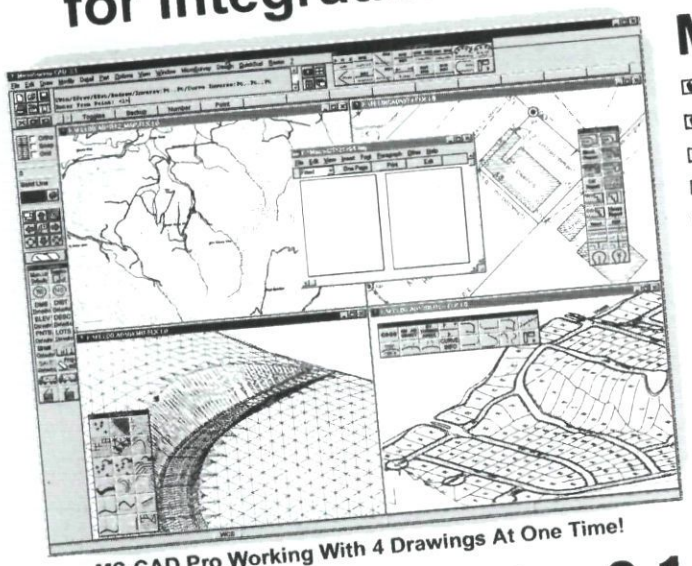

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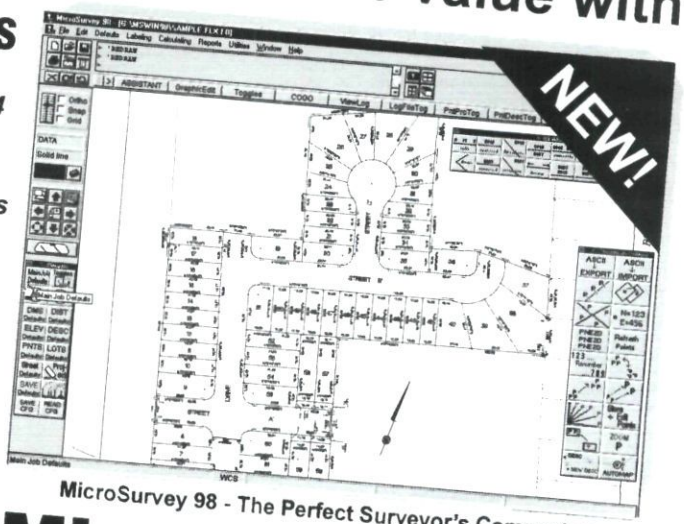

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Joe Bell, L.S. Professional Surveyor Magazine Review Nov. 97

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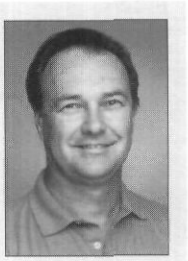
'98 President's Message

By: Steven C. Wilson, PLS



At the beginning of this year, I ended an article with the statement: "This will indeed be an interesting year." As we approach the end of this year, my prophesy has come true, although at that time the last article was written there were only vague clues as to which potential issues would be "front burner items" or as one respondent wrote: "circle the wagons" issues. I assume it is clear that my last article was directed at those who will find an excuse to not participate or belong to the California Land Surveyors Association.

New issues have arisen that will have a profound effect on the land surveying profession. These must be dealt with by the California Land Surveyors Association for the good of the land surveying profession. It is important that we all understand what is happening around us.

BORPELS:

Our Board of Registration is charged with enforcing the Land Surveyors Act, and regulating our practice as Land Surveyors. We need to undertand that it is the exact plain-language wording of the laws that are enforced by BORPELS. This literal interpretation may often be contrary to the standard of the profession, especially as the tools we use and the methods of practice in our profession have evolved. In some cases, the original legislation that formulated these laws may not have been clear or concise. There have been three very good examples of this process lately. They are:

1) Board of Registration Policy Resolution #96-03, as a clarification to §8762 of the Land Surveyors Act, states that we are bound to file a "Record of Survey" if our survey work "establishes" a line not shown on another filed map. In many cases, such as ALTA Surveys, to cite one example, permanent monuments are not requested, in fact, often nothing is set at all. Should it be a requirement of law to file a "Record of Survey" map when nothing is set? The definition of "established" as related to land surveying practice needs to be clarified by legislation. Perhaps it should be the setting of markers that "establishes" the line, and thus triggers the requirement to document the work. CLSA is working on this. This does not imply that we should not be documenting our work, as required by law.

2) Some within the GIS community and BORPELS have a disagreement over §8725 & §8726 of the Land Surveyors Act. BORPELS has stated that: "All of the electronic or computerized data created, prepared, or modified in connection with those subdivisions exhibited within Geographic Information Systems (GIS) and/or Land Information Systems (LIS) require licensure as a Professional Land Surveyor or registration as a Professional Civil Engineer authorized to practice land surveying". There seems to be a general consensus that primary positional control data, and all land boundary data should be prepared and interpreted by, or done under the supervision of, a person authorized to practice land surveying. However, we must recognize that much of the data contained within the GIS does not depend upon high geopositional accuracies. The BORPEL's regulation of the statutes has set the stage for a possible conflict between the GIS/LIS professionals, public agencies that have a large investment in these systems, and the Professional Land Surveyors. CLSA is working on a resolution of this problem.

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Cover Letter to the Candidates

Dear Land Surveying Professional:

The California Land Surveyors Association, (CLSA), represents all licensed Professional Land Surveyors, and all others who are working in, or have an interest in, the land surveying profession. We continue to be concerned about the low examination pass rate for those who seek licensure in California. If you did not pass the last examination, you were among 98% of those who sat for the exam. CLSA is compiling information from the enclosed questionnaire to attempt to identify, from the standpoint of the applicant, the important factors affecting the pass rate.

As you probably know, California develops its own examination. CLSA does not prepare the examinations, and CLSA does not have control over the licensing processes. We do maintain dialog with the Board of Registration for Professional Engineers and Land Surveyors, and other related professional groups. We also routinely propose legislation to enhance the land surveying practice, and legislation affecting the licensing process. We also provide seminars and sponsor an annual conference that provides educational opportunities for the profession.

About three years ago, we developed a questionnaire sent to those who sat for the land surveyors examination, that was focused on the education and qualifications of the candidates. This questionnaire has been expanded to include some general questions about your view of this year's examination. Your response will provide valuable data that will be compiled, studied and reported to the Board of Registration for Professional Engineers and Land Surveyors. It is our goal that all qualified applicants be able to become Licensed Professional Land Surveyors. I thank you for responding to this questionnaire.

Sincerely yours,

Steve C. Wilson, PLS
President

Continued from page 7

3) On September 9, 1998, at the Los Angeles Chapter meeting of CLSA, another problem with the wording in the PLS Act surfaced. Now it seems that if we disclose an undocumented corner in any of our work it triggers a "Record of Survey" map. Although §8762(a) does say "material evidence or physical change", there is some disagreement with the definition which includes monument character as "material evidence or physical change", especially when Board Rule 464(e) is taken into account. The burden of documenting corners should fall upon the person making the change, not the person who discovers it. I believe that it is a good practice to show all evidence taken into account in our surveys. If a corner happens to be undocumented, it should not be the problem of the person who recovers it. This is exactly what the existing laws relating to documenting our work should accomplish, and **that documentation is the burden of the person who sets or resets a marker.** We are working on language that should clarify this issue. It should be noted that if the point is tagged, the person who sets an undocumented corner is also responsible for its documentation.

The Land Surveyors Examination:

The 1998 Land Surveyors Examination, that was developed, administered, and graded by BORPELS, had a passing rate of less than 2%. Only 9 of the 471 candidates passed this examination. CLSA has taken an active part to determine why the Land Surveyor's examination is such an obstacle for those seeking licensure. We have developed a questionnaire that has been sent to all persons who took this examination. (The cover letter to the candidates on page 7, and the questionnaire is duplicated on pages 8 and 9). The results of the responses, along with the comments from the individual chapters and members of CLSA, will be sent to BORPELS. Early returns from the questionnaire have shown that nearly one-half of the applicants are college graduates, yet they too have equal trouble with passing the examination. Although CLSA is not the testing or licensing authority, it is in the best interest of the profession, and especially the applicants, that CLSA does what it can to help solve this problem. The reporting of the results of the questionnaire will be in a future issue of the "CLSA NEWS", which is sent to all CLSA members in good standing.

National Council of Examiners for Engineering and Surveying:

The NCEES is comprised of representatives from the regulatory boards of the 50 states, some U.S. territories, and some foreign countries. NCEES prepares the "national" examinations for licensure, and also develops a "model law" for regulating our practice. Many states adopt portions of this model law into their statutes, or they may adopt it in its entirety. In 1995 a change was made to the model law that included photogrammetry as an area of practice requiring licensure as a Land Surveyor. This created a dilemma insofar as many practicing photogrammetry were not Land Surveyors. At least one state is allowing photogrammetrists to be grandfathered as Land Surveyors. This problem acted as a catalyst for the formation of a "Task Force on the NCEES Model Law for Surveying". This task force consisted of the following five organizations:

American Congress on Surveying and Mapping (ACSM)

American Society of Civil Engineers - Geomatics Division (ASCE)

American Society for Photogrammetry and Remote Sensing (ASPRS)

Management Association for Private Photogrammetric Surveyors (MAPPS)

National Society of Professional Surveyors (NSPS)

This Task Force began its business in early 1997, and delivered their report to NCEES so

PLS Examination Questionnaire

How many times have you previously taken the California PLS Exam?
☐ First time ☐ Once ☐ Twice ☐ Three times ☐ Four times ☐ More than 5 times

If you have previously taken the California PLS Exam, please answer the following:

a.	This examination was more difficult	☐ Yes	☐ No	☐ No Opinion
b.	Problems took more time to comprehend	☐ Yes	☐ No	☐ No Opinion
c.	Problems took more time to complete	☐ Yes	☐ No	☐ No Opinion

Your field and office experience prior to taking the PLS Exam.
Field Experience: ____ Years Office Experience: ____ Years

Educational Background. (Please indicate the highest level of school completed)
☐ High School Diploma
☐ Less than 2 Years of College
☐ Two Year Degree
☐ Two to Four Years of College (without degree)
☐ College Degree _____ Field

Professional Licenses held (Please check all that apply)
☐ Land Surveyor-in-Training
☐ Engineer-in-Training
☐ Professional Engineer
☐ Licensed Land Surveyor in another state - ___ (state)
☐ Other _____

Preparation Courses (Workshop/Seminars) taken to prepare for the Exam:
☐ CLSA Chapter Review Course
☐ CalTrans Review
☐ CSU-Fresno Review
☐ None
☐ Other _____

Employment (Please check where your significant experience was gained)
☐ Private Practice
☐ Public Practice

Continued on page 9

that it could be formally received at the August 1998 annual meeting in Honolulu, Hawaii. It was at the NCEES annual meeting that the content of this Task Force report became known to CLSA. No mention of this Task Force or its recommendations could be found in the ACSM News or in the Professional Surveyor. The February issue of Civil Engineering News does have an article on page 28 entitled "The Geomatics Evolution", by Wendy J. Woodbury Straight, L.S. This article completely missed the effect that implementation of this newly proposed Model Law will have on the practice of the Professional Land Surveyor.

The recommendations of the Task Force are that licensure in the surveying profession become a 3-tier process. The recommended titles, and licensure to offer services to the public as proposed are:

Part 1: Surveyor and Mapper Intern - pass NCEES fundamentals examination

Part 2: Geomatics Professional - pass discipline specific or choice-based Principles and Practice NCEES examination. Such a person will have a general knowledge of boundary principles, cadastral surveying and mapping, photogrammetric surveying and Geodetic surveying. Being a Geomatics Professional would allow offering professional services such as consultation, investigation, testimony evaluation, expert technical testimony, planning, mapping, assembling and interpreting reliable scientific measurements and information relative to the location, size, shape, or physical features of the earth, improvements on the earth, the space above the earth, or any part of the earth, and utilization and development of these facts and interpretation into an orderly survey map, plan, plat, report, description, or project.

Part 3: Professional Land Surveyor - pass jurisdiction specific legal and boundary practice examination. This category will permit boundary and legal surveys.

It is clear that the proposals contained in the Task Force report, if implemented, would remove control over the majority of the areas of practice now protected by the Professional Land Surveyors license, and assign it to the Geomatics Professional. As proposed, the Geomatics Professional would be regulated by NCEES, not the individual states. If all jurisdictions adopted these guidelines, each state board would find itself only regulating the practice of "boundary" and "legal" surveying.

At this point, the report has been received by the NCEES, and is now in committee for study and recommendations. CLSA will be working toward a solution that will protect the safety and welfare of the public, that at the same time will allow photogrammetrists and GIS / LIS professionals the ability to legally perform their limited services. I am confident that common ground can be reached to the benefit of all concerned. If not, we have a very serious issue developing that must be resolved. If this is not resolved, we will lose much of our professional practices, as the states one by one, adopt portions of this proposed Model Law. A copy of this report can be obtained at http://www.asprs.org/asprs/index2.html.

If there is one common element among Land Surveyors, it is analytical, independent thinking, along with the basic premise of having an open, inquisitive mind. Land Surveyors are an interesting group, to say the least, and I have found the privilege of serving the Association as your President very rewarding. ❖

PLS Examination Questionnaire *Continued from page 9*

	NO	YES	NO OPINION
Did you pass the PLS Exam?	☐	☐	
Did you attempt all the problems?	☐	☐	☐
Do you feel you were properly prepared for the exam?	☐	☐	☐
Were you prepared for the breadth of the exam?	☐	☐	☐
Should the exam have certain required problems and other optional problems from different areas of PLS practice?	☐	☐	☐
Did you feel you had sufficient time to complete the exam?	☐	☐	☐
Did you feel the problems were too difficult?	☐	☐	☐
Was it clear to you what the questions were asking?	☐	☐	☐
Did you feel the problems were unnecessarily time consuming?	☐	☐	☐
If so, please describe below	☐	☐	☐
Do you feel the exam was fair?	☐	☐	☐

List the subject(s) on the exam you feel you tested the strongest and the subject(s) you tested weakest.

Strongest Subjects:_____

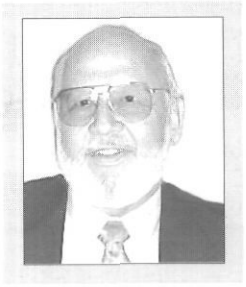
Weakest Subjects:_____

Please describe why you feel the pass rate was so low; and what could be done, in your opinion, to increase the pass rate:_____

Comments:_____

Return to: California Land Surveyors Association • PO Box 9098 • Santa Rosa, CA 95405 ❖

'99 President's Message



By: Gerald A. Stayner, PLS

Well, here we are at the beginning of the last year of the 20th century. We, the members of CLSA, must start planning to meet the challenges of the 21st century.

As we have seen in the past forty or so years, technological advances are being made at a fantastic rate. Forty years ago, when I first began surverying, I sat atop a hill and wished somehow we could just push a button and record X,Y, Z coordinates. Now of course, pushing a button to obtain these coordinates is an everyday occurrence.

We are going to need more available training if we want to stay competitive. CLSA will strive to provide more seminars and workshops. We need more input from members about their needs and requirements concerning subject matter.

Some states now require a degree to sit for the Land Surveyor test and some even require eight or more years of experience. Add to this the fact that 22 states have mandated continuing education to maintain a P.L.S. license and we may be able to see into the furture of the P.L.S. in California. The CLSA education committee is currently compiling a list of schools that are offering surveying courses and degrees to assist those members interested in obtaining formal education. We need to give serious thought to this issue and lead the way, by advising the state, and educating our members on the importance of professional development.

Another important issue is the state examination. We need to assist the state in identifying the reasons for the extremely low percentage of successful candidates. Once these problems are identified, work can begin on solving them. Currently, we are soliciting information in an attempt to determine the factors that have lead to this low percentage of pass rate. This will ensure that qualified candidates can pass the exam, thereby maintaining our high standards.

As the 1999 president of CLSA, I would like to continue the effort to increase the the membership of our organization and see it reach its highest enrollment to date. Let each of us encourage others to join, as there is strength in numbers.

I am looking forward to meeting the challenges that CLSA will face in the 21st century. ❖

From the Editor

EXAM?

By: Phil Danskin, PLS

Well. Well. Congratulations to our nine new cousins who passed ***The Test***! Nine passing out of four-hundred seventy-one! Exam? CLSA polled the examinees and thus far all have responded with such inveigh! Perusing some comments, an astronaut's pressure-suit must have been donned to keep the authors blood from boiling!

In the interest of understanding, Cindy Christenson, Executive Officer of BORPELS has responded to some questions posed by CLSA, (published herein). It would also seem fair to enlist rebuttal and/or responses from the examiners, (anonymously, of course).

The "talk of the town" at the October CLSA Board of Director's Meeting was this year's exam, and they were in unanimous agreement with the candidates responses.

In the interest of fairness and open-mindedness, the dialogue among BORPELS, the candidates responses, CLSA and the examiners should proceed until an equitable solution is accomplished (Although peace in the Middle East may be easier to attain.) It would seem that in California, one of the more populus states in our Union, the population of practicing surveyors would parallel the population growth. Not because of a need to churn-out surveyors, rather the existence of a larger pool of surveyors to choose from. Could there be some truth in the "Doonesbury" comic strip regarding the status of our educational institutions? (As in the decline of higher education.) Does this years pass-rate parallel the nation's perception of California graduates, which may indicate Californians may not seem as bright as their sunsets? (This editor is living proof of such!) The tentacles to the root-cause of failure may be elusive and numerous.

I believe there are more candidates with a college degree, presently, than the surveyors of the past. This does not imply surveyors of yore were not intelligent. The contrary may be true. Most of us are in awe of how well our forefathers measured - and without the aid of today's gadgets. Although today's tools are sophisticated, they are still just that - tools. To employ these new-fangled "tools" with confidence, still requires one to think as our forefathers thought: "strong" mathematical solutions and elimination of blunders. Does this necessitate a Baccalaureate for this profession, or just common sense mathematics?

Now that some finger-pointing has been aimed at a myriad of causes, we should also take a glimpse in the mirror. We "practicing" land surveyors may also have some "egg on our face" too. If these Not-So-Passing candidates failed the exam, who taught them? As of October 1998, CLSA's poll of candidates indicated forty-seven percent had a college degree. Is Divine intervention needed to pass?

When we perform a survey, of any type, do we ask ourselves, "is this survey performed on the premise it's going to court? Was it performed as though it was a response to an exam question?" Hopefully, The Test is not a reflection on how we taught our underlings. If so, it would be unfortunate to the candidates and a sorry state of affairs for our profession.

Words are just words unless we take action. So where do we go? What do we do? The candidates have vehemently voiced their concerns. Now it's your turn. Please share your thoughts and opinions on this issue.

We welcome your input on any and all subject matter relating to this great profession. This journal is supposed to be the voice of California surveyors.

Respectfully submitted,

Phil Danskin, editor
(geometre@vom.com)

Congratulations . . . . . .

To the following individuals who passed the April PLS Examination:

S. Shasta Greene, PLS
Santa Cruz, CA

Mary J. Lewis, PLS
Thousand Oaks, CA

Donald R. Poppe, PLS
Santa Barbara, CA

Otto G. Jarquin, PLS
Torrance, CA

Richard T. McCormick, PLS
La Mesa, CA

Brian J. Stratman, PLS
Salinas, CA

Chad D. Lansberry, PLS
Fallbrook, CA

Chad C. Mosier, PLS
Chico, CA

Michael T. Turnrose, PLS
Redwood City, CA

Letters to the Editor

Dear Editor:

Following is a letter I submitted to George Shambeck at the Board of Registration for Professional Engineers and Land Surveyors. For those of you who have an opinion on this topic, I encourage you to voice it to the Board.

George Shambeck, P.L.S.
BORPELS
2535 Capitol Oaks Drive, Suite 300
Sacramento, CA 95833-2926

Dear Mr. Shambeck:

Discrepancies in California laws regulating Land Surveyors and Civil Engineers perpetuate a double standard between the professions. The purpose of this letter is to bring these discrepancies to your attention with the hope of inspiring change through legislative action.

As the laws are currently written, a licensed Civil Engineer is automatically granted a 4 year credit towards the 6 year qualifying experience requirement for the Land Surveyor license. Whereas the Land Surveyor seeking licensure as a Civil Engineer is assessed a de facto penalty in that not only is no qualifying experience automatically granted, but the candidate is precluded from reusing any portion of experience used to qualify for the Land Surveyor license. This includes engineering surveys which would otherwise be acceptable. Although the natural conclusion is "what's good for the goose is good for the gander", this is not so according to the Board of Registration for Professional Engineers and Land Surveyors. In interpreting the Professional Engineers and Land Surveyors Acts, the Board makes it clear that there is overlap between Land Surveying and Civil Engineering; perhaps that is the reason behind the automatic 4 year credit for Civil Engineers seeking the Land Surveyor license. Yet when the shoe is on the other foot, it's a one way street. A difference in formal education requirements cannot account for this discrepancy because a college degree is not required for becoming a Land Surveyor or a Civil Engineer in California.

Additionally, it makes little sense that a Land Surveyor seeking licensure as a Civil Engineer is required to take the Special Survey portion of the Civil Engineering examination; the Land Surveyor is already licensed to perform every kind of survey there is in this state. However, in the eyes of the Board that's not good enough. Apparently, the Land Surveyor seeking licensure as a Civil Engineer can't be trusted to perform engineering surveys without additional examination.

If the discrepancies ended here it would be enough to merit change, yet there is more. A person having passed the Engineer In Training examination (EIT) need not take the Land Surveyor In Training examination (LSIT) on his way to becoming a Land Surveyor. "EIT, LSIT, what's the difference", says the Board, unless of course you're desirous of switching the other way around. Then the difference is huge. As someone who has taken and passed both exams, I can testify that the EIT does not by any stretch measure competence in surveying. It's hard to imagine how this little loophole protects the health and welfare of the public.

Maybe these discrepancies can be traced back to 1982 when Civil Engineers lost the privilege of practicing Land Surveying without having to undergo examination and licensing. Placating engineers at that time likely helped to facilitate the necessary change, but 1982 was 16 years ago and now it's time to move on.

For the sake of our future as a profession, please examine these issues carefully and work towards making our laws more equitable. Licensing laws that appear to place the Land Surveyor in a subordinate position to the Civil Engineer diminish the value of laboring through a surveying engineering curriculum. This may have the undesirable effect of discouraging educated young people from entering the profession. Our future is in your hands.

Sincerely,
John Wilusz, PLS

Expert Witness Fees

By: Peri Cosseboom, PLS

> ***"Your ignorance is their power."***
>
> ***- anonymous***

If you practice land surveying for any length of time, eventually you will be asked to give expert testimony. This testimony will be given at a deposition, at a trial, or at both. Perhaps you didn't realize it, but the State of California thinks that you, as a Licensed Land Surveyor, are special. You have several sections of the Code of Civil Procedure and of the Government Code that were passed into law for the express purpose of seeing that you get paid, and paid a fair fee, for your valuable time and opinions.

Why it is important to be aware of the law? In my experience, without using the law, I have found it difficult to be paid promptly or to be paid at all as an expert witness. This is true for a couple of reasons.

If the dispute is over the ownership of a particular strip or piece of land, the party prevailing in a lawsuit receives clear title to all or a portion of the area in dispute. This award of clear title has no immediate monetary value and the "winner" may have incurred significant expenses, including your fee. It's human nature for a party to a suit of this type to attempt to limit these expenses in advance or to not pay them at all.

Where damages are involved, the suit becomes a "crap shoot". The plaintiff and the plaintiff's attorney get nothing if they lose. Since they are responsible for the fees for your testimony at a deposition or at a trial, they usually make every attempt to limit or delay the payment of these fees. Similarly, the defendant and his insurance company, if one is involved, are in a suit against their will and naturally desire to limit their expenses.

There are two ways to participate in a trial as an expert. One is as an independent expert not involved in the original survey, or two, as a Land Surveyor who was involved in the original survey in question. Both types of experts are afforded the same protection by law in regards to their expert fees.

The Law

The applicable law is section 68092.5 of the Government Code and Section 2034 of the Code of Civil procedures. (The complete text of these laws and every other California Code, is available on the internet at www.leginfo.ca.gov/calaw.html) These two codes are quite similar, and insofar as the Code of Civil procedures is more comprehensive, I will mostly limit my comments to it. The Code of Civil procedures is where all the rules for the conduct of the various state courts and the rules of professional conduct for attorneys are set forth. (And you thought they had no rules. Shame on you.)

Excerpts from Section 2034 CCP:

(a) After the setting of the initial trial date for the action, any party may obtain discovery by demanding that all parties simultaneously exchange information concerning each other's expert trial witnesses to the following extent:

(1) Any party may demand a mutual and simultaneous exchange by all parties of a list containing the name and address of any natural person, including one who is a party, whose oral or deposition testimony in the form of an expert opinion any party expects to offer in evidence at the trial.

(2) If any expert designated by a party under paragraph (1) is a party or an employee of a party, or has been retained by a party for the purpose of forming and expressing an opinion in anticipation of the litigation or in preparation for the trial of the action, the designation of that witness shall include or be accompanied by an expert witness declaration under paragraph (2) of subdivision (f).

(f) (2) If any witness on the list is an expert as described in paragraph (2) of subdivision (a), the exchange shall also include or be accompanied by an expert witness declaration signed only by the attorney for the party designating the expert, or by that party if that party has no attorney. This declaration shall be under penalty of perjury and shall contain:

(A) A brief narrative statement of the qualifications of each expert.

(B) A brief narrative statement of the general sub-

stance of the testimony that the expert is expected to give.

(C) A representation that the expert has agreed to testify at the trial.

(D) A representation that the expert will be sufficiently familiar with the pending action to submit to a meaningful oral deposition concerning the specific testimony, including any opinion and its basis, that the expert is expected to give at trial.

(E) A statement of the expert's hourly and daily fee for providing deposition testimony and for consulting with the retaining attorney.

(i) On receipt of an expert witness list from a party, any other party may take the deposition of any person on the list. The procedures for taking oral and written depositions set forth in Sections 2025, 2026, 2027, and 2028 apply to a deposition of a listed trial expert witness except as follows:

These sections of the code set up the rules for the exchange of information about experts between the attorneys involved in the suit. Paragraph (2) of subdivision (f) specifies that an expert witness declaration be prepared by the attorney designating this type of witness. The pertinent Sections here are (C), (D), & (E).

These requirements force the attorney to do three things which most are reluctant to do because of the costs involved. They are:

1) Actually enter into an agreement with a surveyor to act as an expert.

2) Pay you to examine the facts and evidence and reach an opinion.

3) Set your fees.

Remember this declaration is signed by the attorney designating you as an expert "under penalty of perjury". If you end up at a deposition and feel that you, in your professional opinion, have not been properly retained, have not been given adequate time and information in regards to the particulars of the case, or if your fees have not been agreed to, then I would suggest that it would be your minimum professional obligation to so state immediately after being sworn in. This should have the effect of having the designating attorney correct any of these deficiencies.

Further excerpts from Section 2034 CCP:

(2) A party desiring to depose any expert witness, other than a party or employee of a party, who is either (A) an expert described in paragraph (2) of subdivision.....

This defines an independent expert.

(C) an architect, professional engineer, or licensed land surveyor, who was involved with the original project design or survey for which he or she is asked to express an opinion...

This defines an involved expert.

...within his or her expertise and relevant to the action or proceeding, shall pay the expert's reasonable and customary hourly or daily fee for any time spent at the deposition from the time noticed in the deposition subpoena or from the time of the arrival of the expert witness should that time be later than the time noticed in the deposition subpoena, until the time the expert witness is dismissed from the deposition, whether or not the expert is actually deposed by any party attending the deposition. If any counsel representing the expert or a nonnoticing party is late to the deposition, the expert's reasonable and customary hourly or daily fee for the time period determined from the time noticed in the deposition subpoena

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until the counsel's late arrival, shall be paid by that tardy counsel. However, the hourly or daily fee shall not exceed the fee charged the party who retained the expert except where the expert donated his or her services to a charitable or other nonprofit organization...

Make sure you have given the party who retained you your fee schedule.

...A daily fee shall only be charged for a full day of attendance at a deposition or where the expert was required by the deposing party to be available for a full day and the expert necessarily had to forego all business he or she would have otherwise conducted that day but for the request that he or she be available all day for the scheduled deposition. In a worker's compensation case arising under Division 4 (commencing with Section 3201) or Division 4.5 (commencing with Section 6100) of the Labor Code, a party desiring to depose any expert on another party's expert witness list shall pay this fee.

The party taking the deposition shall either accompany the service of the deposition notice with a tender of the expert's fee based on the anticipated length of the deposition or tender that fee at the commencement of the deposition. The expert's fee shall be delivered to the attorney for the party designating the expert...

Section 68092.5 of the Government Code extends this tender requirement to include a subpoena to be deposed as well as a request. This tender (anticipated fee) shall be delivered to the attorney designating the expert. In other words, when you arrive at the deposition, either by request or subpoena, there should be a check made out to you in the amount of your anticipated fee. I would suggest that once sworn in, and on the record, that you request that this tender be delivered to you as it is a requirement of law.

...If the deposition of the expert takes longer than anticipated, the party giving notice of the deposition shall pay the balance of the expert's fee within five days of receipt of an itemized statement from the expert. The party designating the expert is responsible for any fee charged by the expert for preparing for the deposition and for traveling to the place of the deposition, as well as for any travel expenses of the expert.

(3) The service of a proper deposition notice accompanied by the tender of the expert witness fee described in paragraph (2) is effective to require the party employing or retaining the expert to produce the expert for the deposition. If the party noticing the deposition fails to tender the expert's fee under paragraph (2), the expert shall not be deposed at that time unless the parties stipulate otherwise...

Simply put no dough no show.

...(4) If a party desiring to take the deposition of an expert witness under this subdivision deems that the hourly or daily fee of that expert for providing deposition testimony is unreasonable, that party may move for an order setting the compensation of that expert. This motion shall be accompanied by a declaration stating facts showing a reasonable and good faith attempt at an informal resolution of each issue presented by the motion. Notice of this motion shall also be given to the expert. In any such attempt at an informal resolution, either the party or the expert shall provide the other with (A) proof of the ordinary and customary fee actually charged and received by that expert for similar services provided outside the subject litigation, (B) the total number of times the presently demanded fee has ever been charged and received by that expert, and (C) the

frequency and regularity with which the presently demanded fee has been charged and received by that expert within the two-year period preceding the hearing on the motion.

In addition to any other facts or evidence, the expert or the party designating the expert shall provide, and the court's determination as to the reasonableness of the fee shall be based upon (A) proof of the ordinary and customary fee actually charged and received by that expert for similar services provided outside the subject litigation, (B) the total number of times the presently demanded fee has ever been charged and received by that expert, and (C) the frequency and regularity with which the presently demanded fee has been charged and received by that expert within the two-year period preceding the hearing on the motion. Provisions (B) and (C) shall apply to actions filed after January 1, 1994. The court may also consider the ordinary and customary fees charged by similar experts for similar services within the relevant community and any other factors the court deems necessary or appropriate to make its determination.

Upon a determination that the fee demanded by that expert is unreasonable, and based upon the evidence and factors considered, the court shall set the fee of the expert providing testimony.

The court shall impose a monetary sanction under Section 2023 against any party, person, or attorney who unsuccessfully makes or opposes a motion to set the expert witness fee, unless it finds that the one subject to the sanction acted with substantial justification or that other circumstances make the imposition of the sanction unjust.

Let's hope that you will never have your fee questioned because this process can be uncomfortable for all involved.

Your experience and expertise as a Land Surveyor didn't come cheap. This experience and expertise is valuable, both to you, and as an expert in the location of boundaries and to the land owners in the community in which you practice. The legislature of the State of California has recognized this and felt strongly enough about acknowledging your special place in society to enact laws to protect your rights for fair and prompt payment. If you choose to ignore these rights, you do a disservice to yourself and to your fellow Land Surveyors. ❖

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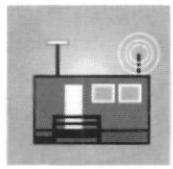

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How to Become a Professional Surveyor

By: Dr Bill Hazelton, Assistant Professor at Ohio State University

Professional registration and licensing in the USA is based on three components: education, experience and examination. For most professions, Education means a degree program, generally to at least the Bachelors level. Experience means a period of several years working with a currently registered professional, gaining practical experience to round out the more theoretical education component. Examination means some type of formal, often independent, testing, which attempts to ascertain the suitability of the candidate for professional registration, as well as to ensure that the public are protected from incompetent people.

The surveying profession in Ohio currently requires a four-year degree in Surveying (or closely related field) or Civil Engineering (with additional courses) as the education component. Experience consists of a minimum of four years' work in the profession. Examination involves initial testing to decide whether a candidate can become a Surveyor-in-Training (the Fundamentals of Land Surveying examination, FLS), followed by an examination at the end of the experience period, to ascertain if the candidate is suitably qualified for professional registration (the Principles and Practice of Land Surveying examination, PLS).

The examination component, being a candidate's final hurdle, can be used as some measure of the effectiveness of the education and experience components. It is often difficult to make quantitative and qualitative assessments of a candidate's experience, beyond the minimum requirements, so we must expect that this will be hard to trace in the examination results. But the type and standard of the education component are much easier to determine, so we will look at education as a factor in the examination component.

The following figures are derived from data provided by the National Council of Examiners for Engineering and Surveying (NCEES), who devise and run the FLS examination and the national component of the PLS examination. The data consisted of pass rates for both examinations from October, 1993, to April, 1998 (the last ten examinations), with a detailed breakdown of the results for the last four examinations (October, 1996 to April, 1998). These figures are for the nation as a whole.

Fundamentals of Land Surveying Examination

The overall pass rate for the FLS (10 examinations) is 52%, with a pass rate of 63% for candidates taking the examination for the first time. For just the most recent four examinations, the overall pass rate is 53%, with 63% of first-timers passing. Total numbers taking the examination are fairly consistent from year-to-year, so the last four examinations appear to be reasonably representative of the longer-term pattern.

If we look at the pass rates compared to the number of attempts at the examination, using the figures for the last four examinations, we see the following pattern (based on 5,223 candidates taking the last 4 examinations):

Attempt	Pass Rate	Proportion of Candidates
First time:	63%	62%
Second time:	41%	18%
Third time:	39%	9%
Fourth or more time:	29%	10%
No data:	30%	1%

Candidates are also asked what kind of educational background they have. A 4-year Surveying degree includes

degrees in Surveying, Surveying and Mapping, Surveying Engineering, Geomatics and Geomatics Engineering. The pass rates based on education are as follows:

Educational Background	Pass Rate	Proportion of Candidates
4-year Surveying degree (ABET accredited)	75%	6·5%
4-year Surveying degree (non-ABET)	30%	7·0%
4-year Engineering degree (not Surveying)	66%	13·3%
Other 4-year degree	66%	8·6%
2-year degree	54%	20·3%
No degree	47%	36·5%
Multiple degrees	72%	1·0%
No data	40%	6·8%

Pass rates for students from a range of the better-known 4-year ABET-accredited degree programs varied from 67% upwards, but in many cases the actual numbers of candidates were fairly small, making the percentages very sensitive to individual students. The pass rate for OSU alumni, based on 26 candidates (the fourth largest group separated) was 77%.

Principles and Practice of Land Surveying Examination

For the PLS examination, the overall pass rate was 63% (10 examinations) and 62% (4 examinations), while the first-timers' pass rate was 70% for both sets of exams. With similarly stable numbers of candidates, this suggests that the last four examinations are reasonably representative of the pattern in the previous 10 examinations.

The pass rates based on the number of times a candidate has taken the examination are as follows (based on 3,187 candidates taking the last 4 PLS examinations):

Attempt	Pass Rate	Proportion of Candidates
First time:	70%	63%
Second time:	53%	19%
Third time:	50%	9%
Fourth or more time:	36%	8%
No data:	58%	1%

The pass rates based on education are as follows:

Educational Background	Pass Rate	Proportion of Candidates
4-year Surveying degree (ABET accredited)	84%	5·6%
4-year Surveying degree (non-ABET)	24%	6·1%
4-year Engineering degree (not Surveying)	76%	12·7%
Other 4-year degree	80%	8·3%
2-year degree	46%	22·5%
No degree	57%	39·5%
Multiple degrees	69%	1·6%
No data	48%	3·7%

Again, the selected 4-year ABET-accredited programs had alumni with pass rates from 77% upwards. OSU alumni had a pass rate of 93% of 28 candidates, the second largest group. This pass rate is well above the national average.

Discussion

If we are prepared to accept that the NCEES examinations are a valid test of competence for professional

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surveyors (which all the State Boards of Registration seem prepared to do), then education plays a critical role in entering the profession. The NCEES bases the examinations on extensive investigation of professional needs and activities, coupled with levels of competence, and the current examinations are strongly biased towards practical surveying knowledge and skills, rather than purely theoretical knowledge.

The pass rates indicate that by far the best way to become a competent professional surveyor, in terms of both time and effort, is first to obtain an ABET-accredited 4-year degree in Surveying (or a closely related degree). At present, there are 15 such degree programs in the USA, covering EAC, RAC and TAC ABET accreditation levels, but we can expect this number to grow.

Within Ohio, candidates must now hold either a Surveying or a Civil Engineering degree, so we can expect Ohio's candidates to have pass rates above the national average. It is encouraging to note that OSU graduates do well in both examinations, and that those who choose to enter the surveying profession continue through to complete the registration process.

An interesting question is: "What will happen to the pass rates when the NCEES introduces the revised FLS examination, planned for October, 1999?"

The new examination is based on the most recent survey of practitioners, undertaken in 1997. The result is an examination that more-or-less assumes that candidates have the knowledge and skills of a 4-year Surveying degree graduate.

For many candidates from Ohio, this will not present a problem. We may expect candidates with Civil Engineering degrees and the '24 credit hours' to suffer a declining pass rate, as such candidates will not have covered much of the revised examination's material on geodesy, adjustment, GPS, photogrammetry, GIS and mapping. Graduates from 4-year Surveying programs generally cover these topics in sufficient depth to pass the new FLS examination.

Candidates who do not hold a 4-year degree can be expected to have a much lower success rate, so we could expect to see the national pass rates decline sharply with the introduction of the revised examination.

What does this do for the profession?

Surveying has had major influxes of technology for the last 50 years. The pace has not slowed of late. GPS is now being used extensively as a location and measurement tool. There is a growing collection of surveying software that enables ever-more-wonderful capabilities. Many surveyors are diversifying into related areas as the technology enables them to offer a broader range of services. On the horizon are new mapping and surveying systems, high resolution satellite imagery, wider use of GIS/LIS and spatial information systems, and the increased power of global connectivity.

'Surveying' is no longer just boundary surveying, where skill in legal and historical matters plays a major role. The adoption of 'Geomatics' as a term to describe the wider discipline, which allows the application of much of this technology to fields beyond traditional surveying, is one reaction to the influx of technology.

If ever there was a time when surveyors needed to understand new technologies (and their background science) from a growing range of disciplines, it is today. It is not just our personal situation, for if we are obliged to protect the public from those who are not competent to operate new technology in a broader application domain, we may be obliged to exclude a significant number of surveyors who may not have the necessary skills.

Merely being able to operate a new piece of equipment is not enough to sustain a claim of being a professional; a professional understands how the equipment fits into a larger system, its strengths and weaknesses, and its appropriate use. Using the equipment is just a technical skill. So the new FLS examination should be seen as an effort to lift the level of professional competence of the profession.

Conclusions

If the NCEES FLS and PLS examinations are good tests of professional competence in surveying, the evidence of the pass rates in these examinations strongly suggests that an ABET-accredited 4-year Surveying degree is the best way to enter the profession. The data also suggest that these graduates have the highest level of professional competence of all paths to professional registration, even compared to PLS candidates with many more years of field experience, but no degree. ❖

Q&A

The PLS Examination

An Interview with Cindi Christenson, Executive Officer of the Board of Registration for Professional Engineers and Land Surveyors

Q Tell us the steps involved in preparing the examination from beginning to end.

A Briefly, the steps are as follows: (In each step, the Board utilizes California licensed Professional Land Surveyors)

Occupational analysis - Conducted every five to seven years to assure that the examination is testing current practice.

Test Plan - Derived from the occupational analysis and provides the percentage of each area of land surveying to be tested on each examination. Due to the breadth of land surveying, not each and every area is tested each examination. However, the Board attempts to test each area over a period every two to three years.

Item Writing - Multiple choice and design type problems are written during a two to three day meeting. A model solution and grading plan are developed for the design type problems and solutions with plausible distractors for multiple choice type problems are also written at this meeting.

Item Review and Weighting - All problems, solutions and grading plans written at the prior item writing meeting are reviewed during a two to three day meeting. After the review is conducted, the design type problems are assigned a total point value and then are further broken down into elements and assigned points for each element. Multiple choice type problems are assigned a point value for each problem. This is called item weighting. Factors involved in item weighting include the percentage of each test plan area covered by the problem and difficulty.

Field Test - A two-day meeting is held where recently licensed land surveyors take the examination on one day and debrief with one or two of the item writers on the next day.

Examination sign-off - A final copy of the examination is given to one or two of the licensed land surveyors from the item writing committee for the purpose of proofing the examination to assure accuracy. A Board representative also oversees this process to ensure accuracy.

Examination administration - Board administers the examination. Examinees have the opportunity to provide comments on a form provided by the Board after the examination is administered.

Team Leaders Meeting - A 1 1/2 day meeting is held where the item writers, who will become team leaders at the grading session, review actual candidate solutions. This review catches any inconsistencies with the grading plans and finds any alternate solutions which were not considered up to this point.

Scoring Meeting - A 2-3 day meeting is held to score the examinations. Graders are trained and calibrated before they begin the task of grading. Graders use a pen scanner to scan the bar code placed on each solution booklet and a blank scoring plan with the appropriate candidate ID number appears on the screen before the grader. Grading plans are broken into several elements and graders either choose correct or incorrect for each element. Types of elements and points are provided for the method, answer, or reference, as appropriate. Two graders grade each candidate solution. If the graders disagree on one or more elements, it goes to a third grader to grade. Multiple choice problems are graded prior to this meeting.

Standard Setting Meeting - A 2 to 3 day meeting is conducted in order to set a passing score. Each multiple choice problem is evaluated by each member of the panel and the average score of the panel is used for the pass score on that problem. For design type problems, a pass point is set for each element. Again, the average score of the panel is used. The sum of all of these scores will then establish the overall passing score that is recommended to the Board.

Board approval of Passing Score - The recommended passing score of the standard setting committee is forwarded to the Board for approval. Upon adoption, candidate results are released. Candidates that fail the examination are provided with a diagnostic report that indicates the points they received within each test plan area in order to assist them in identifying their areas of strength or weakness.

Appeals/Review Session - Candidates that fail the examination may choose to pay a fee and review a copy of their solution along with the examination questions. Neither the Board's model solution or grading plan is provided for review. However, the Board is developing an informational sheet for the candidates so that they can determine where points were gained or lost within their solution.

Appeals Grading Session - Candidates appeals are pre-screened to determine whether the appellant substantiates his or her request for additional points. Appeals which merely state that the appellant deserves more points are rejected. The remainder of the appeals are graded in the same manner as was done at the original grading session.

Q Why does California create its own test when there is a national test available?

A The national examination is a 6-hour multiple choice type examination and is written by the National Council of Examiners for Engineering and Surveying. States that offer this examination also offer a state specific examination because of varying laws throughout the United States. The Board reviewed the national examination last year and determined that the quality and level tested does not adequately protect the public in California.

Q How much does it cost to prepare, review, issue and review the PLS examination?

A Approximately $430,000. Expenses include: the review of applicant qualifications, contractor fees paid to the testing vendor, travel

Q & A Continued on page 24

Continued from page 23 . . .

and wages incurred by licensed land surveyors that work on the examination, Board member and staff travel and salary, land surveyor consultant travel and salary, site rental, proctor pay, issuance of notices and licensure and overhead.

Q Who writes the questions for the PLS examination?

A California licensed land surveyors. These individuals are selected based on considerations such as geography, public or private practice, gender and ethnicity. The committee typically consists of 8 members and our goal is to have that committee mirror the land surveying community in terms of such factors previously listed.

Q Who reviews the questions for the PLS examination?

A California licensed land surveyors review the examination throughout the process outlined above.

Q Who scores the PLS examination?

A California licensed land surveyors.

Q How is the cut score determined?

A First, a psychometrician (an individual who has a PhD in industrial psychology or related testing field) leads the group in coming up with a definition of an entry level land surveyor. The committee member reviews each problem or element keeping in mind that entry level land surveyor and then determines the percentage of entry level practitioners that would get the problem or element correct. Discussion is led by the psychometrician when committee member evaluations are much higher or lower than the group itself. All committee members are then provided an opportunity to change their percentage after the discussion is over. Also, the psychometrician will show the committee certain statistics related to candidate performance if the committee sets an unrealistically high or low passing score on that problem or element. Again, after these statistics are reviewed and the group discusses the problem further, the committee members may elect to change the percentage. After the committee establishes a percentage, these percentages are averaged and multiplied against the total points available on that problem or element and a passing score for that problem or element is established. At the conclusion of the meeting, the scores are added together for a total passing score or cut score.

Q Does anyone take the examination in its final stage of development?

A The Board recruits recently licensed land surveyors to take the examination within the given 8-hour time period. The individuals are allowed to bring all material that they would normally bring to the examination itself.

Q What is the Board's definition of minimum competence?

A This term is critical in all phases of examination development. The Board does not have a definition. Rather, the subject matter experts that work on the examination develop this definition as they prepare to develop, score and establish a cut score for the examination. However, there are legal parameters that are set forth in statute and they include passing or being exempt from taking the LSIT examination and having 6 years of qualifying experience.

Q Does the examinee receive partial credit for incomplete answers?

A Yes. Design type problems are broken into elements consisting of method, answer, and reference. This way an individual could make a minor mathematical error and still receive credit for all the work he or she did in arriving at that answer. This is confusing because the credit for an element is either all or nothing. However, partial credit is given because when an individual writes out an equation, credit points are given for that. Credit is also given when certain variables in that equation are correctly cited. Intermediate calculations are also broken out and given credit for method, answer, and reference. This eliminates the subjectivity involved when graders used to be given a 10 point spread and could give any point value between this range. Instead, the 10 points are broken down into method, answer, and reference elements.

Q Can you tell us some good ways for candidates to increase their scores on the PLS exam?

A The Board is not in a role of coaching or teaching land surveying. Therefore, we are unable to assist in answering this question.

Q Since experience is purported to be the best teacher, can Board policy accommodate release of tests previously administered for candidate review?

A The Board is considering releasing problems that have been given on examinations that have been previously administered.

Q What can CLSA do to contribute to a better test and to a better candidate pool?

A The Board is in the process of reviewing the qualifications of the candidate pool that has taken the examination within the past 5 years. Once this process is complete, the Board looks forward to sharing this information with CLSA in order to identify any areas that they could assist us with.

Q What changes to the exam do you see in the future?

A This is a difficult question. Issues such as advances in technology, the national trend to require a four-year degree, and changes in the laws and regulations governing the practice of surveying play a large role in how the examination will change in the future. However, our goal will continue to be to administer an examination that is fair to the candidates and protect the public.

Q Why can't examinees get copies of their tests, as done in years past?

A One of the largest costs incurred in the examination process is writing examination problems. In order to keep costs down, the Board voted to bank the items so that they could be reused in future examinations. This way the Board does not have to write a new examination each time it administers an examination. Approximately 20% of each examination consists of banked items. ❖

Formal Surveyor Education

By: Wilhelm A. Schmidt, PLS, MA

About the Author

Wilhelm Schmidt is the owner of Bascom and Sieger in Allentown, Pennsylvania, and a Contributing Editor for the Professional Surveyor Magazine.

Most of us now in the practice of land surveying have no formal education in surveying. Many have post-secondary education, although not in surveying. My own undergraduate studies provided me with some fluency in writing and more math than I will ever need in surveying; and my graduate studies provided me with an ability to frame an argument and an acquaintance with the classical texts on ethics. However, that hardly matters.

What matters is that all of us now in practice became sufficiently knowledgeable about and adept at surveying to pass the examination that is the prevailing requirement for licensure. Modestly, I say that most of us do good work; the world, after all has not gone to pieces on our account. Many of us keep up with advance in technology and keep learning about the legal aspects of surveying. On the whole, we tend to be competent and conscientious in the discharge of our duties.

However, sometimes we are belittled for our lack of formal education. We are chided for laxity in making and adjusting measurements. We are berated for claiming that our work requires judgment, which cannot be taught formally. We are denigrated by some who have neither license nor responsible charge for surveys, yet speak for the profession. We are even vilified for asserting our independence from and dislike for those who would dictate our conduct and performance.

Benefits of Formal Education

Still, we generally appreciate formal education. Contrary to some claims, we are not all reluctant to hire graduates of surveying programs for fear that they will upstage us. We welcome their technical competence, if not their brashness. We know that this competence can be, but is less likely to be , acquired without formal education. We recognize the value of formal education, if not in ourselves, then in others.

We therefore support formal education. On our own initiative, some of us have given classroom presentations. Through surveyors' associations, at the state and local levels, we have provided financial assistance to students and even contributed to the salaries of instructors. We have offered suggestions for and evaluations of courses. We draw on a host of lecturers from academia for continuing education workshops and invite instructors and students to our meetings and conferences.

Some of us (read "I") nevertheless draw a line when we are asked to support the requirement of a baccalaureate degree for the examination for licensure. Some states have already enacted this requirement into law and thereby forestalled further argument about it. Its enactment, however, does not mean that there are no convincing arguments against the requirement, or that they should no longer be made.

The Arguments

One reason why some of my colleagues support the requirement is that they expect it to elevate the stature of surveying. The complaint is that we are not highly regarded, that we are not even recognized as professionals. This requirement, it is argued, will attract brighter students to the profession and put us on par with engineers. But the argument is, in T. S. Eliot's words, the highest treason: doing the right thing for the wrong reason.

We should entice bright students to the profession, but not because it will enhance the public's perception of surveyors; we should entice them to raise the profession's

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level of competence. But will it do that? I suspect that the brightest students will be reluctant to return to apprenticeship status and will instead seek employment with greater responsibility and higher pay than they will find in surveying. Those who take employment in surveying will hardly be asked about credentials. The general public at least will not think better of them for having attained a higher level of education.

None of this is cause to object to the requirement of a college education in surveying for licensure. If anything, it should make us hope that more students will pursue it. My objection to the requirement has a different basis: it is selective to the point of being discriminatory.

The problem is not that the admission to the profession is selective. Such an admission always is selective and would be worthless if it were not. The problem is that the requirement excludes anyone of equal competence but without degree.

The idea of a profession is to be learned. Whether or not surveying fits the idea, learning is generally thought to come from books. One can learn from books on one's own as well as by instruction. There is no way of knowing whether someone has learned as much one way or the other, but by being subjected to the same test. If someone passes the test without the benefit of formal education, on what grounds can that person be excluded from the profession? And if there is no answer to that question, how can the requirement of a degree be legitimate in the first place?

An Unfair Advantage

The summary exclusion of those without a degree gives those with a degree an unfair advantage. It gives the appearance that admission to the profession can be bought. Formal education is, after all, acquired at a cost, which some may not be able or willing to assume. It also gives the appearance that entry into the profession is a privilege rather than an achievement. To make a four-year degree an absolute condition for taking the examination violates any sense of fair play and, very likely, the laws that guarantee equal opportunity.

Those advocating the requirement would therefore be well advised to moderate their position. A greater burden of proof of competence might be placed on applicants who have no formal education because years of experience alone do not prove adequate preparation for licensure. However, to preclude entry into the profession without formal education is to forget that many of such ilk have graced the profession with solid, even outstanding, careers. There is no disgrace in being self-taught! ❖

This article appeared in the March 1998 Issue of Professional Surveyor Magazine and is reprinted with permission.

Obituaries

Elwin L. "Clarkie" Clark, PLS 03546

Lifelong Lake County resident and Land Surveyor Elwin L. "Clarkie" Clark died at his home September 1, 1998 at the age of 79.

Mr.Clark was past Commander of Clearlake VFW Post 2337 (U.S. 1944-1945), past President of Lakeshore Lions Club and a former volunteer with the lakeshore Fire Department. He also served as Secretary for the Lake/Mendocino Chapter of CLSA for more than 20 years. He was granted a lifetime membership in CLSA for his years of devoted service that began with the formation of CLSA in 1966.

Mr.Clark was a self-employed professional land surveyor for 30 years who began his long career as a mining surveyor and retired with a successful private practice serving Lake County.

Mr. Clark is survived by his wife, Bernice Clark of Lower Lake; daughters Ruth Ann Clark of Pleasant Hill and Marlyn Bailey of Redding. Sister and brother-in-law, Roaslie and Frank Slemmer of Chula Vista; grandchildren, Annjanette and Brian J. Good of Pleasant Hill.

Clarkie was not only a very dedicated land surveyor but a good friend to all of us. His presence at our Chapter meetings will be greatly missed.

Donations may be made to the National Multiple Sclerosis Society, Northern California Chapter, 150 Grand Ave., Oakland, CA 94612-3726

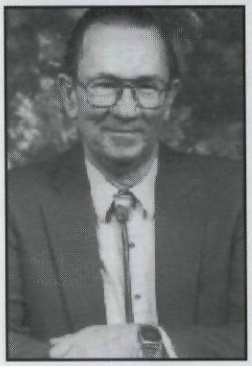
Respectfully submitted,
Members of the
Lake/Mendocino Chapter of CLSA

Louis Eugene "Gene" Rutledge

Louis Eugene "Gene" Rutledge, a 50-year resident of Ventura County, passed away Oct. 5, 1998, at his home at age 70. Gene served as the deputy county surveyor for the County of Ventura after a 20 year career in the navy. During his navy career he was awarded honors such as Seabee of the month and later enlisted man of the month. He served as the president of the Channel Island Chapter of the California Land Surveyors Association, president of the California State Board of Land Surveyors Association, president of the Oxnard Gem and Mineral Society, and vice president of the California Federation of Mineralogical Societies.

Gene is survived by his beloved wife, Betty; children, Patricia Hartman, Skip (Lewis) Rutledge, and Linda Wellington; and loving grandchildren, Elisia, Jessica, and James.

In Memory of Louis Eugene "Gene" Rutledge



Gene was one of us. A Land Surveyor. He served both the Public and Private sectors. He served them well. With dedication and pride for his chosen profession. No shortcuts and always with the utmost of integrity. A project undertaken by him was always thorough, complete, accurate and professional.

He loved to teach and to give back to his profession so those that will follow all of us someday can have the benefit of previous experience. This was always done in a non-selfish manner and proud that he could be a contributor to who we are.

How wonderful it would be if such examples of a person are not a rare occurrence. He will be missed. One thing for certain, while he was here, he gave good line.

Jim Dorsey, PLS

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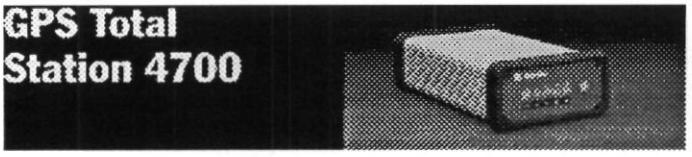

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Here's Some Important Information About CLSA

The goal of the California Land Surveyors Association is to promote and enhance the profession of surveying, to promote the common good and welfare of its members, to promote and maintain the highest possible standards of professional ethics and practice, and to elevate the public's understanding of our profession. CLSA represents all Land Surveyors, whether they are employees or proprietors, whether in public or the private sector.

Representation

■ LOCAL: Your local chapter represents you in local issues. Through your chapter representative to the State Board of Directors, the individual member can direct the course CLSA will take. ■ STATE: The Surveyor is represented at the state level through an active legislative program, legislative advocate, and liaison with the State Board of Registration. ■ REGIONAL: CLSA is an active member of the Western Federation of Professional Surveyors. This Federation is composed of associations throughout the western United States and addresses regional issues. ■ NATIONAL: Through institutional affiliation with the National Society of Professional Surveyors and the American Congress on Surveying and Mapping, CLSA is represented at the national level.

Education Opportunities

CLSA presents annual conferences which provide technical and business programs, as well as exhibits of the latest in surveying and computing technology. Seminars and workshops are presented to assist in continuing education. CLSA publishes the California Surveyor magazine and the CLSA NEWS to keep the membership abreast of changing legislation, legal opinions, and other items which affect our profession.

Business and Professional Services

CLSA provides a fully staffed central office which is available to answer questions or to provide up-to-date referrals concerning legislation, educational opportunities, job opportunities, or other issues concerning our membership. Professional liability insurance programs are available to members.

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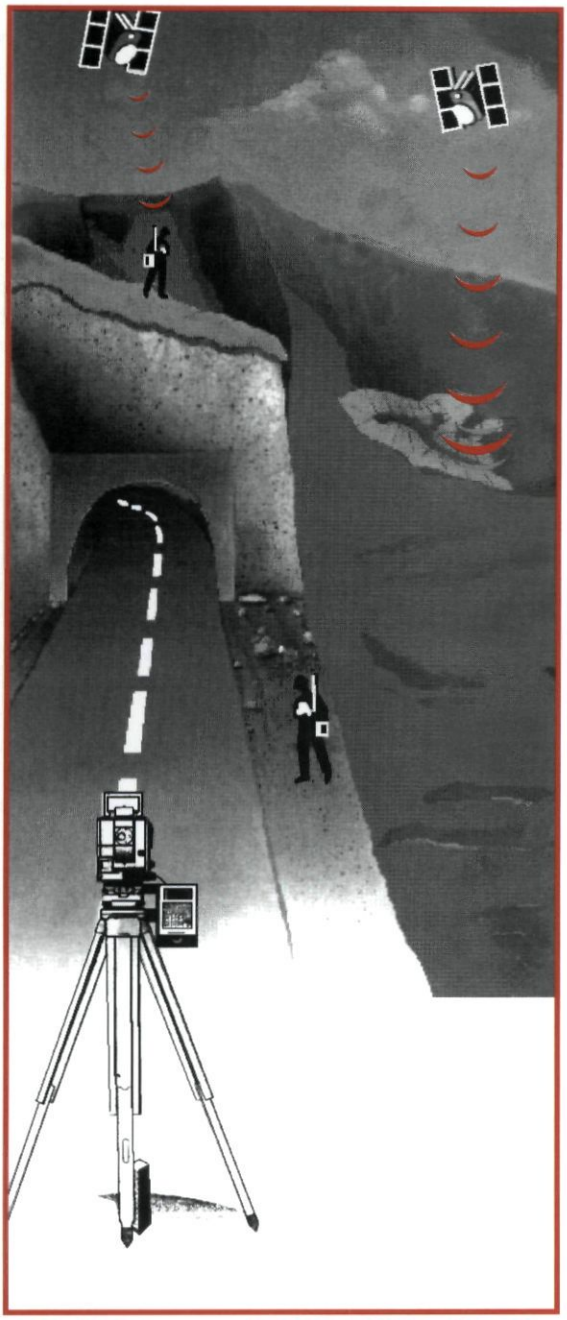

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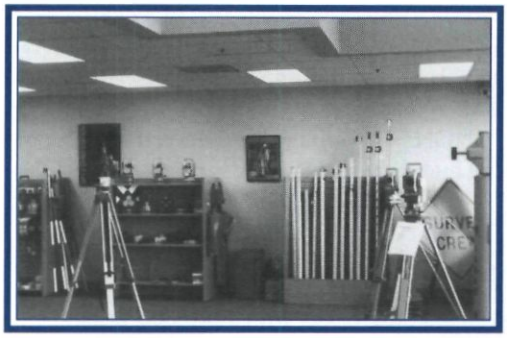

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