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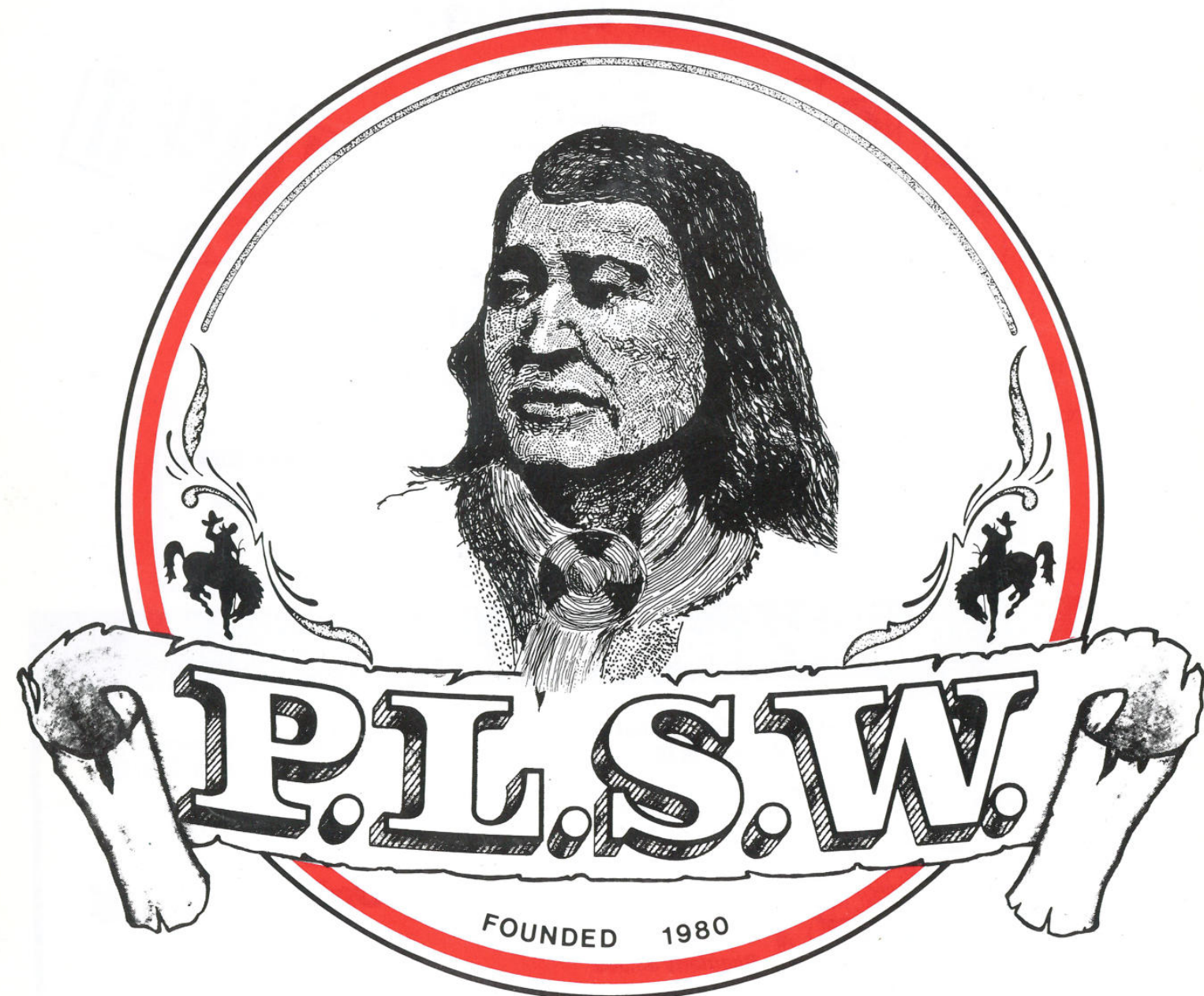
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VOLUME 7, NO. 4

JANUARY 1996



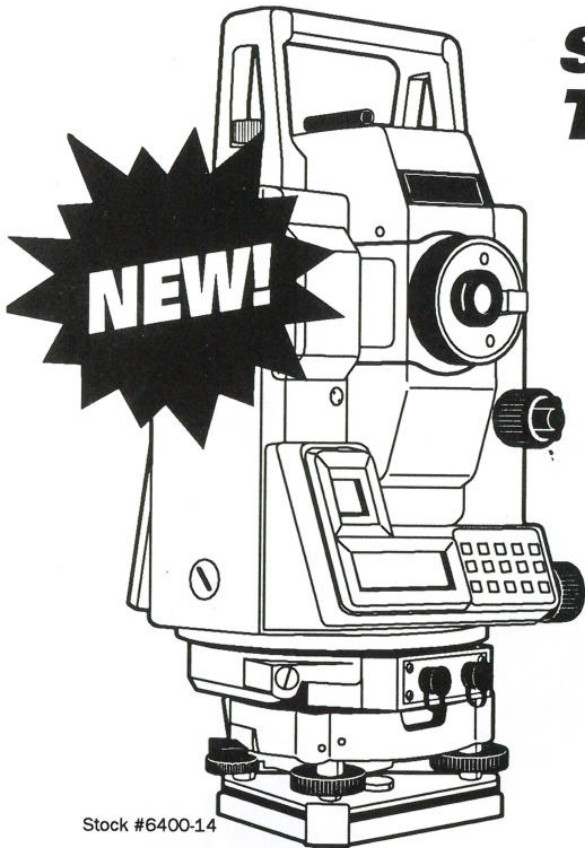
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☐ **Sustaining Member**, annual dues \$100. (Persons, institutions or corporations desiring to assist PLSW financially.)

I AGREE TO OBSERVE THE CONSTITUTION AND BY-LAWS OF THE PROFESSIONAL LAND SURVEYORS OF WYOMING AND THE CHAPTER TO WHICH I WILL BELONG AND TO SUPPORT SAID ORGANIZATIONS IN THEIR ENDEAVORS.

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(For Affiliate Member applicants only.)

NOTE: All portions of the state have chapters. Chapter dues or assessments may vary in amount. Applications are considered by the board of Directors at quarterly meetings. Send completed application to PLSW, c/o R. L. Hudson, Sec./Treas. P.O. Box 784 Thermopolis Wyoming 82443



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—OPEN LETTER

(Continued from Page 21)

It is a well-worn truism that the construction and life-cycle costs of a project far outweigh the design fees, and that the constraints of low-bid budgeting result in too little time or effort to achieve the most economical project. A relatively new discipline, value engineering, has been introduced to insure the best design to produce the best and most practical construction projects. But many in the design professions seem unwilling to recognize that good design is, in large part, dependent on good data collection. Since the surveyor's subcontract often comes out of the architect's or engineer's prime contract, it is the tendency of some (anecdotal testimony suggests *many*) to nickel-and-dime the data collection effort.

In addition to being poor project management, this practice suggests a twist of irony in the history of the qualifications-based selection struggle. The Brooks Act, requiring QBS procedures for most federal government contracts for architect and engineering services, has been in place for more than 20 years. After much effort by COFPAES, a consortium of the design professions (ASCE, ACEC, NSPS-PEPP, AIA, and ACSM) surveying and mapping were specifically included in the Brooks procedures, by redefinition of "Architect-Engineer Service" in the federal acquisition regulations (48 FAR Part 36.102). Yet today we find that the membership of ACSM's partners in that struggle continue to bid surveying services. What was hailed in 1988 as a giant step forward for the surveying/mapping profession turned out to be Pyrrhic victory.

It is not only on federal projects that engineers and architects follow the practice of bidding survey work. If anything, it is even more prevalent on privately-funded projects and state and municipal work.

ASCE's practice manual, "Consulting Engineers, A Guide for the Engagement of Engineering Services," indicates ASCE's support for the concept of QBS procedures in the selection of professional subcontractors. The manual lists geotechnical engineering, value engineering, studies and tests, and *land surveys and engineering and topographic surveys* as services often negotiated by consulting engineers on behalf of the engineer's client. These services are, by implication, included in the manual's discussion on selection: *Qualification, experience, and reputation are of critical importance in the selection of a consulting engineer. Selection based primarily on compensation factors, with less or no consideration as to competence, can result in unsatisfactory service to the client and in higher overall capital and life-cycle costs.*

In this open letter to ASCE I urge a statement by the leadership of the society to appear on the editorial page of *Civil Engineering* magazine to address this blotch on the parchment of professionalism. For all the examples cited by Mr. Hatheway of the evils of bidding for design professionals' services, a direct application of those arguments ought to be made regarding the selection of surveying services. Let's see ASCE take a position on bidding in the selection of surveying and mapping services as clearly expressed as that by Mr. Hatheway on the subject of bidding for engineering services.

Robert Foster is a past president of ACSM. He works in private practice offering professional consulting services in arbitration, dispute resolution, and litigation involving surveying

The Unofficial Glossary of Surveying & Mapping Terms

BY MIKE WELDON, P.L.S.

Due South:

Any line pointing in the general direction of Clark Canyon Dam — where you wish you were with a fishing pole anyway.

Corner Recordation Form:

Another example of needless "red tape!" If completed at all, should be from memory to enhance one's recollective abilities and four to five corners per sheet to challenge the readers abilities.

Best Available Evidence of Corner Position:

Usually wherever a chunk of rebar resides at any given point in time — often close to fence corners.

Rehabilitation:

Something rarely accomplished with perverts and other mutants — the track record with Professional Land Surveyors is approximately 0.3% success. Occasionally in reference to public land corners.

Ethics:

An unusual rash — possibly from eating too many tacos or going heavy on the crawdads.

Division:

Something my eight-year-old can do better than I.

Left Bank:

Usually the opposite side of the river, regardless of which side you are on.

Right Bank:

Same as above — except with more ice jams and colder water.

Property Rights:

A colloquialism, but none the less valid, with respect to the external objects of property, usually dictated by the size of the agitated adjoiner and how maniacal he/she becomes.

Senior Rights:

A right in a parcel of land, legally defensible and cast in granite stone, excepting as a practical matter, which side of a fence you are standing on, and whether in decimal inches or metric of the adjoiners smoke pole.

Positional Error:

The act of being on the adjoiners side of the fence when his bulldog develops acute rabies-like symptoms.

Field Check Law:

The inviable natural wonder of the northern hemisphere that dictates a problem with the field data will be uncovered in your office when the job site at Wolf Point is experiencing triple digit wind chill factors and your office is in Whitehall.

Dependent Resurvey:

A legal term reserved for those occasions when there is a compelling reason to re-perform a survey you pretty well cobbled up the first time through, but a second attempt is required to make it totally untraceable.

Optical Term; Rear Element:

No comment.

Strength of Figure:

No comment.

Plane Table Survey:

A survey utilizing a device for plotting survey data directly from field observations. Occasionally used when you have let

EDITORIAL POTPOURRI

O NEW PLSW MEMBER - The newest members of PLSW, approved by the Board of Directors are as follows:

Bill Stampados	Member	Cheyenne, WY
Ted Taggart	Member	Evanston, WY
Pat Factor	Associate	Wilson, WY

Congratulations and welcome to PLSW.

O PLSW MEMBERSHIP - If you are not a member of PLSW, join now. We need your support. An application is included in this issue. If you are a member, recruit a new member.

O SUPPORT OUR ADVERTISERS - Our advertisers have been very loyal to us. For your next purchase, consider our advertisers first.

O LOCAL PLSW NEWS - We need news of your chapter's activities. Send us a summary of your chapters activities or other related activities for publication. Summaries need not be typed. The deadline for the next issue of *Lines and Points* is presented on this page.

O PLSW BOARD MEETINGS - 1996 Board of Directors meetings are scheduled as follow:

February 1,2,&3	Casper (WES Convention)
May 4	Laramie
September 7	Rock Springs
December 7	Casper (Winter Tech Session)

O BRONZE RAFFLE - Have you bought your raffle ticket? Have you sold any raffle tickets? Contact your Director for additional tickets. The drawing will be at the WES Convention in Casper.

O LINESAND POINTS FAX - The *Lines and Points* fax number is 307-235-5604 or 307-235-8184.

O ELECTION OF STATE OFFICERS - The nomination committee presents the nominees for PLSW offices as follows:

President	Peter Hutchinson
Vice-president	D. R. Griffin
Secretary-Treasurer	R. L. Hudson

O KONTINUING EDUKATION - to professional development to professional competency? (evolution from 1991 to 1995) Are you incompetent? Has anyone heard from the State Registration Board? *Lines and Points* requests summations of the Registration Board's meetings for each issue. For the past year, we have received no information. If you know the whereabouts or status of the Board, lets us know and we will print it.

Front Cover Artwork by
Larry T. Perry, P.L.S.

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PLSW (Professional Land Surveyors of Wyoming) is a statewide organization of Registered Land Surveyors licensed to practice in the Equality State of Wyoming. PLSW is dedicated to improving the technical, legal, and business aspects of surveying in the State of Wyoming. PLSW is affiliated with the American Congress on Surveying and Mapping and the Western Federation of Professional Land Surveyors.

Editorial Staff: John Hibsman, Steve Strang, Don Davis.

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MESSAGE FROM THE PRESIDENT

Once again the winter season has blown into Wyoming. With winter comes the end of another year and a transition for our Directors, Chapter officers, and the State Officers. With the new year comes new faces, new ideas and a renewed enthusiasm within the PLSW. Congratulations and best wishes to the newly elected Chapter Officers and Directors.

I would like to take this opportunity to thank all of the Directors, Officers, Delegates, numerous committee chairpersons and members for all of your hard work and dedication displayed throughout this past year.

Have you ever wondered what your PLSW Board of Directors, Committees, and Delegates accomplish during the year? I took some time this week to review our major accomplishments and have compiled them for review.

This past year your PLSW have: had representation at all NSPS and WFPS conferences, increased its membership by over 10 percent, formulated an excellent variety of continuing education programs for the upcoming PLSW/WES Convention, welcomed a new chapter, produced four superb volumes of *Lines and Points*, administered funds for three scholarships, administered the Mapping the Frontier scholarship fund raising effort, formulated and implemented a state TRIG STAR program, finalized a Corner Recordation procedure guide, compiled and submitted to the WSBPRLS the corner recordation questionnaire, drafted and submitted several bills for consideration to the state legislature, upgraded the PLSW handbook, finalized the history of the PLSW, administered various bank accounts, disseminated large amounts of information to the chapters, and conducted an unlimited amount of business required to maintain this excellent organization.

For all of those responsible for these accomplishments once again, a big thank you.

Plans for the 1996 PLSW/WES convention are progressing very well, I'm sure that all members will be pleased with the educational programs scheduled for this year. The BOD had an opportunity to tour this year's facilities and were quite impressed. Make your plans now for what appears to be an excellent convention.

Total ticket sales for the Mapping the Frontier scholarship fund raiser are at approximately 50 percent. I urge all members to make a concerted effort in selling the remaining tickets during the next few months. Martin Pederson suggests an aggressive approach, get out and bend some arms!

Participation in the NSPS TRIG STAR program around the state is progressing very well, various chapters are reporting the involvement of numerous schools. This program provides an excellent means of communication between the Land Surveyor and the high school student pondering a professional career. Upon completion of the competition a follow-up visit to the participating school should be helpful in answering any questions the students might have.

Corner Recordation forms for the SAVE OUR SURVEYOR competition should be sent to Pate Hutchinson by January 15, 1996. Pete reports several entries already, make sure to submit your entries for the convention.

Last issue I expressed my concern regarding the lack of and loss of survey education programs within the state. It appears

that Dr. Herb Stoughton has been busy working with Laramie County Community College developing a survey curriculum. Dr. Stoughton will be outlining this new program at the convention in February. Keep up the good work Herb!

Welcome to all of our new members who were approved and accepted at the December BOD meeting, may your participation in PLSW be a rewarding and educational experience.

The next BOD meeting will be held in conjunction with PLSW/WES convention and annual meeting. Hope to see you all there.

James Claflin
President, PSSW



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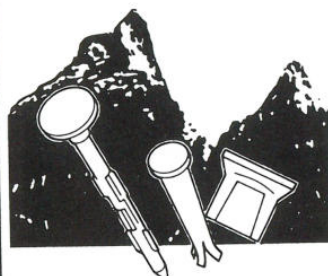
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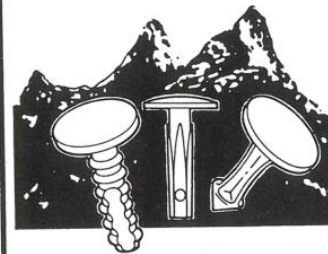
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—LAND SURVEYING

(Continued from Page 20)

LS-8. Advanced Topics in Land Surveying Retracement Surveys. Special topics pertaining to retracement and reestablishment of legal boundaries are presented. The topics include riparian rights, seashore boundaries, topographic boundaries (contours and geological features), and swamp lands. The role of federal and state statutory regulations are presented.

3 credits [2 hours of lecture, three hours of laboratory]

Prerequisite: LS-4, LS-5, and LS-6 or permission of the instructor.

LS-9. Advance Topic's in Public Domain Surveys. An in-depth study of the original instructions, special instructions, original plats, original field notes, and court decisions relevant to retracement of original Public Domain surveys. Land surveying adjacent to meander lines, private claims, Indian reservations, and mineral surveys is discussed.

3 credits [2 hours of lecture, three hours of laboratory]

Prerequisite: LS-6 and LS-7 or permission of the instructor.

LS-10. Land Surveying - Easements. An in-depth study of the subject of easements and rights-of-way. Emphasis is placed on identifying unwritten easements, apparent easements, and the common law pertaining to easements. 2 credits [2 hours of lecture]

Prerequisite: LS-2, LS-3, LS-4, LS-5, and LS-6, or permission of the instructor.

LS-11. Special Topics in Land Surveying. This course is designed to permit the student to study further the various topics of land surveying. The student and the instructor will identify a topic or project not discussed in detail in the previous courses, and will prepare a term paper or project.

1 - 6 credits

Prerequisite: LS-8 and/or LS-9, and the permission of the instructor.

FOOTNOTES:

¹ Justice Cooley, "The Judicial Functions of Surveyors," this paper was presented originally at a meeting of the Michigan Society of Engineers and Surveyors, and has been reprinted more than 50 times in various surveying textbooks and surveying periodicals.

² *Ibid.*

³ *Ibid.*

2 Million Geographic Names on the Net

The USGS is placing on the World Wide Web (WWW) the GNIS list of federally recognized names for almost two million physical and cultural geographic features located across the U.S. and its territories.

Users are prompted to enter the name of a geographic feature, and the system responds with listings for feature type, state, county, latitude, longitude, and the name of the 7.5-minute USGS topographic map on which the feature is located.

The Universal Resource Locator (URL) for the GNIS WWW site is: <http://www-nmd.usgs.gov/www/gnis/>.

The address for retrieving GNIS digital data sets is: <ftp://www-nmd.usgs.gov/pub/gnis/>.

An Open Letter to the American Society of Civil Engineers

BY ROBERT FOSTER, P.E., P.L.S.

Gentlemen:

The November 1995 issue of your monthly publication *Civil Engineering* carried the excellent editorial entitled "End the Evils of Bid Competition," by Allen W. Hatheway, F.ASCE. Mr. Hatheway's inventory of the evil effects on the profession of bidding was one of the best, most complete this writer has seen. Client selection by low price rather than quality, low-balling by the least competent, claims for extras to make up for money left on the table, a "meet-the-budget ethic" in place of innovation, and so on, are all demonstrable results of bidding for professional design services. One of the effects of bidding described by Mr. Hatheway hints at an especially egregious practice that begs for amplification.

Mr. Hatheway includes in his roll call of the evils of bidding the following: *Lowering the overall standard of care in site exploration and a related increase in failures occurring in construction or during operation of engineered works, in which undesirable conditions were not anticipated, detected or appreciated in the face of bid-shopped procurement, as well as increased disputes involving discovery of negative-impact site (and waste) characteristics undetected due to inadequate scopes of work.*

What surveyors call the data collection process fits very nicely into the category of "site exploration". When a surveyor is selected on the basis of lowest fee by a design professional to perform data collection services a few of the evils suggested by Mr. Hatheway are especially relevant.

- Meeting the budget takes precedence over quality and innovation.

- The surveyor is encouraged to examine the site for a specific laundry list of features while ignoring "undesirable conditions [which] were not anticipated, detected or appreciated in the face of bid-shopped procurement."

- There is "virtual removal of any effort to expand the knowledge base for the specific project."

(Continued on Page 22)

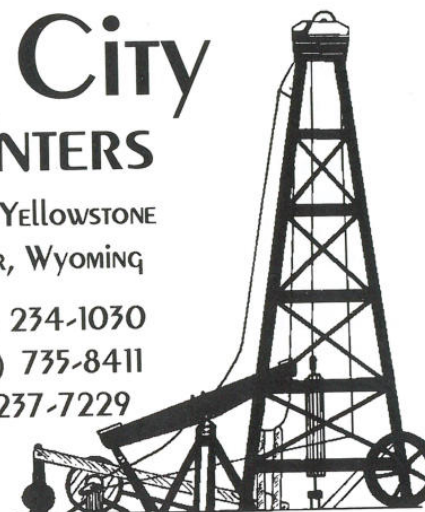
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—LAND SURVEYING

(Continued from Page 19)

property to the owner or developer's desires. It is not uncommon for the surveyor to be an arbiter between developer and statutory agencies embroiled in disputes.

Although most states do not permit land surveyors to practice engineering (unless licensed by the state to do so), the surveyor must be accurately aware of engineering factors that will definitely affect the design and layout of parcels of land. Environmental-ecological factors, traffic system design, utility placement, sewers, water, and drainage are major factors to be considered in subdivision design. If these factors are considered in the design, engineering work is minimal and usually less costly.

The subdivision surveyor not only designs the land parcel layout, but must calculate concisely the boundary dimensions (bearings and distances), prepare the necessary maps for filing, and prepare the land boundary descriptions of streets, lots, and easements for the deeds.

In many instances, the land surveyor is called upon to prepare maps and descriptions for lands encompassed in zoning changes, political subdivision annexations, etc. Also, the land surveyor may furnish engineering surveys for construction of streets, drainage systems, curbs, sidewalks, water lines, sanitary sewers, and buildings. At various times during construction of buildings the surveyor will furnish affidavits as to location and condition of the building for mortgages and title purposes.

Along with the normal land surveying practice, the land surveyor may be called upon to prepare maps and descriptions for zoning changes, annexations to political subdivisions, special utility districts, i.e. lighting, sewer, drainage, school, water, etc., Public Service Commission charter renewals, tax mapping, floodplain mapping, highway accident mapping, and other projects too numerous to mention.

LAND SURVEYING CURRICULUM

Keeping in mind that the land surveying profession contains many facets, it is important to design a land surveying curriculum which addresses the broad spectrum of professional practice. A *surveying* curriculum will contain surveying courses which address the mensuration and computational aspects of surveying practice in general. These courses address plane and geodetic surveying, surveying computations and adjustment, topographic mapping, engineering and route surveying, architectural surveying, etc. These other courses serve as prerequisites to land surveying studies, and will not be addressed herein.

The land surveying curriculum herein presented provides a broad academic overview of the subject. The first four courses [LS-1; LS-2; LS-3; and LS-7] introduce the student to the fundamental topics. The middle level courses [LS-4; LS-5; and LS-6] address actual professional practice of retracement and subdivision surveying. The last four courses [LS-8; LS-9; LS-10; and LS-11] are advance professional level courses which are project oriented. It is recommended that students have several years of professional experience and/or be licensed to practice land surveying prior to enrollment in LS-8, LS-9, and LS-10.

LAND SURVEYING COURSES

LS-1. Introduction to Land Surveying The course is designed to introduce students to the profession of land surveying. Topics include state licensure, client-land surveyor relationships, professional responsibilities, introduction to real property law, abstracting title, and types of land tenure.

3 credits [2 hours of lectures, three-hour laboratory]
Prerequisite: plane surveying, route surveying, or permission of

the instructor.

LS-2. Legal Aspects of Land Surveying. The course introduces the concepts of legal research necessary in a legal library. The student will become familiar with legal publications to research legal decisions to establish precedence. The role of the land surveyor plays as an expert witness in court will be discussed. The student will prepare assignments studying the problems of attorney-land surveyor relationships. 3 credits [2 hours of lecture, three-hour laboratory] Prerequisite: LS-1 or permission of the instructor.

LS-3. Statutory Aspects of Land Surveying. This course introduces the legislative and statutory relationships to real property boundaries and political boundaries. The student will be introduced to concepts of establishing state, county, municipal, and special district (school district, lighting, sewer, annexations, Public Service Commission, etc.) boundaries and the land surveyor's role in this effort. Study of municipal law, county law, and way law will be introduced.

3 credits 12 hours of lecture, three-hour laboratory
Prerequisite: LS-1 or permission of the instructor.

LS-4. Land Surveying - Subdivision Design. The course presents the statutory and design aspects a land surveyor utilizes in designing residential subdivisions, commercial subdivisions, trailer parks, and industrial parks. Preliminary design, environmental impact reports, statutory approvals, and final platting are presented. Subdivision ordinances, planning commission functions, and zoning commission functions are discussed. Some laboratory sessions will attend various commission meetings.

4 credits [2 hours of lecture, six hours of laboratory]
Prerequisite: LS-2 and LS-3 or permission of the instructor. Note: courses in transportation engineering, hydrology, sanitary engineering, and environmental science are recommended.

LS-5. Land Surveying - Retracement Surveys. This course incorporates the material in the prerequisite courses for the retracement of real property and statutory boundaries. Emphasis is placed upon analysis of conflicting evidence found in legal documents and field surveys. The application of statutory material and court decisions to resolve these conflicts is discussed. Preparation of survey maps, records of survey, report of survey, and other documents will be described.

4 credits 12 hours of lecture, six hours of laboratory
Prerequisite: LS-2 and LS-3 or permission of instructor.

LS-6. Preparation of Land Boundary Descriptions. The course introduces the theory of preparing land boundary descriptions for deeds, easements, and rights-of-way. The generally accepted forms of descriptions for condominiums and subdivisions are presented. Emphasis is placed on metes and bounds, station and offset, strips of land, and aliquot descriptions.

4 credits [3 hours of lecture, three hours of laboratory]
Prerequisite: LS-4 and LS-5 or permission of the instructor.

LS-7. Introduction to the Public Domain Surveys. A general course tracing the development of surveying the Public Domain. Emphasis is placed on tracing the surveying instructions and procedures developed from Congressional Acts and the manuals of instruction issued by various surveyor generals, Commissioners of the General Land Office, and the Bureau of Land Management. The general underlying principles of retracement surveys in the Public Domain are presented.

3 credits [3 hours of lecture]
Prerequisite: LS-2 and LS-3 or permission of the instructor.

BOARD OF DIRECTORS' MEETING SUMMARY

The fall meeting of the Board of Directors was held at the Parkway Plaza Convention Center in Casper on Saturday, December 9, 1995. The meeting was hosted by the South Central Chapter with arrangements having been made by Director Don Davis.

The meeting was called to order at 10:07 A.M. by President Jim Claflin. All chapters were represented, with a total of thirteen members present, including nine board members.

The minutes of the August 26th board meeting, held in Buffalo, were presented by Secretary Rick Hudson, discussed and approved.

The treasurer's report, in its usual format of bank statement, itemized expenses and balance sheet, was distributed by Hudson, discussed and approved. He also reported that interest on our certificate of deposit will amount to over \$210 by December 21, 1995.

Our NSPS Governor, Becky Braman, distributed copies of her report from the board meeting in Nashville on November 11 and 12, 1995, and discussed various items within the report. She also distributed copies of a letter, from the USDI - Bureau of Land Management, seeking input regarding the possibility of private contracting for cadastral surveys. Deadline for responses has been set as January 19, 1996. Upcoming ACSM / NSPS meetings will be in Baltimore next spring and Denver next fall.

"WestFed" Delegate Paul Reid was also at the meeting and distributed copies of his report from the board meeting in Denver on September 30th. He discussed various items within the report including the NSPS Foundation, further discussed later in this meeting, and the "Right of Entry" legislation passed this year in Oregon. This led into a question and discussion regarding the use of a lobbyist. The next meeting will be on January 5th and 6th in Las Vegas.

Committee reports were presented on behalf of Membership, Nominations & Elections, Education/Convention, Scholarship, History, Corner Record, Handbook and Newsletter "Lines & Points". Becky presented the nominations for 1996 officers, and one additional nomination was made from the floor. The results of the 1994 PLSW/WES questionnaire, prepared by Herb Stoughton, were distributed and discussed by Chris Hamilton. A general discussion concerning seminars indicated a preference for a "winter technical session" similar to the annual activities of PLSC in Colorado. Bill Braman reported that Herb is updating the "History of PLSW" for the handbook. The long-awaited corner record guide will be completed at a meeting of the Northwest Chapter on December 11th and will be sent to "Lines & Points" for publication in the upcoming edition. Don Davis announced the deadline for that edition has been set as Friday, December 15th.

Other items discussed in conjunction with committee reports included the Trig-Star competition, an update regarding raffle of the "Mapping the Frontier" bronze, and a reminder from Pete Hutchison of the deadlines for entries in the "SOS" (Corner Record) and NSPS map/plat competitions - January 15th for SOS December 15th for 1996 maps, January 15th for 1997.

The only item of old business was further discussion, by Chris, of Herb's tabulation of the 1994 questionnaire. Herb's recommendation to make this an annual questionnaire was considered.

New business began with the approval of three applications for membership; William C. Stampados of Cheyenne and Ted T. Taggart of Evanston as members, and Patricia Steikunas Factor of Wilson as an associate member. Welcome to PLSW!

A motion to accept the nominations for 1996 officers, and to authorize the ballot, was carried. The secretary will mail the ballots to all members in mid January.

Final plans for the Wyoming Engineering Society convention, February 1, 2 and 3, here at the Parkway Plaza, were discussed by Pete Hutchison. He distributed copies of the proposed program, of particular interest to land surveyors, and led a general discussion concerning the upcoming event. The principal topic will be presented by Dave Doyle of the National Geodetic Survey and center around national geodetic networks in Wyoming and their application to GIS and mapping programs. If Dave is unable to attend, Herb Stoughton will make the presentation. The attendance fee is to be \$25 for members of PLSW and WES, \$50 for non-members.

Rick Hudson distributed copies of last years annual state meeting agenda and asked for input regarding the format of the upcoming meeting to be held in conjunction with the WES convention on February 1st. After a general discussion, it was agreed this meeting is to follow the same general format as last years meeting. The annual raffle will be known as the "Allen Mace Memorial Raffle", in memory of his generosity.

The 1996 budget worksheet was distributed and pored over by the board members, resulting in the usual general discussion. Jim called for a break at 12:33 P.M. wherein members were given a tour of the convention facilities by Don Davis including the impressive 1000-seat banquet room. Following the tour, a luncheon was served back in the Shoshoni Room. The meeting was reconvened at 1:23 P.M. with Paul Reid distributing and discussing information concerning the NSPS Foundation. Members then returned to the budget worksheet and finalized the 1996 budget by unanimous vote.

The next item of new business was the choosing of board meeting sites and dates: Casper, after the annual state meeting, February 1st or 2nd; Laramie on May 4th; Rock Springs on September 7th and back to Casper on December 7th, 1996, most likely in conjunction with the proposed "Winter Technical Session".

Further items concerned a request of matching funds for a second scholarship from Joel Ebner of the Northeast Chapter; invitations to attend the WES convention as requested by John Steil; proposal for a new membership category "corresponding member" by Martin Pedersen; and a report from Martin, as a state board of registration member, on yesterday's SBRPEPLS meeting. The Southwest Chapter has donated \$500 to the University of Wyoming for the Surveying Education Program.

The board was called into executive session at 2:50 P.M. by the president and returned to regular session at 3:05 P.M.

Martin asked members to solicit names of clients who might be willing to contribute funds for the compilation of NAVD 88 elevations for all the USGS benchmarks in the state. He stated that Herb has compiled a position paper on this proposed project.

The meeting was adjourned at 3:17 P.M.

Dated this 14th day of December, 1995.

R.L. Hudson,
Secretary / Treasurer

(Continued on Page 21)

SW CHAPTER NEWS

The Southwest Chapter of the Professional Land Surveyors of Wyoming held a meeting on 16 November 1995. At the meeting a motion was approved to donate \$500.00 to the University of Wyoming — Surveying Education Program. The members in attendance at the meeting believe the continuation of the program is vital to the education of future Land Surveyors.

As part of the donation, the membership wishes to issue a challenge to the other chapters and the State Organization to also contribute. The idea conveyed is that a more substantial contribution could be raised for the program and that it would also be an indicator of our support. Please discuss this at your Board of Directors Meeting and advise the other chapters of our challenge. Our Chapter Director, Dick Griffin, should be in attendance if you have any questions, or please contact me.

Sincerely,

Joseph W. Manatos, PLS

President Southwest Chapter — P.L.S.W.



Paul, the truck keys . . . throw
down the truck keys!

By L. T. Perry

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BLM NEWS

The Bureau of Land Management's (BLM) Geographic Sciences Team would appreciate receiving feedback from your organization regarding your members' interest in potential future contracting opportunities with the BLM for certain cadastral survey and mapping services. The National Society of Professional Surveyors (NSPS) has agreed to coordinate the responses of the several State surveyor societies to this request.

The BLM recognizes that contracting for these services in the contiguous 48 States is increasingly important due to (1) Federal downsizing and streamlining processes, (2) changing technologies and convergent disciplines within what have been traditionally considered to be surveying and mapping functions; and (3) the successful contracting for survey services done by our Alaska State office.

Those factors have led the BLM to initiate an informal assessment/discussion on ways of increasing the level of private sector involvement in those functions that are capable of being done by the private sector. We believe the outcome of our internal dialogue would be enhanced by the inclusion of a statement from your organization on the prospective levels of interest, and readiness to assist, in the surveying and mapping of public lands. Your responses do not need to be either detailed or specific. Data from the several State survey societies will, when matched with the results of our internal review, help move our analysis forward.

Feedback is requested by January 19, 1996, please direct your responses to the following address:

BLM Geographic Sciences Team
c/o Pat Canfield, Executive Administrator
National Society of Professional Surveyors
5410 Grosvenor Lane
Bethesda, Maryland 20814

Any questions you may have on this request may be directed to Frank Hissong or Dan Webb of the Team; they may be reached on 202-452-5051 or 452-5029, respectively.

Sincerely,
Edward Harne
Acting Team Leader
Geographic Sciences Team

Land Surveying A Look at the Profession and a Curriculum

HERBERT W. STOUGHTON, PH.D., GEODETIC ENGINEER

Introduction

Land Surveying pertains to the location of real property boundaries. The type of land surveying performed can be divided into two major categories: *retracement surveys and subdivision surveys*.

The retracement survey requires the reestablishment of the original boundaries of a parcel of land. Today, most parcels of land to be retraced are not the entire parcel granted to the first owner, usually by letters patent, but a subdivision of the original grant, or even several generations of subdivision of the original grant. This statement is partially true in the West, because many of the GLO sections have not been subdivided since original transfer from the United States. Depending upon the deeds and the other legal documents, it may be necessary to retrace all or portions of the original grant.

The land surveyor's work as a retracement surveyor may be impeded by several conflicting rules. An often quoted maxim of the retracement surveyor is: "He [the surveyor] must follow in the footsteps of the original surveyor." This statement is well and good, but we must remember that we no longer live in the 17th, 18th, or 19th centuries, and that technology has not stood still. Does the court mean by this maxim that the retracement surveyor must employ a circumferential or a compass "of the Rittenhouse design" which measured angles to a precision of about five degrees of arc and a surveyor's chain made of knotted rope, bent iron links, or wood similar to those employed by surveyors in the 17th and 18th centuries? Or, does the court mean that the use of precise optical micrometer theodolites or electronic tacheometers that measure angles to one arc second and sophisticated electronic instruments that measure distances to a few millimeters are acceptable "tools of the trade," correlated with physical evidence, satisfactory to perform the retracement? If the latter system is acceptable, then the land surveyor must have an intimate understanding of the various instruments employed by generations of surveyors. The retracement surveyor must be able to read and interpret legal and historical records - in many instances only a small percentage of these original documents remain. The land surveyor must be able to reestablish *extinct monuments*. An extinct monument is one where all physical evidence - the monument itself or the physical witnesses of the monuments, i.e. bearing trees, etc. - and all living persons having personal knowledge of the location of the monument have passed away. Justice Thomas McIntyre Cooley of the Michigan Supreme Court stated:

It will probably be admitted that no man loses title to his land or any part thereof merely because the evidences become lost or uncertain. It may become more difficult for him to establish it as against an adverse claimant, but theoretically the right remains; and it remains as a potential fact so long as he can present better evidence than any other person. And it may often happen that, notwithstanding the loss of all trace of a corner, there will still be evidence from which any surveyor will be able to determine with almost absolute certainty where the original boundary was between the subdivisions.

A surveyor retracing a grant boundary of 1680 may find that the deed states: "Beginning at the tree where John Smith

shot the bear ... " The incident of John Smith shooting the bear and the location of the event may have been quite significant in 1680, but today the incident is unimportant *except to the land surveyor, who must, to the best of his ability, locate the spot where the tree stood (and has long since died) when John Smith shot the bear*. Many deed descriptions written in the colonial period contain similar data. Illegibility, spelling idiosyncrasies, and transcription errors in various records further complicate interpretation of these documents.

Another important maxim the land surveyor must follow is: "He [the surveyor] is not to assume that a monument is lost until after he has thoroughly sifted the evidence and found himself unable to trace it." Justice Cooley continues: "It is known that surveyors sometime, in supposed obedience to the State statute, disregard all evidences of occupation and claim of title, and plunge neighborhoods into quarrels and litigation by assuming to "establish" corners at points with which the previous occupation cannot harmonize. " Some currently licensed land surveyors do not adhere to this policy, and state on their survey maps: "This map is a survey based on a deed furnished by the client." This deed furnished by the client may contain serious defects in the legal description, which become apparent when the records are reviewed.

Another approach to this is the following:

It is merely idle for any State statute to direct a surveyor to locate or "establish" a corner, as the place of the original monument, according to some inflexible rule. The surveyor on the other hand must inquire into all the facts; giving due prominence to the acts of the parties concerned, and always keeping in mind, *first*, that neither his opinion nor his survey can be conclusive upon the parties concerned; *second*, that courts and juries may be required to follow after the surveyor over the same ground, and that it is exceedingly desirable that he govern his action by the same rights and rules that will govern theirs, ... Surveyors are not and cannot be judicial officers, but in a great many cases they act in quasi judicial capacity with the acquiescence of parties concerned; and it is important for them to know by what rules they are to be guided in the discharge of their judicial functions.

The land surveyor must not only be able to read and interpret the records, but he must have adequate knowledge of the law, statutes, and pertinent court decisions. Many of the early documents necessary for proper retracement of land boundaries are quite scarce. In general, there has been little comprehensive research of the old documents and publication of the research to assist land surveyors. Excellent studies of real property law, the legal aspects of retracement of old boundaries that document court decisions, and historical studies related to property are scarce and rare. The training of an individual to search, locate, evaluate, and decide the interrelationship of evidence, testimony, records, statutes, and court decisions is not a process accomplished in a few months or even a few years.

The subdivision surveyor requires other training and experience. In this work, original boundaries have been reestablished, and it is the surveyor's responsibility to satisfy federal, state, and local laws and ordinances to subdivide the

(Continued on Page 20)

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LETTERS TO THE EDITOR

In the last issue of *Lines and Points* I missed the promised report of the Board of Registration for Professional Engineers and Professional Land Surveyors. It seems like the Board agreed to do that for us.

I trust that you can keep Herb writing as he does have good information and I appreciate knowing of it.

And I appreciate the job you fellows do in getting it out.

Thank you.

Very sincerely yours,
Paul N. Scherbel
Professional Land Surveyor
Registration No. 164

To President and Staff,

I think the October issue of *Lines and Points* was an excellent issue.

R. Jack Smith, Albuquerque, NM



Oh no . . . more changes in the state board
rules and regulations, dear?

by L. T. Perry

Report of Western Federation of Professional Surveyors

BOARD OF DIRECTORS, TERRACE ROOM @ ADAMS MARK HOTEL, DENVER, COLORADO

SEPTEMBER 30, 1995

Meeting was called to order by Chairman John Abenroth @ 8:50 a.m. Members in attendance: John Abenroth, Chairman; Charles "Chuck" Paddock, Secretary; Jerry Tippin, Treasurer; Harry "Bud" Campbell, Alaska delegate; Blair Meggitt and Chuck Paddock, Arizona delegates; Robert "Chic" Chichester and Dave Difulvio, Colorado delegates; David J. Couch, Idaho delegate; Stewart Nash and Linda Smith, Montana delegates; Jim Botsford, New Mexico delegate; Charles Pearson, Oregon delegate; Ron Whitehead and Keith Russell, Utah delegates; John Abenroth and Kenneth Frazier, Washington delegates.

Guests in attendance: John Lisack, Jr., ACSM Executive Director; Gerry Curtis, NSPS Area 8 Director; Jud S. Rouch, ACSM Vice-President, Pat Canfield, NSPS Executive Administrator; Bob Prescott, Chairman, NSPS Board of Governors.

Agenda revisions were made along with the approval of the April 29, 1995 meeting minutes. The action list was reviewed and updated.

Jerry Tippin presented the financial report as of August 31, 1995 for WFPLS. In summary, as of August 31, 1995 WFPLS, had total assets of \$77,827.34, of which \$14,933.06 is earmarked for scholarship funds. Jerry Tippin verbally submitted his resignation as WFPLS Treasurer. Jerry said that after approximately 14 years of serving in that capacity and using his own personal funds for transportation and providing accounting services to WFPLS, he thought it was time to quit. It was motioned and seconded quite quickly that Jerry would not be allowed to resign until he could find a suitable and acceptable replacement to the WFPLS Board of Directors.

Proposed WFPLS budget for the 1995/1996 was reviewed and approved for \$8,550.00.

Conference committee reported that there were 81 attendees to the BLM Workshop. There were 263 registrants to the 9th Biennial Conference. There were 33 Exhibitors.

John Lisack, Jr. reported on ACSM activities on the national level. With the present administration it has been difficult in getting the legislators to understand the net affect of the agency and budget cuts that have been proposed. ACSM is working with a study group that would inform legislators what the net effect of the cuts would be upon the general public.

Blair Meggitt reported on the NSPS Foundation. There is becoming a large interest in the foundation and what it can do in supporting and perpetuating the surveying profession on a national level. NSPS had purchased the bronze "Mapping the Frontier" by Ken Payne for a raffle to go towards the NSPS Foundation.

Installation of new officers was done with Ron Whitehead, Chairman; Blair Megget, Chairman Elect; Chuck Paddock, Secretary.

Dave Difulvio presented the recent Partnership Agreement with Metro State College. The agreement will revolutionize the 4 year degree program @ Metro.

Review of State Reports was done with some of the highlights as follows: Arizona - The annual conference is scheduled for May 9-12, 1996 in the Phoenix area, Scottsdale to be specific. Arizona Professional Land Surveyors Association announced that they have become a Life Member of the NSPS Foundation. At the last Board meeting, the Board passed a motion to donate \$1,000 per year for the next 5 year.

Colorado - Legislative efforts this year will be centered on a bill which grants our State Board of Registration the authority to implement a mandatory continuing education requirement for relicensure.

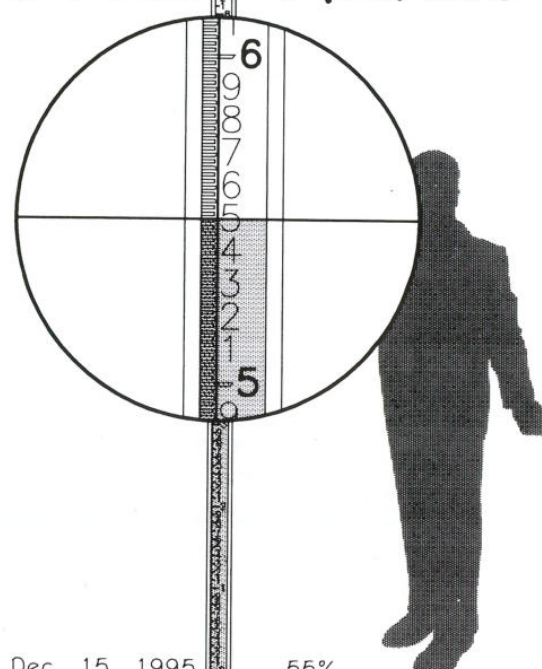
Oregon - PLSO had a lobbyist working for them the past legislative year. It paid off in big dividends as PLSO was able to get their "RIGHT OF ENTRY" bill and "STATUTE OF LIMITATIONS" bill passed. The PLSO board also voted to maintain the relationship with the lobbyist throughout this coming year to help enhance their cause. PLSO is presently pursuing for continuing education and authorship of legal descriptions.

Montana - Due to the Interstate Commerce Commission denying the ACSM Railroad Abandonment Preservation, the MARLS Legislative Committee will begin to draft legislation for the protection and preservation of survey monuments and to include all agency's operating within the State.

Next Board of Directors meeting of WFPS is scheduled for January 5 and 6, 1996 in Las Vegas. A dinner meeting is tentative for Friday evening and wrap up Saturday morning leaving the afternoon for fun.

Paul Reid, PLS
Wyoming Delegate

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WYOMING ENGINEERING SOCIETY MEETING

"Maintaining Wyoming Quality of Life in a World Economy"

FEBRUARY 1,2,3, AND 4 1996
TENTATIVE AGENDA OUTLINE

TIME	EVENT	LOCATION
Thursday 1 FEB 96		
8:00 am to 12:00 pm	ASCE & T ² Joint Workshop Gene Calvert & Joel Farber	Ballrooms A & B
12:00 pm to 1:00 pm	Lunch	Parkway Cafe
1:00 pm to 3:00 pm	WACES WACERS PLSW	Ballroom A Ballroom B Ballroom C
2:00 pm to 3:00 pm	Wyoming Public Works Officials	TBA
3:00 pm to 4:00 pm	ASCE	Ballroom A
4:00 pm to 5:00 pm	WSPE	Champagne Room
6:30 pm	Attitude Adjustment Dinner/Entertainment	Skylight American Room
Friday 2 FEB 96		
8:00 am to 9:00 am	Exhibits open Open Session Innovation -Lutheran Pastor Nathan Doer Opening remarks Mayor Owen Jones coffee break	Mardi Gras & Natrona Rooms Ballrooms B & C
10:00 am to 10:30 am	Concurrent Workshop Programs Surveyors Program	Mardi Gras & Natrona Rooms
9:15 am to 10:05 am	Oil Well Surveys	Ballroom A
10:30 am to 11:50 am	Spiral Curves	Ballroom A
9:00 am to 9:30 am	Engineers Program Sheridan Area Water Project	Ballroom B
9:30 am to 10:00 am	GPS on Tongue River Dam Rehab	Ballroom B
10:30 am to 11:45 am	Consulting with WYDOT	Ballroom B
12:00 pm to 1:30 pm	Lunch	American Room
1:30 pm to 2:30 pm	Concurrent Workshop Programs Surveyors Program	Ballroom A
2:40 pm to 4:00 pm	Statewide Geographic Coordinate Data Base Surface Water Filings	Ballroom A
1:30 pm to 2:15 pm	Engineers Program Construction-Coal Drying Facility	Ballroom B
2:15 pm to 3:00 pm	Windpower Generation	Ballroom B
3:00 pm to 4:00 pm	Courses in Surveying & Mapping	Ballroom B
4:00 pm to 5:00 pm	Exhibitors Beer Break/Drawing	Mardi Gras
5:00 pm to 12:00 am	Bus to/from Petroleum Club	Petroleum Club
5:00 pm to 12:00 am	Dinner & Entertainment	
8:00 am to 9:00 am	Saturday 3 FEB 96 Exhibits Open	Mardi Gras & Natrona
9:00 am to 12:00 pm	Concurrent Workshop Programs Surveyors Program	Ballrooms A,B&C
9:00 am to 10:00 am	Nat Geodetic networks WY & Application to GIS & Mapping	
10:30 am to 11:00 am	Engineers Program New Business Assistance in WY Performance of Prestress Glulam Timber Beams	
11:00 am to 11:30 am	Seismic and Blast Strengthening of Masonry Structures	Ballrooms A, B & C
10:00 am to 10:30 am	Coffee Break	Mardi Gras & Natrona
12:00 pm to 1:30 pm	Lunch, speaker Senator Craig Thomas	American Room & Ballroom A
1:30 pm to 3:00 pm	Workshop Programs Engineers & Surveyors - Joint	Ballroom A & B
3:00 pm to 4:30 pm	Registration Board update	Ballroom A & B
6:30 pm	WES Annual Business meeting	Ballroom A,B & C
9:30 am to 11:30 am	76th Annual Convention of Award Banquet	
Sunday 4 FEB 96		
	Brunch with Legislators, City & County officials	Ballrooms A, B & C

GUIDE FOR PREPARATION OF STATE OF WYOMING CORNER RECORD

OVERVIEW

This guide supplements the current Corner Perpetuation and Filing Act [W.S. 36-11-101 through S 36-11-110] and the State of Wyoming Board of Registration for Professional Engineers and Professional Land Surveyors [SBRPEPLS] rules and regulations.

The purpose of the corner record is to perpetuate the location of existing corner monuments and to provide documentation on the positions of newly established corner monuments. Fulfillment of the provisions of Wyoming statutes and rules and regulations of the SBRPEPLS should be viewed as subordinate to the former.

As public documents, these corner records are a direct reflect on the professionalism of the preparer. The professional land surveyor has the responsibility to perpetuate original survey monuments found, set or reestablished. Consideration of the corner record as a formal document is emphasized. Once filed, this document becomes a portion of the historical record for the corner and all lands dependent upon that corner. It is important that the effort put forth into each corner record should be done not only to satisfy statutory requirements, but to complete the documentation of the research and field work performed resulting in the monumentation. Only by failing to perform this duty has the need for regulations been required.

Corner records are intended to:

- 1) Indicate the location of the corner monument and its accessories;
- 2) Perpetuate the corner position;
- 3) Provide specific documentation of the recovery or reestablishment of the corner monument; and
- 4) Document the most recent date of recovery of the corner monument.

In order to achieve these goals each professional land surveyor must address and complete the specific items on the following State of Wyoming Corner Record form.

AVAILABILITY

The State of Wyoming Corner Record is available from the Secretary / Treasurer in the following media:

- 1) On bond paper, Wyoming Size AA [8½"x14"], for \$1.00 each, intended to be used as a master for making additional copies on bond paper;
- 2) On 3½" magnetic disk, for \$5.00 each, in all of the following formats:
 - a) WordPerfect, Ver:5.1/5.2 [By Richard Greenwood, P.L.S.]
 - b) AutoCAD, Ver. 11.0 [By D.R. Griffin

& Associates, Inc.]

c) Microsoft Works, Ver. 2.00 [By R.L. Hudson - Land Surveyor]

GUIDE FOR PREPARATION OF

State of Wyoming Corner Record

(In compliance with the CORNER PERPETUATION AND FILING ACT, Wyoming Statutes, 1977, Section 36-11-101, et. seq., and the Rules and Regulations of the Board of Registration for Professional Engineers and Professional Land Surveyors)

Reverse side of this form may be used if more space is needed.

Record of original survey and citation of source of historical information (if corner is lost or obliterated). Description of corner monumentation evidence found and/or monument and accessories established to perpetuate the location of this corner. Sketch of relative location of monument, accessories, and reference points with course and distance to adjacent corner(s) (if determined in this survey). Method and rationale for reestablishment of lost or obliterated corner.

Each form submitted for recordation must be on bond paper and bear an holographic (original) signature.

LOCATION OR DESIGNATION:

All corners should be identified by their proper names; i.e., the quarter corner common to Sections 13 and 24, or Corner 4 of Tract 37; including township, range, meridian (Sixth Principal or Wind River), county, and state.

RECORD AND HISTORICAL DATA:

Corners of the public land system are of record with the Wyoming State Office of the Bureau of Land Management in Cheyenne. Field notes and plats are available upon request. Various other sources of record and historical data are available of local levels and should not be ignored. (In time, your county clerk's office will become as familiar as your own living room.)

EVIDENCE FOUND:

Write a thorough report of the evidence you found; composition, size, identifying marks, physical condition. You may have searched on hands and knees, for five hours, in the rain, and found absolutely nothing. If that is the case then state it in your report.

MONUMENT AND ACCESSORIES ESTABLISHED (PERPETUATION):

Corner perpetuation is a privilege and responsibility granted solely unto Land Surveyors by statute. Take the time to rebuild rock mounds, clear sagebrush or replace a crumbling sandstone where necessary. You may be the last surveyor to use this corner for several decades.

You will be remembered by the monumentation you leave upon the earth. Set durable monuments and provide a complete description of your perpetuation activities. Even with GPS, reference lines, bearing trees and reference monuments should not be considered "old-fashioned" or unnecessary.

"A PICTURE IS WORTH A THOUSAND WORDS"

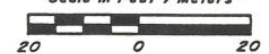
It is suggested that the sketch be done first and the text placed around it. Placement and overall size are matters of individual choice.

If the sketch is drawn to scale, a graphic scale and north point should be added.

The reverse side of the form may be used for such items as:

- a) Additional sketches,
- b) Control diagrams,
- c) Coordinate lists,
- d) Additional text,
- e) Photographs.

Scale in Feet / Meters



When the reverse side is used an arrow, or similar symbol, can be used to alert readers that additional information has been included in your report.

REESTABLISHMENT OF CORNERS:

In most cases, other surveyors (and the courts) will accept your efforts when shown your methods and rationale are reliable. This can be accomplished by including a complete description of your methods on the corner record. "Show your work"

CROSS-INDEXING:

The format of this form requires additional copies be prepared and recorded where the corner is common to two or more townships. Suggestion: Prepare one form, make additional copies on bond paper, fill in cross-index data, sign, date and seal each corner record.

Date of Field Work: Completion or use Office Reference: Your data base or filing system designation.

CROSS INDEX DIAGRAM		Firm/Agency, Address	This corner record was prepared by me or under my direction and supervision. SEAL & SIGNATURE
		Name and PLS or PELS no.	
		Firm / Agency	
		Street / Mailing Address	
		Town / City, State, ZIP Code	
		Telephone Number, Business number	
Common name such as Corner Name: <u>N 1/4 SW cor. or CE 1/16</u> Section: <u>1 - 36</u> R. <u>6th</u> T.M. Cross-Index No.: <u>A-1 through Z-25</u> SBRPEPLS/PLSW: March 1994			or W.R.M. or as otherwise appropriate.

THE ACTUAL FORM IS WYOMING SIZE AA (8 1/2" x 14"), ALSO KNOWN AS "LEGAL".

—LAND SURVEYING

(Continued from Page 15)

mensuration data concerning improvements. The surveyor should prepare a preliminary map depicting existing conditions. Special care must be exercised when drafting "near" encroachments. In this writer's opinion, any encroachment "short" or "over" the boundary by less than 0.10 foot (about 1 1/8 inches) should be carefully resurveyed before any derogatory pronouncements.

All parties must understand that *no measurement is perfect or absolute*. The eave of a residential structure being 1/8 inch (0.02 foot) encroaching is an unacceptable accusation. The purpose of a boundary survey is to demark the bounds and illustrate the liabilities/encumbrances for sovereign usage.

Encroachments Onto Surveyed Property.

As mentioned earlier, the surveyor must carefully review any indications of encroachments. All encroachments are *predicated* upon the land survey's decision of the boundary's location. Many retracement surveys are initiated because the monuments referencing the boundary no longer exist, and the surveyor must analyze record and physical evidence, and decide the location of the boundary.

When a contestation concerning encroachments arises, the underlying issue is the location and the determination of the location of the boundary. Remember, small shifts of one or more property corners will eliminate encroachments. For this reason, when corners are being reestablished, encroachments of 0.10 foot or less are questionable.

Also, the land surveyor must carefully review the decisions about a boundary location and the resulting encroachments. If litigation results, the surveyor could be subsequently sued for damages, if the surveyor's determinations were adjudicated to be unrealistic. Therefore, land surveyors, attorneys, and others should carefully review the data and the resulting rendered determinations in order to minimize subsequent controversy.

Building Set-Back Lines.

The issue of "set-back lines" probably causes the most noisy confrontations. There are numerous misunderstandings, which are the result of a nearly "infinite" number of rules concerning the subject matter. Every political entity below the state government issues/enacts ordinances and regulations concerning minimum distances a residence or other structure must be from street boundaries or other boundaries. Each set of rules is worded uniquely and vary from jurisdiction to jurisdiction. In a single county it is not unusual that the rules for each municipality and the county will be very different.

The land surveyor has two duties. One: to state the location of the foundation for construction. Two: to measure the actual location after construction. The major liability a surveyor encounters in this arena is the subject of staking the structure for construction. Care must be exercised in executing the survey and ensuring that the proposed structure's location meets regulatory and design criteria.

Once the building is completed, a surveyor may be required to survey the actual location of the structure. In some locations, interim surveys as to the structure's location and the status of construction are required by financial institutions, and are performed. After the structure's completion, the political entity's policing power continues in force. After review of the survey and construction records (in accordance with enacted legislation), the oversight authority can issue a "certificate of occupancy." This document indicates that the construction conforms to the enacted rules and regulations. If the structure does not meet the requirements, then a variance is requested. The variance seeks

acceptance and issuance of the certificate of occupancy. The policing authority reviews the application and determines if the failure to meet requirements was accidental and minor, or a deliberate attempt to circumvent the rules. The authority may have the authority to waive penalty, require removal, or assess a monetary fine.

This writer, as well as other surveyors, have been asked to certify the location of a building as to satisfy existing regulations. This request generally arises when a financial institution is preparing a mortgage. The land surveyor must carefully consider this course of action. There are several reasons for this consideration. First: the rules for "set-back" vary over the years. If a structure was constructed and accepted at an earlier era, and fails to satisfy current requirements, the building is "grandfathered," and cannot be termed in *nonconformance*. Second: once the certificate of occupancy has been issued, which categorically means that whether the structure actually satisfied set-back requirements or that a variance was issued, the structure *is accepted* by the regulatory agency, and that no litigation could be initiated that would affect the title based as to the structure's location.

Another problem concerning "set-backs" is the issue of the structure's appurtenances. Porches, entrance overhangs, etc. are considered either temporary or permanent appendages. Careful review of the political entity's regulations must be scrutinized.

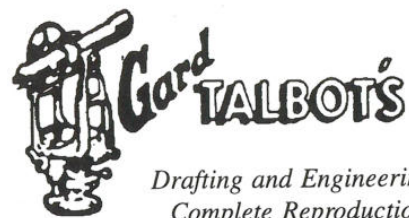
There is no simple answer. Research and study is required in order that land surveyors and attorneys understand the issues with which they are confronted.

How Cemeteries And Graves Are Shown On A Survey - Identification And Location Techniques.

Although not common, land surveyors may encounter graves or a cemetery on lands being surveyed. The existence of which is either indicated by the property owner or by physical evidence. In Wyoming, it is possible to encounter small cemeteries and family grave plots on lands. This is particularly true when the property is distant from communities. When surveyors are researching the records and other sources, it is advisable that one of the questions asked is: Are there any known burial grounds on the property?

Although there is little in the technical and legal literature concerning graves and cemeteries on private property, it is advisable that the land surveyor treat the situation in the same manner as an easement. The surveyor indicates on the survey map the location of the gravels) or cemetery. It is not always possible to determine the boundaries of the area, but a reasonable determination is considered acceptable. The location is not as critical as is the notification of the existence of burial grounds.

Lecture presented to land surveyors and attorneys 14 July 1993.



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1995 ANNUAL STATE MEETING FEBRUARY 9, 1995 - CHEYENNE, WYOMING

DRAFT MINUTES

(To be approved at 1996 Annual State Meeting)

1. LOCATION AND DATE - The 1995 annual state meeting of the Professional Land Surveyors of Wyoming was held in the NE American Ballroom at Little America Hotel in Cheyenne, Wyoming, on Thursday, February 9th, 1995. The meeting was in conjunction with the 75th annual Wyoming Engineering Society convention.

2. SUMMARY - A summary of these minutes, dated 1 March 1995, has been printed in the official publication of PLSW, "Lines & Points", Volume 7, number 1, dated April 1995.

3. CALL TO ORDER, AGENDA REVISION AND ATTENDANCE - The meeting was called to order by President Chris Hamilton at 1:10 P.M., and began with agenda revision and adoption of the revised agenda. The signed attendance list shows thirty-seven members and honorary members, six affiliates, and seven guests present. Honorary Members Paul Scherbel, Joe Popp and Wes Reed were in attendance. Jim Hawks, vice president of the Professional Surveyors Association of Nebraska attended as a guest.

4. INTRODUCTIONS - President Chris Hamilton introduced the officers present including Vice President Jim Claflin and Secretary/Treasurer R.L. "Rick" Hudson at the front table and the above mentioned honorary members and guest.

5. LAST CALL FOR BALLOTS - A last call for ballots was made and Chris acknowledged Teller Bob St. Claire who will tabulate the ballots and report the results later in the meeting.

6. MINUTES - Rick Hudson stated that the minutes of the 1994 annual state meeting, held in Riverton on February 3rd and 4th of last year, had been published in the current issue of "Lines & Points". He briefly reviewed said minutes. A motion to approve same, as submitted, was made by Larry Perry, seconded by Herb Stoughton and carried.

7. TREASURER'S REPORT - Hudson, as Treasurer, distributed copies of the treasurer's report which consisted of the following items: 1994 Itemized Expenses. 1994 Balance Sheet; 1994 Income and Expense graphs. Current balance in checking account at Hilltop National Bank also reported. A motion to accept the report was made by Herb Stoughton, seconded by Larry Perry and carried. Paul Scherbel led a discussion concerning the purchase of a certificate of deposit or other investment. Hudson will submit a report on the matter to the Board of Directors at the spring board meeting.

8. BUDGET - Copies of the 1995 Budget were distributed and discussed by Chris and Rick. The budget had been approved by the board of directors in January. Motion to approve the budget as submitted was made by Herb and seconded. Discussion opened by Paul Scherbel with questions regarding "SOS" income and administrative costs and whether the amount for "Lines & Points" was sufficient. Co-editor Don Davis responded that it was. Motion carried by unanimous vote.

9. NORTHWEST CORNER REMONUMENTATION - Vice President Jim Claflin gave an oral report concerning the remonumentation of the northwest corner of Wyoming. He mentioned the events leading up to the actual remonumentation,

then the actual remonumentation of last August. He recounted the finding of the hole where the original post had been until the 1988 fires and introduced Jerry Messick of the USDI - Bureau of Land Management. The signing of the field notes was done at the front table; by Jerry, as the Cadastral Surveyor; by Paul Scherbel, as the lead volunteer; and by John Lee, as the supervisor. An impressive display of photographs, documents and an old stadia board recovered at the site, was set up at a side table.

10. COMMITTEE REPORTS - Committee reports were presented orally and intentionally kept short. Written versions of the reports were available during and after the meeting at a side table. The following committees, with chairmen noted, submitted reports:

A. Audit - Finance [Becky J. Braman] - Becky stated the report was not yet completed and would be sent to "Lines & Points" for publication causing a worried look upon the face of the treasurer.

B. Membership [Stan Abell and Rick Hudson] - Rick read from the written report indicating total membership at the end of 1994 stood at 104 members, including 9 living honorary members, and 37 affiliates; also stating that as of 7 February a total of 84 members and 19 affiliates had paid 1995 dues.

C. Nominations and Elections [Stan Abell and Bob St. Claire] - Stan mentioned the new policy adopted by the board of directors regarding the nomination of candidates for office. In the future the committee will consist of the last three past presidents who will submit a list of candidates to the board of directors at least 60 days prior to the annual state meeting.

D. Standards, Ethics & Professional Practice; Education - Convention and Manual of Professional Practice [Herb Stoughton] - Herb reported on each of the following topics:

1) Questionnaire regarding corner records and monumentation practices - read from sheet accompanying the actual questionnaire, distributed same, and stated that every member of PLSW will be sent a copy at a later date;

2) The proposed bylaws amendments that were on this year's ballot (regarding formation of new chapters);

3) His letter, dated 4 October 1994, to the State Board of Registration for Professional Engineers and Professional Land Surveyors [SBRPEPLS] regarding the proposed continuing education requirements;

4) The Thane H. Baldwin, Jr., files consisting of 173 water rights maps and 913 General Land Office and Bureau of Reclamation plats to be added to the PLSW map file with 54 miscellaneous maps given to the BLM and the Northwest Chapter;

5) Regarding education - the course outlines that are available for presentation by himself, four of which

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—1995 ANNUAL STATE MEETING

(Continued from Page 9)

will be presented regionally and/or nationally - the BLM cadastral training program that is available for chapter use;

6) Revision of the Certified Land Corner Recordation form into what has now become the Corner Record:

a) The new form was adopted by the SBRPEPLS in March of 1994 and its use, as of 1 January 1995, is now mandatory;

b) The committee (consisting of the Northwest Chapter) has submitted guide lines for the preparation of forms, they have been reviewed, and he suggested publication of said work in "Lines & Points" for comment by the general membership;

c) He read from memo to committee and submitted a written motion requesting certificates of appreciation be prepared for the chairman and committee members seconded - discussion;

d) Harvey Copeland [committee chairman] asked if additional duties are required, Herb stated there are no immediate changes to the SBRPEPLS rules and regulations and that the committee could be disbanded - general discussion - motion to disband the committee tabled, by additional motion, until next board of directors meeting.

e) Jim Greer asked if copies of the new form are available. Rick Hudson stated each PLSW member was sent a copy, on bond paper, last March. Form will be available on magnetic disk from Rich Greenwood and others at a later date.

E. Professional Awards [Chris Hamilton] - Chris acknowledged the financial contributions of Allen Mace and the efforts of Rick Hudson and John Steil this past year. Jim Claflin acknowledged the retirement, from the Bureau of Land Management, of Dennis Bland and Marty Winemiller.

F. Scholarship [Martin Pedersen] - Martin's written report was read and discussed by Rick Hudson.

G. Legislative [John Steill] - John stated the proposed "Recording of Surveys" bill, Senate Bill 0088, was not reported out of Senate Committee No. 7 this session. A general discussion erupted - Paul Scherbel stated that surveyors are not now filing records of survey as permitted under current state law. The majority of comments, regarding our legislative attempts, was that there has not been enough input from our members to legislators.

H. History [Bill Braman] - Becky Braman reported for Bill, indicating that the committee needs input from members for completion of the PLSW history for the handbook.

I. Certified Land Corner Recordation [Harvey Copeland] - Harvey presented a written and oral report of his committee's work which resulted in the new "Corner Record" form. He asked members for comments - Larry Perry inquired concerning the legibility of the township diagram; Jim Claflin stated the Campbell County Clerk was reluctant to accept the new form when submitted by Don Brady. Other comments indicated nearly all users were delighted with the new form. Harvey indicated changes to SBRPEPLS will be required. He completed his report by

acknowledging the efforts of his committee members, the Northwest Chapter.

J. Handbook [Scott Pierson] - Scott reported that most of the PLSW Handbook is now available on magnetic disk. Rick Hudson stated that all out-of-state members will be sent a copy of the handbook, along with the proceedings of this meeting, as soon as possible.

K. Save Our Surveyors "S.O.S." Honorarium [Pete Hutchison] - Pete stated that only one entry had been received for this year's competition - hence there will be no award made this year.

L. Newsletter - "Lines & Points" [John Hibsman, Don Davis, Steve Strang] - Don presented an oral report indicating a "very modest profit" this past year and listed the sources of income and expenses.

11. DELEGATE REPORTS - Written reports are available at this meeting

A. National Society of Professional Surveyors [NSPS] - Becky J. Braman, Governor:

Becky mentioned the two meetings she had attended this past year - Reno in the spring and Phoenix in the fall. She noted changes regarding NGS electronic calibration baselines and briefed members on the Certified Survey Technician program, of which she is a committee member. She mentioned the "GrassrootsAlert!" from ACSM regarding the proposed abolishment of the USGS and urged all members to contact our congressional delegation. Herb Stoughton pointed out that USGS is a scientific, not regulatory, agency.

B. Western Federation of Professional Surveyors [WFPS] - Paul A. Reid, Delegate Paul recapped the meetings he had attended the past year, most recently last month in Tucson. He mentioned the diversity of activities being reported from other WFPS member states and concluded his report by reminding members of the 1995 conference in Denver September 27 - 30 and the questionnaire in "P.O.B." magazine regarding NSPS.

12. OLD BUSINESS - None

13. RECESS - Chris announced a recess at 3:43 P.M. whereupon members and guests dispersed, commingled or otherwise socialized. The meeting was called back to order at 4:05 P.M.

14. PRESIDENT'S AWARD - Chris acknowledged the service of Dr. Herbert W. Stoughton to PLSW during this past year, and presented him with a plaque to symbolize our appreciation of his efforts.

15. ELECTION RESULTS - Teller Bob St. Claire announced the results of the 1995 election: Sixty-seven votes were cast, six of which were invalid - 29 members had not voted. For President - James D. Claflin; for Vice President - Peter J. Hutchison; for Secretary / Treasurer - R.L. "Rick" Hudson. Both amendments to the Bylaws passed; 57 to 3 for No. 1, 56 to 3 for No. 2.

16. INSTALLATION OF 1996 OFFICERS - John Steil, PLSW member and NSPS Area 7 Director, administered the oath of office and affirmation. Now President Jim Claflin acknowledged the service of Chris Hamilton, as president during this past year, and presented him with a trophy - then the traditional plaque.

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Land Surveying Problems In The 90's

HERBERT W. STOUGHTON, GEODETIC ENGINEER

(PART 3 OF 3)

Distance Differentials.

When deed distances and field measurements fail to agree, then the question arises "which distance is correct?" The answer to this question is not a simple response. If the original monuments were recovered, then two questions arise. First: did the monuments move or were they moved? Second: is there a difference in length of the tape or chain previously used and currently used? The reason a land surveyor studies old survey work is to obtain insight into each individual's methods and equipment. The writer spent several years retracing surveys executed over sixty years earlier. The old surveyor monumented boundary corners with two inch diameter iron pipes. After finding several dozen such monuments, analysis of his length measurements revealed that when compared to the writer's calibrated tape length, the difference was about 0.20 foot (2 1/4 inches) per 100 feet. When no original monuments are recovered, and distances do not agree with record distances, the reasons for the discrepancies can only be surmised. If there is close agreement between current and record dimensions (less than about one percent of the length in urban and not more than about five percent of the length in rural areas), there is little concern. However, each survey must be reviewed and analyzed in order to determine the reasonableness of the differences. When differences in distances between the record and new are only 0.10 percent or less, the discrepancy may be due to very slight differences in distances or the accidental errors in the measurement process. These differences are slight, and are disregarded.

Course Differences.

Discrepancies in bearings are very common. The differences can be as large as several degrees. The reason for this is the evolution of surveying instruments. Until World War I the prominent surveying instruments were the compass or the transit (theodolite) fitted with a compass. The transit's telescope was pointed along the boundary lines, and the compass was read. Depending upon the accuracy and precision of the compass, the accuracy of the bearings would be from a few arc minutes to about five degrees. When the engineer's transit gained acceptance, angles between boundaries were measured, and the bearings were computed. By World War II, surveyors were measuring angles to a precision of 30 arc seconds or better. Today, optical micrometer theodolites with a precision of one arc second to one arc minute are employed.

Land surveyors are cognizant of the evolution of angle measuring instruments. The large discrepancies noted between angular measurements from various eras do not normally raise concern amongst land surveyors. In most instances, land surveyors do not have second thoughts about the discrepancies noted between observations from different eras.

Acreage Differentials.

The subject of differences in acreage is probably the most questioned, and thus controversial aspect of land surveying. The problem has been a subject of heated debate amongst surveyors, attorneys, and land owners for over five centuries. In the 16th through 18th centuries, surveyors would carefully weigh scaled wood or paper models (maps) of the property and compare the value to the weight of a parcel of known area at the same scale. If the unknown parcel weighed five times that for a parcel of ten acres (square or rectangle), then the unknown area must be 50

acres. By the last quarter of the 18th century computational procedures replaced the method of weights. The procedures were acceptable and reliable, but were not universally employed. Even though many surveyors attempted to use these new techniques, the results were very poor. It is not uncommon to find errors in area as large as fifty percent of the stated acreage!

It was not until the development of the calculator and computer would the problem of inaccurate computation or areas become less, but was not eliminated. The computation of areas bounded by circular, parabolic, and elliptic curves or contours and water boundaries continue to cause problems. Today (1993), digital computers programmed for numerical integration will address all area computation problems. The resulting errors result only from the sensitivity of the algorithm adopted.

The above only addresses the issue of computing areas. The legal issues concerning areas in conveyances are unchanged. Case law remains unchanged. The issue is how was the area calculated, and if the procedure was reasonable and performed correctly.

Improved Property Issues.

Properties are continuing to be "improved." The definition of "improved property" is a subjective assessment, and must be viewed in that sense. Depending upon philosophical persuasion, the same improvement can be considered either negative or positive! If the land surveyor is called upon to map such improvements, then the surveyor, in a professional role, must impartially execute the assignment. This may seem a trite statement, but in today's environment of activism the issue of "partisanship" could be raised in subsequent litigation.

Surveyor's Duty To Show Or Locate Improvements.

The land surveyor faces two issues when requested to execute a survey. The land surveyor executing retracement boundary surveys traditionally does not map man-made features. However, as mentioned earlier, many "easements" result from actions of various parties. Generally, those features (buildings, fences, drainage, driveways, sidewalks, etc.) that directly affect a boundary are mapped, and the other items are omitted. The second issue concerns the action/response of the client/attorney. "Why should the features be mapped?" Many clients feel that mapping such features is unnecessary. The land surveyor and client must agree upon the purpose of the survey and the desired results. Also, they must understand the importance of surveying and mapping the features.

Most boundary surveys (except ALTA surveys) are not normally concerned with mapping "improvements." It is the writer's belief that the land surveyor should survey/locate all information concerning improvements. These items may not be illustrated on the final survey map(s), but are depicted on "working" maps for analysis.

The surveyor must consider the fact that failure to map man-made features and improvements may result in civil and professional liability litigation. Case law in this area has been scanty, and in some instances conflicting. In the opinion of the writer, it is the duty and responsibility of the land surveyor to survey, locate, and record in the field notes all discernible facts that could affect title and usage of the property.

What Improvements Are Shown Or Located?

As just mentioned, the land surveyor should collect pertinent

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REFLECTIONS

BY JOHN LISACK, JR.
EXECUTIVE DIRECTOR, ACSM

The 1995 GIS/LIS '95 Conference was an outstanding success. More than 2,600 attendees participated in the various educational forums and social events. The conference boasted more than 230 technical papers and 16 workshops which addressed all phases of geographic information systems (GIS), land information systems (LIS) and related fields.

The exhibition, as always, was a very valuable adjunct to the conference and featured strong representation from companies providing products and services to the GIS/LIS community. We are grateful to our corporate friends for participating at GIS/LIS '95. The value of the conference is enhanced by the financial support and technical wisdom that our corporate colleagues bring to this annual event.

The keynote speaker, Rick Broadhead, did an outstanding job of outlining strategies for organizations with regard to the Internet. As Canada's foremost Internet expert, Mr. Broadhead provided perspectives that were applicable to the Internet novice as well as individuals with considerable experience. The Internet is revolutionizing the way we communicate and offers new and exciting challenges for virtually everyone.

One of ACSM's major activities during the conference was the society's midyear Board of Direction meeting. During the meeting, reports were received from the Member Organizations as well as the 37 regular committees and task forces which address the interests of the surveying and mapping professions. The following major action items were discussed during the meeting:

ACSM ORGANIZATION AND STRUCTURE

o The Geographic Land Information Society was approved as the Society's fourth Member Organization, pending approval of their bylaws.

o The 1996 budget was presented and approved.

o A line item, entitled Reserve, was established in the 1996 budget and the surplus was allocated to the Reserve.

o Thirteen members will be invited to join the Fellows

grade of ACSM.

MEETINGS AND CONVENTIONS

o A resolution of thanks will be sent to the organizers of the 1995 GIS/LIS Conference.

o An "ACSM Town Meeting" will be organized at the 1996 Baltimore Convention to formulate a "vision statement" for the Society.

o ACSM will request the American Society of Photogrammetry and Remote Sensing (ASPRS) to accept ACSM as a co-sponsor of the 1996 Softcopy II Conference.

o The preliminary budget for the 1997 ACSM/ASPRS Annual Convention in Seattle, Washington, was approved.

o The possibility of holding the 1999 ACSM/ASPRS Annual Convention in conjunction with the Western Federation of Surveyors, the Professional Land Surveyors of Oregon, and the Land Surveyors Association of Washington, will be explored.

o the Sheraton Washington Hotel in Washington, D.C., was approved for the ACSM/ASPRS Annual Convention and the site for the FIG 2002 Congress.

o An agreement to co-sponsor future Annual Conferences with Resource Technology Institute will be reviewed carefully by the Board.

OTHER ACTIONS

o ACSM will become a charter member of the FIG Education Foundation.

o The employment contract of the Executive Director was extended on year.

o The ACSM professional journals, CaGIS and SaLIS, will be sent to student members and Member Organization preference will be removed from application forms.

o the Awards Committee will explore the possibility of establishing a North American Surveying and Mapping Award.

o The ACSM home Page on the Internet was commended and use of this valuable tool was encouraged to communicate with members and attract potential new members.

o ACSM will consider submitting a proposal to join the University Consortium for Geographic Information Science.

o ASPRS has rejoined the Government Affairs activities of ACSM with financial support.

A very serious scare was experienced when Richard Chinn, ACSM Director of Finance, suffered a heart attack and had to undergo quadruple bypass surgery in Nashville. I am pleased to report that Mr. Chinn is now at home and recovering nicely.

President John E. Dailey reported that he is very pleased with the progress that has been made in government affairs, hydrographic certification, and communications. Continuing efforts to respond to the needs of our profession at all levels will further strengthen and unify our association. We look forward to an exciting "Town Meeting" in Baltimore, when our "Vision for the Year 2020" will be initiated.

**Recruit a New Member
NOW!**

The Brunton Company celebrates 100 years

Celebrating 100 years, Brunton offers a complete line of precision professional and recreational compasses, superior optics with the special Starfire® optical coating system, InteliOptics rangefinding binoculars and award winning Lakota cutlery. Serious outdoor gear that gives you the edge in the field.

PLSW appreciates the past contributions to our scholarship fund from the donation of items to the raffle each year. Thank you Brunton and congratulations on your 100th year serving the surveyors of this state and nation.

—1995 ANNUAL STATE MEETING

(Continued from Page 10)

17. NEW BUSINESS

A. "Mapping the Frontier" Statue Raffle - John Steil reported on the statue raffle. The bronze, by artist Ken Payne, is on display at this convention. He stated that 400 tickets, at \$25 each, are to be sold and the anticipated profit, \$3,500, will be placed in the Scholarship Fund. He stated that tickets have been distributed to all chapters. Chris mentioned that PLSW affiliate Linda Abell had initialized the project, having seen the work at Eagle Bronze in Lander, last year.

B. Corner Record and Monumentation Questionnaire - This matter was previously discussed by Herb Stoughton during committee reports; see Item 10 D, 1) of these minutes.

C. Guide For Preparation of Corner Records - Harvey Copeland, chairman of the newly renamed Corner Record Committee, continued the discussion regarding the new "State of Wyoming Corner Record". He presented an overview of his committee's latest effort; a guide for the preparation of the form. Following a general discussion, he stated that the revised version of the guide will be published in an upcoming edition of "Lines & Points" and, ultimately, be included in the PLSW Handbook. Kevin Jones raised a question concerning use of the word "certification" in the context of Corner Records.

18. ANNOUNCEMENTS

A. Herb Stoughton informed members of a list of equipment stolen from fellow land surveyor Doug Bell in Diamond Bar, California in November of 1994, and of the \$1,000 reward for information concerning said theft.

B. Herb also mentioned a meeting, of international geodesists, to be held this summer in Boulder.

C. Chris acknowledged the gift of \$100 from member Allen Mace that was used to purchase a fine pair of binoculars from Brunton USA of Riverton. Proceeds from the resulting raffle are credited to the PLSW Scholarship Fund - Scott Pierson is selling tickets at \$1 each or six for \$5.

19. ADJOURNMENT - A motion to adjourn was made by Herb Stoughton, seconded and carried at 4:25 P.M., Mountain Standard Time.

Respectfully submitted to the general membership this 23rd day of December, 1995.

R.L. Hudson.

Professional Land Surveyors of Wyoming Federal map Series Published by the US Geological Survey

The following maps pertaining to Wyoming were published by the US Geological Survey. The information was gleaned from the monthly publication *New Publications of the U.S. Geological Survey* (List Nos. 1039 through 1044, February 1995 through July 1995).

1. 7.5 minute, 1:24,000 scale, topographic quadrangles (price \$2.50):

- a. Lyman
- b. Cattail Ranch NE
- c. Dickinson Hill
- d. Duroc
- e. Hawk Springs
- f. Huntley
- g. Klutz Canyon
- h. Whitcomb Hill
- i. Robb Draw

2. Intermediate scale new maps (1:100,000).

- a. Walden

3. Bureau of Land Management Intermediate Scale (1:100,000) maps (price \$4.00):

- a. Surface Management of Lands and Mineral editions (two separate maps).

(1). Cheyenne 1963

- b. Surface Management edition, only.

(1). Torrington 1973

(2). Buffalo 1972

Note: the Bureau of Land Management maps may also be purchased directly from the BLM for the same price. US Geological Survey Maps can be purchased from: U.S. Geological Survey, information Services; Box 25286, Federal Center; Denver, Colorado 80225.

Herbert W. Stoughton



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The Benefits of Certification With NSPS/ACSM

Having worked in the field of surveying for over a decade now has given me a clear and precise view of what its all about, or so I thought.

I was of the opinion there was very little that I hadn't experienced in the realm of surveying and the engineering related fields. So I was pleasantly surprised upon sitting for the NSPS/ACSM Certified Survey Technician Exam to discover the comprehensive range of material it covers.

The personal challenge was one of the subtle benefits rarely acknowledged. Sitting down and attacking the examination with all the necessary reference material to support me. Discovering and making use of calculations and hand held computer programs under pressure, and finally completing the testing with the quiet conviction of a job well done.

Most of the time we think of all the obvious benefits related to this type of certification;

1. Monetary Remuneration
2. Peer Acknowledgment
3. Employment Advancement
4. Resume Enhancement etc

The personal satisfaction derived through successfully completing the examination and receiving my Survey Technician Certification has become an understated but appreciated benefit which most will enjoy.

WHY CERTIFY? WHY BOTHER?

I am a graduate in Land Surveying of Paul Smith's College in the Adirondack Mountains of New York State, Level IV Certified by NSPS/ACSM, and I have ten years of experience with Boutelle and Son Land Surveyors, Delmar, New York, mostly as party chief.

The NSPS/ACSM Certification process is not only extensive and comprehensive but it also incorporates the idea that it takes a certain amount of experience, or college and experience, to simply get accepted to take the certification exams, as opposed to successfully completing only a written exam.

The steps in this process provide an incentive and reason to open up the books, brush up and to get one's work history on paper (signed and therefore documented by immediate supervisors) more often, versus waiting until eight to ten years passes by for an L.S. exam. It should also enhance the chances of successfully obtaining a license.

For a young guy working his way up from rodman to party chief, there are only so many ways to build up credentials. NSPS/ACSM Certification is, in itself, a definite resume builder.

Edward B. Geisel
Guilderland, New York

GET CERTIFIED



SURVEY TECHNICIAN CERTIFICATION PROGRAM

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Survey Technician Level I, Level II, Level III and Level IV are available. The upper three levels are geared to the technician with a minimum of 1.5, 3.5, and 5.5-years total experience respectively. At Levels II, III and IV, one can test in a field track and/or an office track. The Survey Technician Level III field track consists of a Boundary Party Chief and/or a Construction Party Chief examination, while the office track consists of a Chief Computer Operator and/or a Chief Drafter examination. Program Fees: \$30 Application • \$75 Exam.

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Okay Herb, try it again!

by L. T. Perry

OBITUARIES

Allen W. Mace

SARATOGA — Memorial services for Saratoga resident Allen W. Mace, 62, were conducted Saturday at 11 a.m. at the Masonic Temple in Saratoga by Saratoga Lodge No. 14, AF&AM.

Mr. Mace died Oct. 11, 1995, at his home in Saratoga. He was born Sept. 20, 1933, to Mark and Marguerite Mace in Denver. He attended grade school and junior high school in Denver, graduating from Fort Collins (Colo.) High School in 1951.

On April 3, 1962, he married Shirley Cromer. Mr. Mace was stationed in Europe with the U.S. Army and was a second lieutenant. During that time, he served on the marksmanship team.

Mr. Mace then worked for the Wyoming Highway Department in Laramie and Rawlins. He was later employed as Carbon County surveyor and then as a surveyor in Fort Collins. For 15 years, he was chief engineer with Knife River Coal Mining Company in Bismarck, N.D.

In 1989, he moved to Saratoga and was employed as the county surveyor and operated a private survey P.L.S.

Mr. Mace was a member of First Christian Church in Denver, Carbon County Consistory Club and Wyoming Consistory No. 1. He was a past master of Saratoga Lodge No. 14.

Survivors include four daughters, Kristy Gitter of Laughlin, Nev., Sandy Cheese of Highlands Ranch, Colo., and Leslie Doty and Lori Mace, both of Modesto, Calif.; a son, Darren Holland of Price, Utah; and 12 grandchildren.

In lieu of flowers, donations to Saratoga Masonic Lodge No. 14, Box 103, Saratoga 82331 would be appreciated.

Sylvan J. Smith

LOVELAND, Colo. — Memorial services for former Douglas resident Sylvan J. Smith, 65, of Berthoud, Colo., were held Monday at 2 p.m. at Allnutt Hunter Chapel in Loveland with the Rev. Larry Haagenson of the Lutheran Church of Hope officiating. Cremation has taken place.

Mr. Smith died Nov. 23, 1995, at his home.

He was born May 27, 1930, in Ottosen, Iowa, the son of Sam Peter Smith and Laura Mathilda Jensen.

He graduated in 1948 from Humboldt High School in Humboldt, Iowa, and attended Iowa State University for two years, receiving a surveying degree. He worked in Iowa, Colorado, Wyoming and Nebraska as a surveyor.

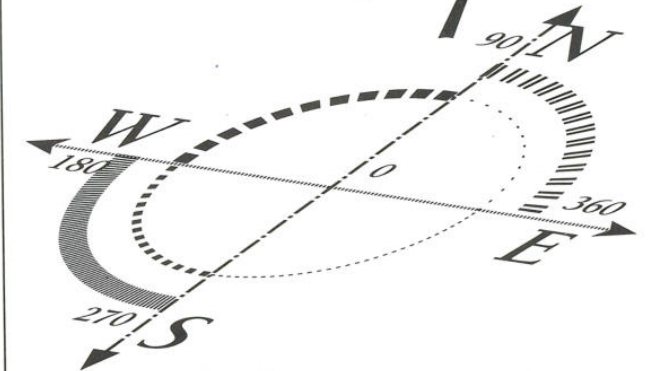
He served in the National Guard during the Korean War. He moved to Colorado from Humboldt, then lived in Douglas for many years before moving to Berthoud 17 years ago.

Mr. Smith loved fishing and hunting.

Survivors include the daughters of his special friend, Colleen Harmon of Loveland, Kelly Collins of Loveland and Patrice Wysock of Berthoud; two nephews and a niece, and four great-nephews, two great-nieces, many cousins and friends; and a sister, Maxine Roberts of Eagle Grove, Iowa.

Memorials may be made to the Wyoming Wildlife Association in care of the Allnutt Hunter Chapel, 2100 Lincoln Ave., Loveland, Colo., 80538.

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