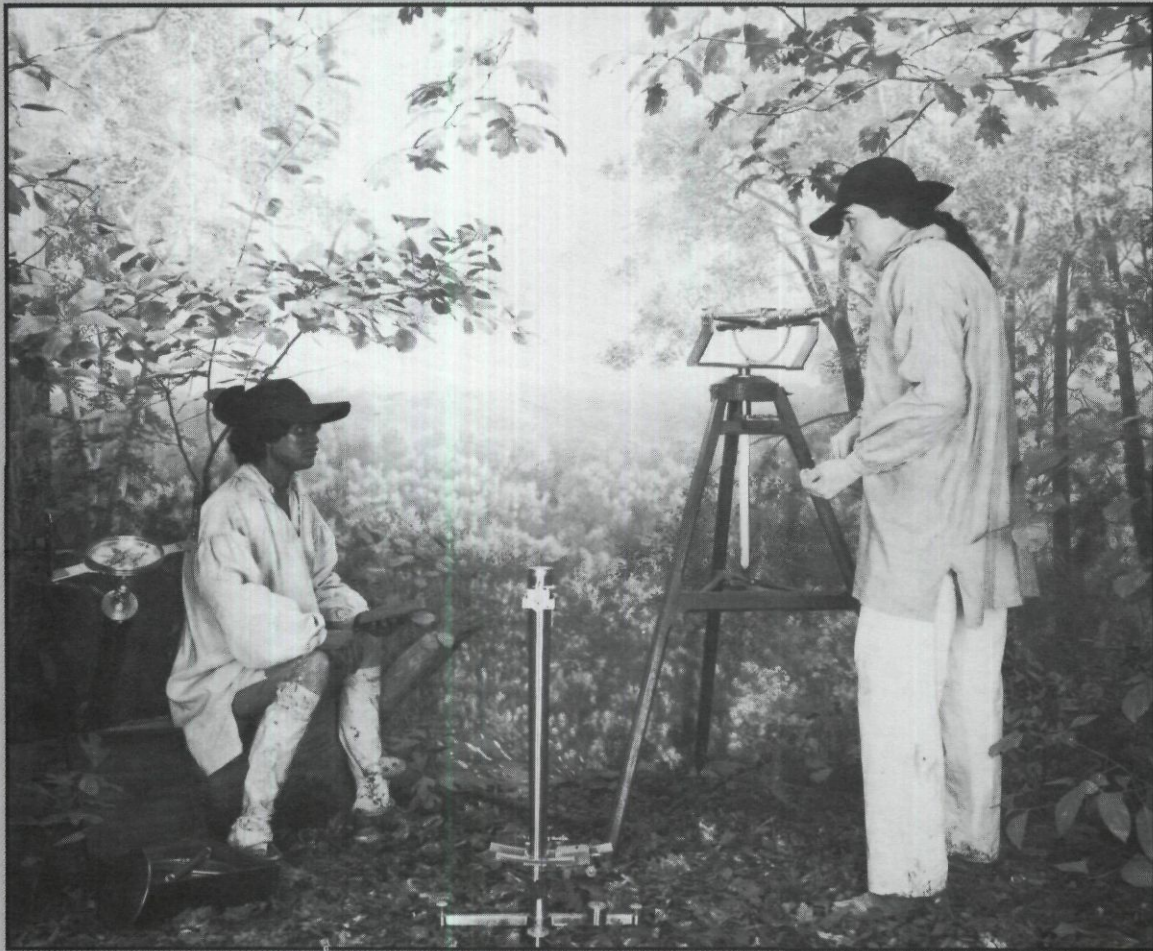


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Cover: This diorama, an exhibit in the National Museum of American history, shows Andrew Ellicott and Benjamin Banneker surveying the boundaries of the new Federal City in 1791. Ellicott is standing by his astronomical transit, used for determining longitude. Near Banneker, who is taking notes, is Ellicott's surveyor's compass, made for him by Benjamin Rittenhouse.

The California Surveyor

is the quarterly publication of The California Land Surveyors Association, Inc. and is published as a service to the land surveying profession of California. It is mailed to all Licensed Land Surveyors and Land Surveyors-in-Training in the state of California as well as to all members of California Land Surveyors Association, Inc. *The California Surveyor* is an open forum for all surveyors, with an editorial policy predicated on the preamble to the Articles of Incorporation of the California Land Surveyors Association, Inc. and its stated aims and objectives, which read:

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

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

Personnel

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Sustaining Membership

Membership in the California Land Surveyors Association, Inc. as a sustaining member is open to any individual, company or corporation who, by their interest in the land surveying profession, is desirous of supporting the purposes and objectives of this association. For information regarding sustaining membership, contact the Editor of *The California Surveyor*.

Editorial Material

All articles, reports, letters and contributions are accepted and will be considered for publication regardless of the author's affiliation with the California Land Surveyors Association, Inc. Contributions submitted on floppy diskette medium is encouraged. For compatibility, the following requirements should be met: 5 1/4-inch floppy diskette, PC DOS or MS DOS format, ASCII text files, and no formatting codes in the text. Material should be sent to *The California Surveyor*.

Editor:

Jeremy L. Evans, L.S.
 c/o Psomas & Associates
 3187 Red Hill, Costa Mesa, CA 92626

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1988 President's Message

After 21 years, our Association has truly come of age. We made it through the "formative years", the philosophical differences and indecisions, the successes and setbacks. It was all part of our growing process and my hat goes off to those past officers and members who weathered the storms.

The question is no longer whether C.L.S.A. will survive, but what we will do for the profession in the future. Will we relax and get by, relying on our past successes and membership, or take our place as the true representative of the surveying profession, taking responsibility for legislation, education and public relations? As your President, I have opted for the later, but I will need your help if we are to be successful.

First, I have tried to identify some of our goals and a course of action to accomplish them.

1. Even though we are the dominant representative of the Surveyors in our state, can we expand our membership to represent the majority of Licensed Surveyors in California?

Goal: We must double our membership.

Means: It is very simple, if you are not a member-JOIN! If you are already a member, sign up one new person this year. I will do it. Will you?

2. Can we direct and control legislation affecting our profession?

Goal: Coordinate a legislative agenda for the next 5 years and be willing to support it with time and money.

Means: Read the Land Surveyors and Subdivision Map Acts and submit recommendations for new legislation and clean-up of the old laws through your chapter representatives or Central Office. Take the time for your profession and respond immediately to Association

requests for your letters and calls to your legislators.

If you have completed Goal #1, you have already taken care of the required money by bringing in your new member.
3. Can we be the leader in Survey Education?

Goal: Expand our continuing education for the profession and our support of Associate and Bachelor degrees in Surveying.

Means: Support C.L.S.A. sponsored seminars and workshops. Make suggestions to the Education Committee for new topics if your needs are not being met. We cannot read your mind! If you are an employer, encourage and assist your employees to attend our educational programs, it will be worth it to both of you. Support students in Survey programs through funding of scholarships and summer work. Remember, if they don't become surveyors, they may become "Planners".

4. Will we finally address the Public Relations issue which has plagued us since our forefathers left the cities to explore and map the wilderness?

Goal: Establish an active Public Relations program which will educate the users of our services and bring in new professionals.

Means: I have established a Public Relations Committee under our Membership Division. The committee is charged with preparing a "High School Career Day" presentation package for use by chapters and individuals throughout the State. The committee will work with local chapters to prepare news releases outlining chapter and state activities, as well as announce the installation of all officers. Further, they will work in conjunction with the Education Committee to organize and

coordinate a Seminar Program for use in educating Attorneys, Realtors, and the Title Industry.

I will do my best to improve our association and to address the needs of our profession, but I am one person volunteering my time. I cannot make the difference alone, but if we work together, we can. I appreciate the opportunity to represent our association as president but my sincere wish is to thank you, after a successful year in office, for your assistance and support. I was recently told that an engineer said this is the year of the Surveyor. Well, in my opinion, it's about time.

Your comments and suggestions are appreciated and should be directed to me.

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Susan Anne Jensen, L.S.
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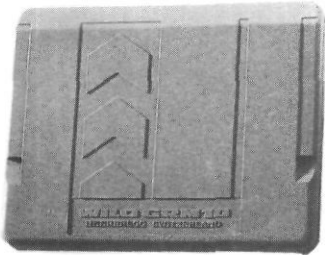
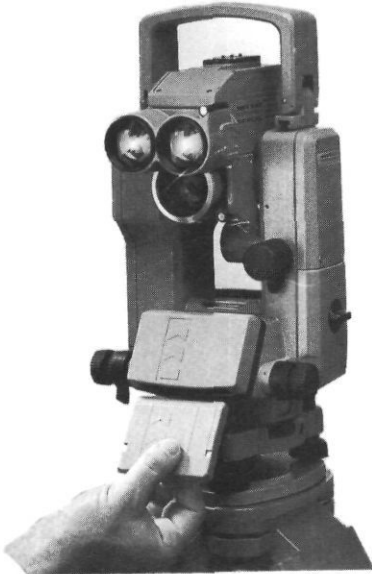


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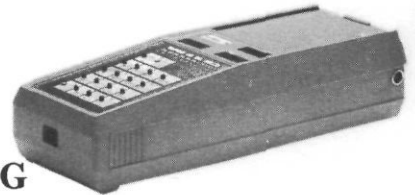
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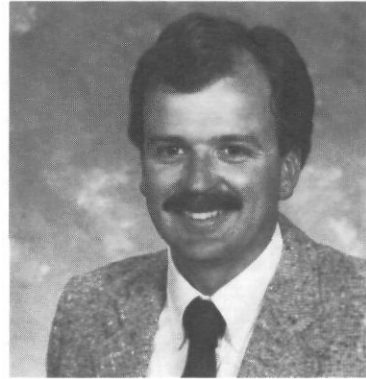
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FROM THE EDITOR...

A couple of months ago, Paul Cuomo called and told me that Ron Greenwell had resigned as the Editor of *The California Surveyor* so that he could devote his time to his expanding survey business. Paul then asked if I would be interested in taking over the Editor's responsibilities. He tried to con me with the standard lines; "You were the first person I thought of", "You'd be perfect for the job", etc. . . . My response was something like "Not a Chance!" Paul asked me to think about it and call him back later.

While driving home that evening I thought about my responsibilities as Editor, how much time it would take and some possible subjects for editorials. It seemed like something I would enjoy doing and it wouldn't take all of what little free time I seem to have these days. The next day I called Paul back and said OK. He put me in touch with Dorothy Calegari and soon I was the Editor. It all seemed so easy.

Well, reality has now set in. As I write this article, I'm already a week late for my



first deadline. All those great ideas I had for the magazine as I drove home that evening have completely vanished. I have no idea what to write about. It reminds me of that first day as a Party Chief. I had worked long and hard and finally been promoted to Party Chief and the first day on the job I was so nervous that I forgot how to solve a right triangle and how to set up a transit. I've got that same feeling now.

Probably the first thing I should do is

thank Ron Greenwell for doing a great job as the Editor of *The California Surveyor* over the last couple of years. One of my new responsibilities is to review other state survey publications for possible articles. Believe me, *The California Surveyor* is one of the best survey publications in the country. Ron Greenwell is one of the main reasons for this excellence. Thanks Ron, for a job well done.

Now it's my turn to continue this excellence. I've got some ideas for possible columns, articles and features, and I've received several letters from people interested in contributing material for *The California Surveyor*. I'll try and implement these ideas and materials in future issues. I'm sure you have all heard before that *The California Surveyor* is your publication and depends on your support to maintain its high quality. Well, this is still true and any contributions of ideas or materials will be greatly appreciated. Good luck to all of us.

Jeremy Evans
Editor

□

1987 President's Message

I started this year off by saying thank-you for giving me the opportunity to serve you, the Professional Land Surveyors of this state, as President of the California Land Surveyors Association. My year is now at an end, and I feel that I must repeat myself and say thank-you again. It has indeed been an honor and a privilege for me. I thank each of you for your support throughout this year. When you were needed, you were there.

It is very hard for me to realize that an entire year has passed. Except for the first three months, it has been an outstanding time for me. I have enjoyed meeting with many of you in your chapters. I have made many new friends, and have renewed a few old friendships.

Starting on January 1st, the Land Surveyors Act will have a new name: THE PROFESSIONAL LAND SURVEYORS ACT. It is my belief that the profession of

land surveying has taken another step forward. This is a move that brings California into closer alignment with the rest of the Western States.

We have taken strides forward on the national scene, also. We have made ourselves heard in arenas where we have only been passive before. Mr. Newcombe attended two NCEE meetings where he expressed the views of the California Land Surveyors Association. It would appear that NCEE is not interested in any views that do not agree with its established policy. NCEE has allowed its Engineering Surveying definition to blind it.

After talking with Ernie Newcombe and reading his report, I have written to the Board of Registration and suggested that California pull its support of NCEE. It is my opinion that NCEE does not speak for, nor adequately represent the Land Surveyor; it is merely trying to use

him. California would be better served if it were to enter into a pact with the Western states and let NCEE pedal its model laws somewhere east of the Mississippi River.

In closing, I urge your support for the new liaison committee that has just been formed between CLSA and CCCE&LS. For this committee to be effective, both sides have to want it to happen. It is far better for us to meet in committee to discuss our differences than to air our dirty linen in public.

To you, Susan, I pledge my support. I use this public media to make that pledge so you will know that it is not just the polite thing to say; I really mean it. A thank-you for taking up the slack when I stumbled coming out of the starting gate.

Louis E. Rutledge, PLS

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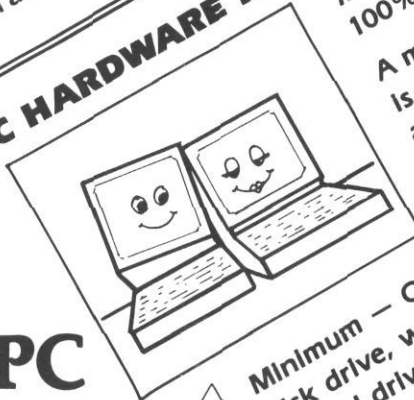
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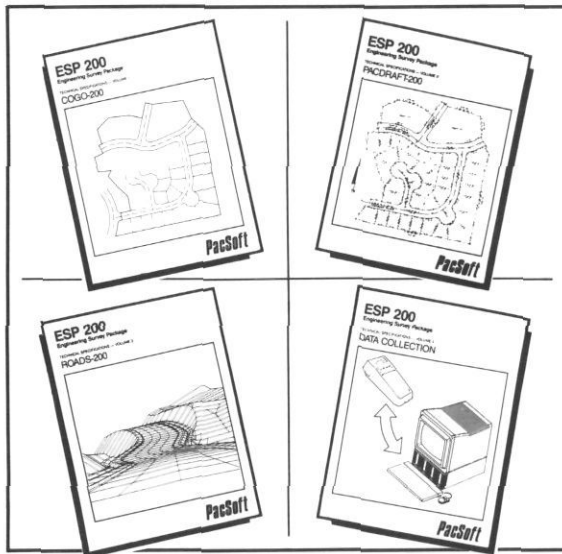
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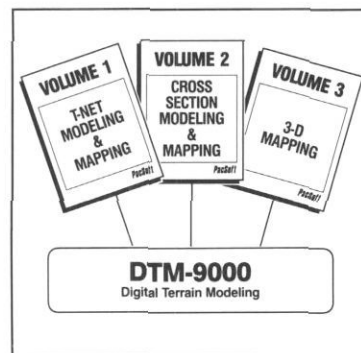
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Some Comments on Projection Tables

by Ira H. Alexander

Since the 1930's, projection tables have been available for surveyors in California who wished to put their control work on to a rigorous coordinate system tied down to a real geodetic base. The U.S. Coast and Geodetic Survey published Special Publication No. 202¹ in 1936. This gave a systematic listing of first and second order triangulation stations in California on the 1927 North American Datum. Station descriptions, geodetic positions, and plane coordinates for zones 1 through 6 were some of the data shown. Also included were the projection tables for these zones.

In 1941, the County Surveyor of Los Angeles County published Specifications for Cadastral Mapping². This work included, among many other items, projection tables for the Los Angeles County System of Plane Coordinates.

In 1947, the California Coordinate System was signed into law by Governor Olson, and the new system included zones 1 through 6 as defined by Special Publication No. 202, and the Los Angeles County System of Plane Coordinate was included as zone 7. The U.S. Coast and Geodetic Survey recognized this zone 7, and in 1951 published Special Publication No. 253³, which provides a systematic listing of the projection tables for all seven zones in the California Coordinate System.

It is this system with which most California surveyors have become familiar. Many cities and counties have tied down their mapping control with it, and have applied it to many of their public works activities. Caltrans has used it for years as the basis of the photogrammetric mapping necessary for their freeway program. In recent years many non-engineering oriented organizations have become aware of its existence because of the need for applying cadastral mapping to information systems used by assessors, appraisers, planners, and those who work with geographic information systems.

In recent years, because of an improved technology and a need to remove various small existing quirks in the underlying control system, the National Geodetic Survey (the current successor to the U.S. Coast and Geodetic Survey) has completed the mammoth task of readjusting the control networks of the United States and has put the new system on a more precisely defined datum, referred to as the 1983 North American Datum (or NAD 83 for brevity).

The conversion of the many thousands of points on NAD 27 to positions on NAD 83 is a formidable task facing us. The purpose of this short paper is not to go into the methods or techniques of this ongoing problem. Suffice it to say, you who follow developments in modern surveying will of necessity become involved in the not too distant future.

The other major problem facing us is how do we handle the NAD 83 coordinate system? In 1986, legislation was passed in California making the NAD 83 applicable to the California Coordinate System. Unfortunately, the National Geodetic Survey has decided not to publish a set of projection tables similar to those in Special Publication No. 253. In discussions with their staff, it would appear that this will be for now and the immediate future.

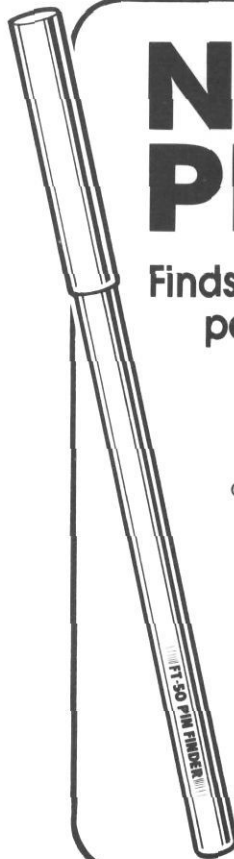
The NGS has published lists of defining constants for the six zones of the California Coordinate System NAD 83. Two recent papers by T. Vincenty^{4,5} have been published in Surveying and Mapping. These permit the calculation of projection data using some elegant algorithm methods.

To make projection tables available on NAD 83 for surveyors in California, it was decided to compute this information and

publish it in format similar to that appearing in Special Publication No. 253. This was done in both metric and U.S. survey foot units. The actual computations were done using rigorous formula taken from Special Publication No. 251⁶. Using these tables, the mathematical equipment necessary to perform coordinate transformations will remain at the right triangle solution level.

It is the intent of the California Land Surveyors Association to assist in publishing these projection tables as soon as practical in a convenient pamphlet form. □

1. Hugh C. Mitchell - First and Second Order Triangulation in California (1927 Datum). U.S. Coast and Geodetic Survey, Special Publication No. 202. 1936.
2. Los Angeles County Surveyor - Specification for Cadastral Mapping. 1941.
3. Plane Coordinate Projection Tables - California. U.S. Coast and Geodetic Survey, Special Publication No. 253. 1951.
4. T. Vincenty - Precise Determination of the Scale Factor from Lambert Conical Projection Coordinates. Surveying and Mapping, Vol. 45, No. 4, pp. 315-318.
5. T. Vincenty - Use of Polynomial Coefficients in Conversions of Coordinates on the Lambert Conformal Conic Projection. Surveying and Mapping, Vol. 46, No. 1, pp. 15-18.
6. P.D. Thomas - Conformal Projections in Geodesy and Cartography. U.S. Coast and Geodetic Survey, Special Publication No. 251. 1952.



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The 1962 and the 1986 ALTA/ACSM Land Title Survey Standards: A Comparison

by Richard F. Bales, Esq.

Reprinted from the *Real Property Law Communicator*, published by the Chicago Bar Association.

Follow-Up to the Article in Last Issue of *The California Surveyor*

The American Land Title Association (ALTA) and the American Congress on Surveying and Mapping (ACSM) recently revised their standards for land title surveys. The purpose of this article is to highlight the new changes in these requirements.

The new standards have been criticized as being impossible to comply with—i.e., it has been said that the new standards demand that the survey be "accurate". However, critics argue, since surveying is not an exact science, complete accuracy is unattainable.

Such criticism is unfounded. Both standards speak to the issue of accuracy in their preface and, if anything, the new requirements are more relaxed. Compare the language in both sets:

Old standards: ". . . in insuring title, title insurance companies are entitled to and should be able to rely on the evidence produced to it, as the basis for its insurance, being of the highest professional quality both as to completeness and accuracy."

New standards: "It is recognized equally that title insurance companies are entitled to, and should be able to, rely on the evidence furnished to them being of the appropriate professional quality, both as to completeness and as to accuracy. . ."

It has been said that the new standards put an undue burden on the surveyor, for they require him to search adjacent land parcels so that the record owners of said parcels can be shown on the survey. This is untrue in several respects. First, both the old and new requirements speak to the issue of record owners of adjacent parcels—not just the new. Second, the surveyor need not search the parcels—under both sets of standards, the surveyor only needs to include information that is furnished to him by other sources. Third, the new standards seem to have lessened the burdened put on the surveyor in supplying ancillary information. Compare the following parallel language from both the old and new standards; emphasis is mine.

Old standards: . . . (C)ertain specific

and pertinent information *must* be presented for the distinct and clear understanding. . . The title insurance company or the client, at the time of ordering a survey, *should* notify the surveyor that a "LAND TITLE SURVEY" is required, and furnish to the surveyor the record description of the property and the record easements or servitudes and covenants affecting the property, to which the "LAND TITLE SURVEY" *must* subsequently make reference. The names and deed data of all adjacent owners as *available*, and all pertinent information affecting the property being surveyed, should be transmitted to the surveyor for notation on the plat or map of the survey. . . Names of adjoining owners and/or recorded lot or parcel numbers, and similar information *where known*, *must* be shown (on the survey).

New standards: . . . (C)ertain specific and pertinent information shall be presented for the distinct and clear understanding. . . The client, at the time of ordering a survey, *shall* notify the surveyor that an "ALTA/ACSM LAND TITLE SURVEY" is required. . . and *shall* furnish to the surveyor the record description of the property and the record easements or servitudes and covenants affecting the property to which the "ALTA/ACSM LAND TITLE SURVEY" *shall* subsequently make reference. The names and deed data of all adjacent owners *as available*, and all pertinent information affecting the property being surveyed *shall* be transmitted to the surveyor for notation on the plat or map of the survey. . . Names of adjoining owners and/or recorded lot or parcel numbers, recording information for last available conveyance, and similar information, *where needed*, *shall* be shown (on the survey).

The new standards have been criticized for requiring the surveyor to certify as to zoning matters. However, both the old and new requirements include virtually identical statements concerning zoning.

The old standards stated that bearings of angles could be referenced to true North, State Plane Coordinate North, or to "some well-fixed bearing line". The new standards state that bearings need refer only to the aforementioned "well-fixed bearing line".

Omitted from the new standards is the

earlier burden on the surveyor to note, when known, changes in the street lines, the date of any change, and the authority under which the change was made. Optional in the old, mandatory in the new, is the requirement that the survey disclose building set-back lines that have been recorded and platted. Not shown in the old, but stated in the new, is the stipulation that "(w)here only a part of a recorded lot or parcel is included in the survey, the balance of the lot or parcel shall be indicated".

The old standards dictated that "(a)ll monuments, stakes or marks, found or placed, must be shown. . ." Also, when there was no physical evidence of possession along the boundary lines, the surveyor had to make such a notation on the survey.

The new standards are broader: "(a)ll evidence of monuments, found or placed, shall be shown. . ." Also, when there is no evidence of possession along the property line, the surveyor no longer has to state so—an absence of notation on the survey raises a presumption of no physical evidence of possession.

In many respects the new standards have eliminated what is superfluous while at the same time expanding what many would feel to be necessary. Consider the following (emphasis mine):

Old standards: The *character* and *location* of all buildings. . . must be shown and their location *given* with reference to boundaries. . . Physical evidence of easements and/or servitudes of all kinds. . . should be located and noted. If the surveyor has knowledge of any such easements and/or servitudes, *not physically evident*. . . such physical non-evidence should be noted.

New standards: The *location* of all buildings. . . shall be shown and their locations *defined* by measurements perpendicular to the boundaries. . . *Observable* evidence of easements and/or servitudes, *not observable*. . . *such lack of observable evidence* shall be noted.

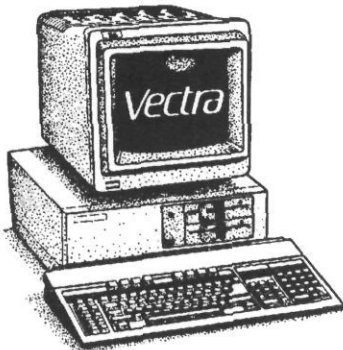
The section dealing with improvements located within two feet of boundary lines has been completely rewritten. The new section makes the surveyor's job easier without sacrificing survey quality.

Under the old standards, when dealing with this issue, the surveyor had to

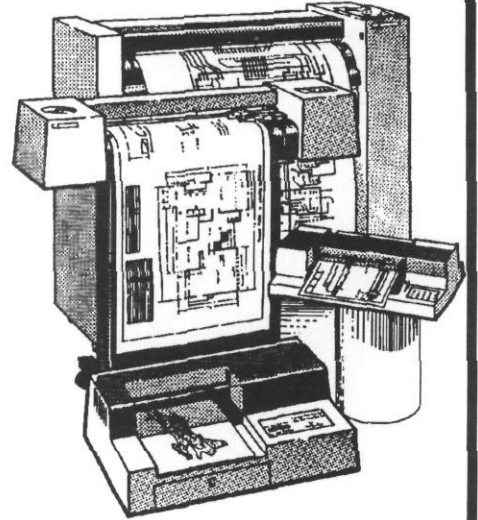
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note the character and location of all walls and whether or not the walls were plumb. Buildings or fences had to be noted. The surveyor had to show the location and thickness of all party walls, and had to note window and door openings in the walls of buildings located on adjoining premises. Physical evidence of all encroachments had to be shown on the survey.

Under the new standards, however, the surveyor has to show the character and location of all walls, buildings, and fences and show physical evidence of all encroachments. Any requests to show additional information would have to be separately negotiated by the surveyor and the client.

The section on driveways and alleys has been rewritten, but with little substantive change. The section on cemeteries and burial grounds has also been rewritten. The result, unfortunately, is a paragraph that is in need of explanation: "Cemeteries and burial grounds disclosed in the process of surveying or searching the title to the premises shall be shown by actual location if known. If the client wishes to have the survey reflect observable cemeteries and burial grounds, the surveyor shall be so advised."

Unlike the old requirements, the new standards contain a section relating to water boundaries. This is a caveat, instructing the surveyor that when the surveyed property contains a natural water boundary, the surveyor is to note on the survey that the boundary is subject to change due to natural causes.

The most dramatic change in the standards is in the area of technical precision. Under the old standards, the surveyor's "order of precision" was limited to certain positional tolerances for lot corners; the surveyor also had one standard "ratio of linear error of closure"—i.e., the legal description had to "close" within one set tolerance-1/10,000.

These standards were appropriate for their time. However, since 1962, the year they were adopted, new technology has made surveying instruments more and more accurate. At the same time, as land values have risen, there has been a greater and greater demand for this increased accuracy. This has resulted in 1962 standards that ALTA and ACSM agreed were technologically and functionally obsolete in a 1986 society.

The new "Classification and Specifications for Cadastral Surveys" are more detailed; they thus can be more readily changed as technology improves. Table 1 classifies the land according to land

use: Class A is Urban Surveys, Class B is Suburban Surveys, Class C is Rural Surveys, and Class D is Mountain and Marshland Surveys. Table 2 lists the closures and procedures one must follow in order to assure the precision of a particular survey class. The degree of precision necessary for a Class D survey, e.g., is not as great as a Class A survey, and Table 2 reflects this.

Note (1) of Table 2 simply states that all requirements of each class must be satisfied in order to qualify for that particular class of survey. Note (2) concerns the degrees of accuracy of the various surveying instruments. Note (3), similar to Note (2), deals with the degree of estimation of accuracy of the surveying instruments. Note (4) concerns the measurement of an angle more than once in order to achieve better accuracy. Note (5) deals with the accuracy of the angle measured. An unnumbered note between (5) and (6) concerns the maximum angular error of closure which is stated in terms of the product of a given angular value times the square root of "N"—the number of interior angles in the surveyed property. Note (6) concerns the aforementioned "ratio of linear error of closure." Note (7) deals with the methods of measuring distances. Notes (8), (9) and (10) deal with the minimum length of distance measured based on the type of measuring device used.

By following the closures and procedures in Table 2 for a given class of survey, the precision of said survey can be statistically assured. This, some surveyors feel, does not necessarily mean that one survey is "right" or "accurate" and another, of a lower class, is "wrong" or "inaccurate." Surveying is not an exact science. Completely precise measurement is impossible. In any survey there is always a built-in or inherent error. The new standards simply recognize this and attribute degrees of precision accordingly.

There are other surveyors, however, who feel that the new standards have opened up a Pandora's box, the effects of which may only truly be known years from now.

Such criticism is not without merit; it stems from Table 1 of the standards—i.e., the specification of varying degrees of precision based on the different survey classes. As stated earlier, the degree of precision necessary for a "lower" class survey is not as great as a "higher" class survey. A fundamental issue therefore arises: what happens when today's "lower" class of land use becomes tomorrow's "higher" class of use? It seems reasonable to state that when land which is at one time surveyed as per a

"lower" class of land use, but later, because of increasing development, is surveyed as per a "higher" class of use, resultant survey boundary problems are almost a certainty.

It appears that the American Land Title Association and the American Congress on Surveying and Mapping have considered this question. The first paragraph of the Introduction to Table 1 of the new standards states that "(t)he degree of precision necessary for a particular cadastral survey should be based on the intended use of the land parcel, without regard to its present use. . ." Unfortunately, the tenor of this statement is to a large degree tempered by the final clause of this sentence: ". . . provided the surveyor has knowledge of the intended use." Note that the new standards do not require that the surveyor be furnished information as to the intended use of the land.

Some surveyors, recognizing the potential problems with the new standards, have opted instead to continue to survey according to the old standards. However, even this may not prevent future boundary discrepancies. The old standards required that the "ratio of linear error of closure" be ". . . of not less accuracy than 1 part in 10,000. . ." While this ratio is sufficient for "new" surveys of Classes "B", "C" and "D", Class "A" surveys require a ratio of closure of 1:15,000!

There are other areas of concern that stem from this fundamental issue of future boundary problems. Does the surveyor owe a duty to his client to "upgrade" a survey, based upon conjecture as to possible future development of the surrounding area, when a lower grade survey would be sufficient under the new standards? If so, what if the client is unwilling to pay the extra cost associated with a higher class of survey? What effect will the potential for future boundary problems have on a surveyor's liability insurance? Does an attorney have a duty to tell his client that he should order an "upgraded" survey from a surveyor, based upon conjecture as to possible future use and development? When drafting real estate contracts, is this duty met by requesting Class "A" surveys, regardless of intended use? Is such an approach realistic? If not, what approach is realistic?

It is hoped that the issues raised by this article provoke serious thought and consideration in the legal and surveying communities. It is equally hoped that the American Land Title Association and the American Congress on Surveying and Mapping will work towards addressing these issues. □

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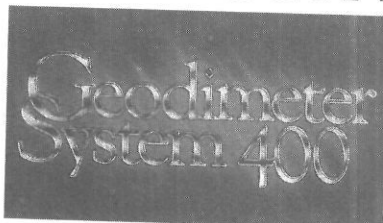
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Surveying Scene

by Kenneth Gold, RPS 1223

The phone just rang, and your caller wants you to update one of your old surveys. Since you made the original survey only 5 1/2 years ago, that shouldn't be a problem, particularly since this is just a house on a lot being re-sold. It's funny, because just the other day you got a call to update surveys you made on a shopping center that also was being sold and an apartment complex being taken over by a bank. The business of updating surveys has suddenly taken a favorable "spurt."

Or has it?

The problem with "updates" is that many clients are convinced your service should not cost much because you made the original survey. To some extent they may be right. An update survey is almost always less expensive than the original.

The update survey is remotely akin to the service offered by a tailor who custom designs clothing. The tailor can, some-time later, take in or let out the stitching to accommodate a certain amount of his client's physical changes without much difficulty. For this he charges a nominal fee, depending on how much work is required.

However, when more than "take in" or "let out" is required, a major restyling may be necessary. One thing the tailor must do is to "cover" his client so that there is durability, pleasing appearance, comfort and piece of mind.

Surveyors may not be too dissimilar, especially when it comes to "covering" their clients.

Another problem with "updates" is that not only clients, but also some surveyors are not totally sensitive to the responsibility involved. When one surveyor readily signs and redates a plat because he feels confident nothing new has occurred on the property since his last survey, and does this frequently, sometimes simply on the say-so of a real estate agent friend, it is little wonder other similar clients would expect the same service.

There really are few, if any, reasons a surveyor should agree to update a survey without going on the ground. If the first survey was just finished a few days ago, maybe, just maybe, it would be a safe risk to update without going to the field. The new buyer of any tract of real estate has every right to expect that the corners of the property in question are marked and visible for inspection, especially if an update survey has been made. Any buyer

trusting enough to take the seller's word, or the agent's word, as to the location of the corners or boundaries, is a buyer who has unknowingly played a fool's role and may soon part with more than his money.

A surveyor trusting any individual's word that there is no need to go to the field for an update survey is playing Russian roulette with his professional career. Likewise, the surveyor who doesn't go on the ground will be in the untenable position of trying to explain why the corners are not flagged or don't even exist, especially when the neighbors haven't seen anything like a survey party in the vicinity since 1979. A claim that someone pulled up the corners or something knocked them out will seldom hold water when the area is covered with a well manicured lawn and a three year old tree stands where that corner should be, or the neighbor's year old concrete driveway cuts across and covers the other front corner location.

Depending on the site for which the survey is to be updated, the underlying liability for an updated survey can be as great or even much greater than that of the original survey. The value of the real estate, even in our depressed economy, may still be higher than when the original survey was made. Any protrusion into the property by a new fence or an improvement to a neighbor's facility may not be readily visible. Conversely, an improvement to facilities on the original surveyed site may have protruded into neighboring tracts. Landscaping improvements, such as shrubbery, ornamental trees and particularly sprinkling systems, can, in themselves, protrude into surrounding properties or help obscure more permanent installations of questionable location.

Liability for any survey can be substantial, but prudent work will minimize risk and provide reasonable assurance to the client that visible problems pertaining to location have been identified. The liability for an update survey that has not been thoroughly re-checked on the ground may be astronomical. That type risk could not be considered anywhere near prudent practice and could most probably be the subject for a law suit under the Texas Deceptive Trade Practices and Consumer Protection Act (DTPA).

Any surveyor not familiar with the DTPA had best find him an attorney and request he be given some fatherly advice. Coughing up an attorney's fee for such a talk would be considerably cheaper than facing the consequences of the tre-

ble damages as provided in that act.

Just going to the field, however, is not the answer to minimizing a surveyor's exposure to serious and factual claims of breach of contract, gross negligence or incompetence and damages to the client.

The updating of a residential survey is often so easy to do that some practitioners get a bit complacent and thereby allow their survey party to slack up on such work. Not infrequently the party chief is told to "swing by this address and see if anything has changed."

The party chief may do exactly what he understood the boss to say. He swings by and with a quick look at the old plat and a glance or two at the residence - maybe even a tie from the house to a new, wooden fence - and then off to another more important assignment. No corners were found or even looked for because they were shown on the old plat to have been set or found at the time of the original survey.

Nothing looked disturbed. Later, the entry on the time sheet probably showed a half hour or maybe an hour, including driving time; and the client was billed accordingly.

At that rate, update surveys are cheap!

But what about the new water line that had to be installed and subsequently knocked out one of the front corners? Then there is the back corner of the new wooden fence. It protrudes into the subject lot about 3 1/2 feet to accommodate the swimming pool the next door neighbor put in three years ago. And the concrete walk around the pool adjoins the fence. So does the neighbor's filtration and chlorination facility. But none of that will show on the updated plat. The party chief couldn't see those things from the front of the lot where he had been asked to "swing by and see if anything has changed."

Shopping centers can really be a nightmare as update surveys. While the owner/manager should have a record of important physical changes, he/she does not always. Obviously the size of the center is a major factor in the complexity of the update. A "mom and pop" center with a drive-in grocery, washateria and barber shop would probably remain relatively uncomplicated, once the original survey was made. But not necessarily. The adjoining properties may be more active and create problems imperceptible to the layman's eye.

The same circumstances apply to

continued on page 16

Survey Standards

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Richard F. Bales is an Illinois licensed attorney employed as an Advisory Title Officer in the Chicago office of Tigor Title Insurance Company of California. While not a surveyor, Bales feels that working with complex legal descriptions is the most interesting part of the title insurance business. He periodically teaches a course in legal descriptions to Tigor employees. In addition to belonging to several bar associations, Bales is a member of the American Congress on Surveying and Mapping, International Right of Way Association, and the Illinois Registered Land Surveyors Association.

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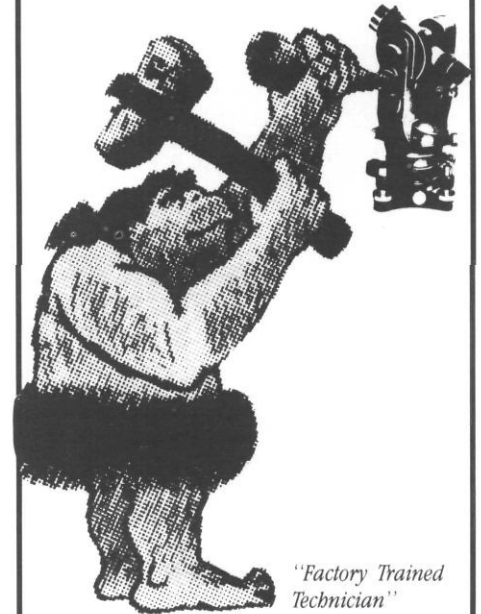
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Survey *continued from page 14*

larger shopping centers or other sites requiring an update survey. The site to be updated is not always a cause of boundary complications. New works of any sort - installation of utilities, plumbing repairs, additional structures, fencing, patio slabs, guttering, automatic sprinklers - can destroy property corners and protrude beyond proper boundaries.

Every surveyor knows - or should know - the Texas Board of Land Surveying requires "sufficient" corners to be set by the surveyor, or left as found, to mark boundaries of tract or parcel. There is no way a surveyor can properly serve his client and obey the law without recovering or setting corners, even on an "update." That update survey will be relied upon just as much, if not more, than the original.

If corners are not in, or wrong and the fact is discovered, woe to the surveyor who made the update. If encroachments are found, it would be too late to sell the farm, unless it's for attorney's fees.

Any individual suggesting the surveyor need not do much work to update his old survey may be asked jokingly to furnish a notarized letter to the fact that the surveyor is released from all liability for

such a survey. In the remotest chance an individual were to accept such responsibility in writing, the surveyor, by the registration act, is prohibited from working under such circumstances.

Why are there no formal standards for a service called an "update" survey? The answer is simple. An "update" survey is nothing less than a land title or standard land survey. The only difference is the original survey gives a head start for additional work necessary.

Any updated survey, therefore, should be done with no less concern and effort than the original. True, much, if not all, of the preliminary work need not be done over. That doesn't mean that the fundamentals for any boundary survey should then be waived just because the surveyor has a good head start.

An updated survey should follow the same processes performed for the original survey. That means the records, both public and private, should be reviewed to be certain nothing new has developed in the way of a sell-off, purchase, condemnation or easement taking. That review also should include a review of the adjoining properties; any one of which may have had something

done influencing the common boundary. Then:

1. A survey party should visit the site and locate all corners, measuring between them to be certain they are the original corners and have not been disturbed.
2. Place stakes or visible markings on or near corner markers and replace missing corners by appropriate survey methods.
3. Check all installations, facilities, buildings, utilities against the original plat.
4. Keep sufficient field notes for work performed, particularly where changes or additions are found.
5. Contact the client promptly when, or if, unusual circumstances are found on the site.
6. Prepare the updated plat by any appropriate means, keeping a file copy of the original survey for possible future reference.

That's it! Why should an "update" survey be expensive? It never is when it does what it's supposed to do. The only time it is expensive is when it isn't done right.

Then guess who pays!

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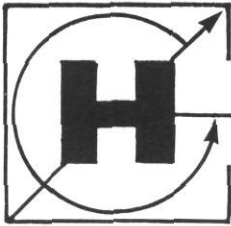
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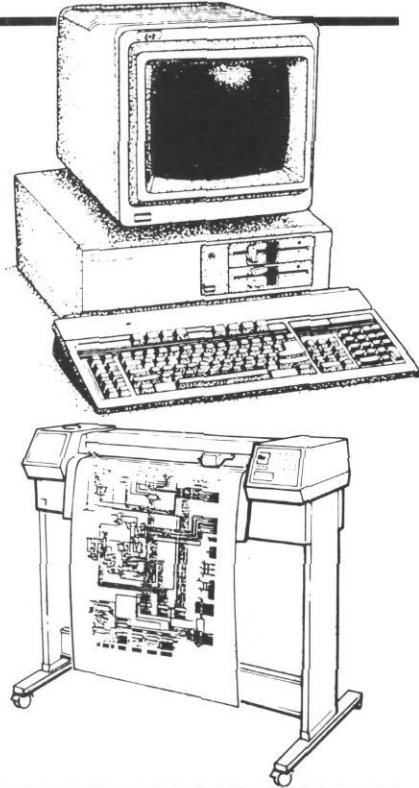
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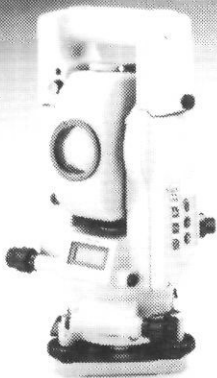
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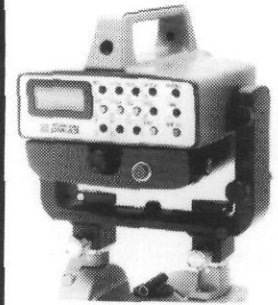
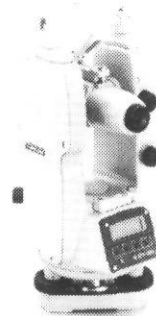
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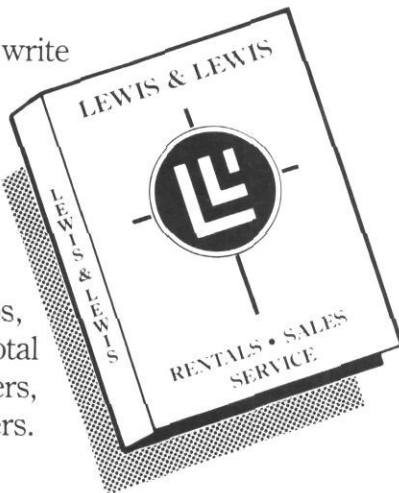
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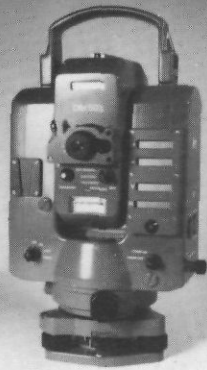
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Grant Deed Filings Raise Questions of Flaws in System

By David W. Myers

By some accounts, the woman who calls herself "Her Royal Majesty Queen Rose Mary J. (for Jesus) Windsor" doesn't seem like the type of person who'd feel at home in Buckingham Palace.

Her modest garb would clash with the regal dress of the British monarchy; the tiny apartment she calls home is hardly fit for a queen.

And she certainly doesn't seem like the type of person who owns the Beverly Wilshire Hotel and at least 11 other buildings worth more than \$1 billion—even though records at the county recorder's office and several computer firms that service the real estate industry indicate that she does.

The escapades of Windsor—who hasn't purchased any of the properties, but has filed grant deeds with the county saying that she has—are generally considered little more than harmless fantasies.

Flaws in System

But they also spotlight some flaws in the system the county uses to record real estate transactions, and, perhaps, raise some questions about the state regulations governing the conduct of notaries public.

By spending about \$100, Windsor—who, Beverly Hills notary Dorothy Ward says, claims to be the daughter of the Duke of Windsor and actress Jean Harlow—has laid claim to several of Los Angeles' most prominent and valuable landmarks. In addition to the swank Beverly Wilshire, Windsor has filed grant deeds for:

— Chase Plaza, the 22-story office tower at 8th Street and Grand Avenue that was purchased last year by Japanese real estate giant Shuwa Investments Corp. for more than \$100 million.

— International Towers, a 20-story office and retail complex at 9th and Figueroa streets.

— One Westwood, a 17-story office tower nearing completion at Wilshire and Veteran Avenue.

— The 25-story, bronze-glass World Savings Bank Building at Wilshire and San Vicente Boulevard.

— First Federal Square, the 12-story office complex at 4th Street and Wilshire in Santa Monica that serves as corporate headquarters of First Federal Savings Bank.

Windsor also has recorded deeds indicating ownership of several other Santa Monica properties: A Vons grocery store and nearby bank on Wilshire; a residential building on Euclid; trendy Cafe Casino on Ocean Park Boulevard; the 11-story Wilshire Palisades on Ocean Avenue, and a new building rising on the Santa Monica Mall. She also filed a deed with the county saying that she owns the apartment building she rents, plus the apartment complex in front of hers.

Windsor's phantom holdings began coming to light when David Ower, owner of the Hollywood brokerage firm Commercial Properties, wanted some information about a tenant who rents office space in the World Savings Bank Building.

Ower couldn't locate the tenant's phone number, so he asked Dataquick, a computer firm tapped into the recorder's records, to look up the owner of the building with the hope that the owner could put him in contact with the tenant.

Dataquick said the owner was Rose Mary Windsor, who recorded the purported purchase with the recorder's office on April 21. Since the purchase was fairly recent, the address to which property tax bills were to be mailed didn't appear on the computer printout.

Surprised by Results

Ower asked the computer firm to search for other properties Windsor might own, hoping to find her mailing address.

"You can imagine how surprised I was when I got a computer readout that said she owned six other buildings, most of them along Wilshire Boulevard," Ower said. Even more surprising, the computer search showed that she had apparently purchased all the properties in March and April.

Ower, his curiosity piqued, asked a local title insurance company to send him copies of some of the grant deeds Windsor had filed with the county recorder's office.

The deeds showed an "H.R.M. Rose Mary J. Windsor" deeding the properties from herself to herself. In most normal transactions, a grant deed shows title transferring from a grantor, or seller, to the grantee, or buyer.

A later check by The Times turned up five other properties Windsor had deeded to herself, including the Beverly Wilshire and Chase Plaza. Since Windsor had filed all the deeds with the county, the

recorder's office and all the computer firms that rely on those records now show her as the owner—even though she hasn't paid a nickel for any of the properties.

Notaries who dealt with Windsor, plus government officials interviewed by The Times, doubt that Windsor is trying to defraud anyone. However, Ower says, "the fact that the integrity of the recording system has been so easily compromised" is "a bit chilling."

"I don't think Windsor is trying to rip anybody off, but the way she was able to fill out all these grant deeds, get them notarized and get them recorded makes me wonder how easy it would be for someone to pull off a fraud," Ower said.

For example, Ower said, Windsor might be able to list the properties she has purportedly acquired as assets on a credit application for a new loan. The lender might be misled into advancing the money if it merely relied on the data supplied by computer firms.

"Even if someone didn't get ripped off, something like (what Windsor has done) is going to cause problems sooner or later," Ower said. "When the property tax bills get mailed out later this year, they're all going to go to the home of Her Royal Majesty—not to the real owners. And if one of the owners tries to sell his property, the county's records are going to show the Queen as being the current owner."

Ower finds it surprising that five different people notarized the grant deeds despite the irregularities of the documents, and that "the documents slipped through the cracks at both the notary and recorder's level."

Currently, clerks who work in the recorder's office are expected to examine the signature on a grant deed an individual attempts to file, and to make sure the document has been notarized, said Richard Hughes, the county's assistant registrar recorder. But the clerks aren't required to check whether the grantor listed on the deed actually owns the property—a fact that could be ascertained by looking at the most recent grant deed on file at the recorder's office.

Unfortunately, Hughes said, additional research of grant deeds submitted for recordation would raise the fees individuals must pay to file, and "would be a tremendous undertaking that would require a huge increase in our work force."

"Right now, we have about 15 clerks to process 8,000 grant deeds a day," Hughes said. "We're already working as hard as we can."

Hughes also said he doubts that any serious problems will arise from Windsor's actions, in part because most buyers purchase a title insurance policy that protects against defects of title.

Windsor's actions did not surface earlier because she did not purchase a title policy for any of her alleged purchases.

To what extent are the five notaries public who notarized Windsor's grant deeds responsible for what has happened? Even Ward says she thought the two deeds she notarized for Windsor were "unusual" because Windsor was both the grantor and grantee. Ward also says that conversations convinced her that Windsor "certainly wasn't the Queen of England."

However, Ward said she notarized the deeds after Windsor, whom she described as about 60 with reddish hair, produced identification that said she was "Queen Rose Mary Jesus Windsor."

"If her Royal Majesty presented satisfactory evidence that she is who she says she is, the notary has probably fulfilled her responsibilities," said Tony Miller, chief deputy secretary of state. "A notary's signature doesn't attest to the validity of

the document—it attests to the fact that a person appeared before the notary on a certain date, presented satisfactory identification and signed a particular document."

Notaries can be punished with suspension or revocation of their commission if they notarize a document they know is fraudulent, or if they notarize a document that a reasonable person would believe was fraudulent based on available evidence.

Notarizing a deed in which a woman who calls herself "H.R.M. Rose Mary Windsor" grants an interest in a property from herself to herself - without presenting any evidence that she has the legal right to do so - "may or may not be a violation," Miller said.

Hughes says a case like Windsor's pops up only once every several years, which "proves that our system of recording is working."

"To some extent, it's a system based on honesty," he said. "But it has worked pretty well for more than 130 years." □

David W. Myers is a Times real estate writer. Copyright, 1987, Los Angeles Times. Reprinted by permission.

DATA COLLECTOR UPDATE

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News Release: Mapping Aircraft in California Mid-Air Collision

Andy Andelin and Jim Nennman were killed in a mid-air collision of their Cessna 206 and a U.S. Air Force T-38 Jet. Two Officers in the T-38 were also killed. The accident happened on May 22, 1987 while flying a routine photo mission near Tehachapi, California, and is subject to an intensive investigation by the National Transportation Safety Board. Few facts surrounding the accident have been released at this time.

Andelin, the pilot, known by many surveyors in the region, was a partner in the Santa Ana based firm, Pacific Aerographics. He was a member of the American Society of Photogrammetry & Remote Sensing. His wife, Peggy, will remain active in Pacific Aerographics with business partner Jim Sorenson. Nennman was Andelin's photographer and lab man.

To all in the photo mapping business, this is a gut-wrenching occurrence which makes us even more aware of air traffic hazards, air space control and safety procedures.

For those who have offered contributions and wish to do something, a Memorial Fund has been established.

The fund will be used at a national level for Air Safety Education and to represent General Aviation/Photo Mapping Operator interests. The Andelin family and friends expressed their desire for such a memorial fund and will be advised as contributions are received. Send contributions to:

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The fund is being administered by Jack Dozzi of Horizons, Inc., P.O. Box 3134, Rapid City, SD 57709 — 605/343-0280. Please contact Jack for further information. Your input concerning air traffic control, air safety and the welfare of photo mapping will be appreciated.

The mid-air collision at Cerritos, California and Salt Lake City involving airliners and other numerous near-misses are prompting proposals for tighter regulation and identification procedures. General aviation operators who make all or part of their living performing precision mapping photography have an interest at stake. □

Profanity and the Professional

By Dennis J. Moulard, LS USDA Forest Service, Albuquerque, NM

Several months ago I attended a training session put on by one of the world's leading "salesmen". The course was on how to sell your ideas. Surprisingly, most of the principles we learned were exactly the same as one would find in a course on selling encyclopedias or computers. I learned a lot from the course, but there was one point which really surprised me. It was the general consensus of the students and an emphatic point from the instructor that the use of profanity is still a big no-no.

In the land surveying profession we deal with many other professions, including engineers, contractors, architects, and developers. It would seem the norm that all these groups "cuss like sailors". The interesting point of some studies done on this subject was that even people who regularly use profanity are offended by someone who uses it in a professional atmosphere. In the 1980's we seem to be to the point that even public meetings of associations or other professional groups are very willing to allow blatant profanity.

In spite of the "trend" in society, it is this writer's opinion that such habits are very unprofessional. Certain standards of conduct must be maintained as a respect and courtesy to those around us. I certainly am not trying to dictate to anyone how to conduct their own life, but rather pointing out the fact that a professional of any sort should be aware of his audience or environment and act accordingly.

We are constantly bombarded with articles and speeches about being a professional. Wearing a coat and tie to certain occasions is often cited. Having an office that is neat and organized or having professional appearing plants are other examples. I agree with these wholeheartedly. So let's add another to the list: **AVOID PROFANITY IN THE WORK PLACE AND OTHER PROFESSIONAL ENVIRONMENTS.**

There is no law against the Professional Land Surveyor being a scholar and a gentleman: both these terms add up to being a professional. □

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The Chiseled Cross Solution

By L.G. "Gus" Chambers, PLS

Surveyors over the years have chiseled offset crosses in sidewalks and curb heads to reference the front corners of urban lots. This has been a handy system for a couple of reasons: a quick search up and down the block will usually reveal which lots have been monumented and this will suggest where to look for rear pins and caps. A search along the back fence lines of a block isn't very practical because of dogs, a reluctance to invade back yards and the fact that a lot of rear corners get wiped out by fence construction. The chiseled cross practice has worked fairly well but it has a few limitations: when the walk is snow-covered the surveyor would have to shovel the whole block in order to properly search for control. Once a cross is found, it's impossible to tell who set it and the offset distance is unknown.

In Colorado the State Legislature resolved some of these problems in CRS 38-51-101(5) where surveyors are required to set "a durable metal disk or cap in the rock or concrete and stamped with the survey point and the Colorado registration number of the land surveyor respon-

sible for the establishment of the monument or marker." The debate rages among private survey practitioners about compliance with our State regulation. Various methods have been tried with mixed results and some companies have even ignored the requirement and stuck with the old chiseled crosses. It takes time to bore holes in sidewalks with a star drill to set brass caps and that can eat into the marginal profit of a lot survey. I've heard that epoxy can work on concrete and rock but it's hard to tell how long it will hold. The freeze-thaw action of water under a glued marker can pry it out. Snowblowers and shovels present an obvious problem with a surface marker. I'd like to share with you a fairly simple method to set cheap, durable markers in sidewalks.

The first set is to get a hole into the concrete. Explosive devices like Hilti or a Ramset can blow a crater in the walk and rattle the operator. Power drills work well, but the larger ones require a generator. I've found that the Makita (Model 6012) drill works great and is ni-cad battery powered. These units can be had at discount tool outlets for less than \$100.00. Skill

also makes a 3/8" cordless drill called the "Boar Gun" that is of the same industrial quality. Spare batteries are available: I've been setting 4 to 8 corners on one charging. If a surveyor can stand more stuff on his belt, there's a nice holster for the drill which has slots for bits or nails. The markers that I've found to be effective with this system are 1" fender washers mounted concrete nails. These markers are galvanized to prevent rust and come in a 1/8" hole size which is a press-fit with the knurled concrete nails. There is plenty of room on the washer for your registration number as well as an off-set distance or point designation number. One-eighth inch masonry bits are perfect for concrete nails. The nails drive into the pilot holes and fit very tightly. I make it a rule to chisel a conventional cross first, before placing the marker, in case an "unfriendly" destroys the disk. This marker won't come out without determined intervention, however, but if it does, a cross and hole remain. Another way to ensure that the marker is as tamper-proof as possible is to counter-sink the washer by tapping the concrete with a ball-peen hammer before

continued on page 24

The image shows three screenshots from the COGO PC-Plus software. The top screenshot displays a data table with columns for POINT, X, Y, and DISTANCE. The middle screenshot shows a help screen with text explaining batch file operations. The bottom screenshot shows a plot of a survey area with various points and lines.

POINT	X	Y	DISTANCE
11	N 78 14 85.125 E	264.7796	
12	S 64 54 57.536 E	152.7575	
13	S 85 25 29.204 E	188.8531	
14	S 25 11 57.845 W	171.5914	
15	N 56 45 13.869 W	287.3194	

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continued from page 23
driving in the disk. This way the marker will lie just below the surface, immune to snowblowers, shovels and skateboards.

You'll be running into hard gravel stones occasionally which will halt your progress and eat drill bits. For this I made a rock buster out of an eighth inch pin punch: just grind a pointed tip onto one of these punches and it will fit right into the pilot hole and shatter the obstacle. A Vise Grip wrench is handy in this operation in case the punch gets wedged in too deeply. You'll want to carry a few spare masonry bits which can dull quickly but can be resharpened easily on a grinding wheel. If you can't drill a very deep hole, there are very short lengths of concrete nails—ranging from 1/2" to 1 1/2". These markers are easy to locate with a metal detector. In locations like alleys where there may be asphalt overlaying concrete you can use a 1/4" hole fender washer with a PK nail. This works espe-

cially well on rock slabs and boulders which are softer than concrete. I found a handy compartmentalized vinyl box to carry the various-sized washers, concrete nails, drill bits, etc. This case also has room for hub tacks and numeral punches and you can carve out a slot for the pin punch. The blue rubber bands from broccoli bunches hold the box closed while banging around in the truck. This whole outfit, including all of the above plus a can of fluorescent spray paint, a large ball-peen hammer, a whisk broom, the hammer and drill holsters, numeral punches and a cold chisel, will fit into a conventional milk box. This way a crew can grab one thing and be all set.

That's it. The materials are cheap and the markers are quick and fun to set. This system makes for a relatively painless way to comply with our statutory obligation as Professional Land Surveyors. □

Reprinted from *Side Shots* - a publication of the Professional Land Surveyors of Colorado, Inc.

How to Kill an Association


1. Do not go to meetings.
2. If you go, arrive late.
3. Criticize the work of the organizers and members.
4. Get mad if you are not a member of a committee, but if you are, make no suggestions.
5. If the chair asks your opinion on a subject, say you have none. After the meeting, say you learned nothing, or tell everyone what should have happened.
6. Don't do what has to be done yourself, but when members roll up their sleeves and do their very best, complain that the group is run by a bunch of ego-trippers.
7. Pay your dues as late as possible.
8. Complain that nothing is ever published which interests you, but never offer to write an article, or make a suggestion, or find a writer.
9. And, if the association dies, say you saw it coming years before.

I hope you don't fit any of these nine categories—DO YOU????? □

The Michigan Surveyor Volume 20, Number 2

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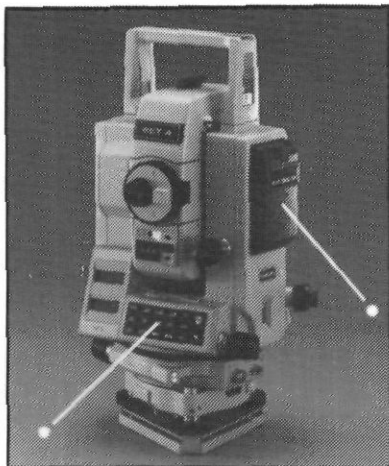
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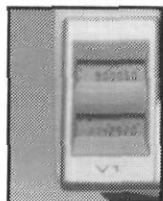


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Surveyor and Lawyer Liable for Reconstruction Costs

Surveyor and lawyer, liability to owner. Crawford v. Gray and Associates, 943 So.2d 734 (La.App. 1986).

A surveyor and a lawyer who failed to discover a right-of-way adjoining an existing highway were liable for their client's costs when he had to raze the part of his store that encroached on the right-of-way.

John Crawford hired lawyer Steven Porter to verify title to land on which he wanted to build a convenience store. Porter searched the title by referring to a book published by a local abstract company listing property conveyances. However, he gave Crawford a written opinion of good and valid title, stating it was based on his examination of local public records for "at least the past sixty years."

Crawford then hired Gray and Associates to survey the property and mark its boundaries. Gray's plat of the property indicated no easements for rights-of-way.

Crawford began construction of his store within the area surveyed and marked on Gray's plat. Before the building was completed, however, the state Department of Highways informed Crawford that the State had a 50-foot right-of-way on each side of the highway on which the

convenience store was located. The building encroached on this easement, and Crawford was forced to remove a 9-foot by 12-foot section of his building.

The owner sued both Lawyer Porter and Surveyor Gray to recover his costs, claiming the two were negligent in failing to discover the existence of the right-of-way. The Louisiana trial court dismissed Crawford's claim against the lawyer, while finding the surveyor negligent. However, the court concluded that the owner himself was partially liable for the problem, and reduced the damages Gray had to pay by 50 percent, to \$22,000.

On appeal, both the lawyer and the surveyor were found liable to Crawford. The Louisiana Court of Appeals noted that Porter's title opinion letter, which stated that it was based on an examination of the local public records, was false. According to the court, Porter would have discovered the right-of-way if he had actually examined those records.

The court also concluded that Crawford was not himself negligent in failing to discover the right-of-way, since he had hired a lawyer and a surveyor to do the needed work. The court then ordered Porter and Gray to pay the owner damages of \$39,000, the amount needed to compensate the owner for his cost of

repairs, and for the income he lost while his building was being demolished and reconstructed.

"Professional services" upon which others rely must be rendered in accord with reasonable professional standards. Less than reasonable skill will result in liability.

—M.S.S.

Reprinted from the Missouri Surveyor

Getting Out a Newsletter is no Picnic

If we print jokes, some say we are silly;
If we don't, some say we are too serious.
If we print original matter, we lack variety;
If we don't, we are too lazy to write it.
If we print news, some say we are nosey;
If we don't, some will be offended.
If we print contributions, it's full of junk;
If we don't, we don't show our appreciation.

Like as not, someone will say we swiped this.

Well, we did! From another Newsletter!
(No telling where they got it.)

-1976 West Virginia Surveyor

APPLICATION FOR MEMBERSHIP IN THE CALIFORNIA LAND SURVEYORS ASSOCIATION

- CORPORATE MEMBER GRADE: Shall have a valid California Land Surveyors or Photogrammetric license.
- AFFILIATE MEMBER GRADE: Any person, who in their profession, relies upon the fundamentals of land surveying.
- ASSOCIATE MEMBER GRADE: Any person who holds a valid certificate as a Land Surveyor in Training.
- STUDENT MEMBER GRADE: A student in a College or University actively pursuing the study of land surveying.

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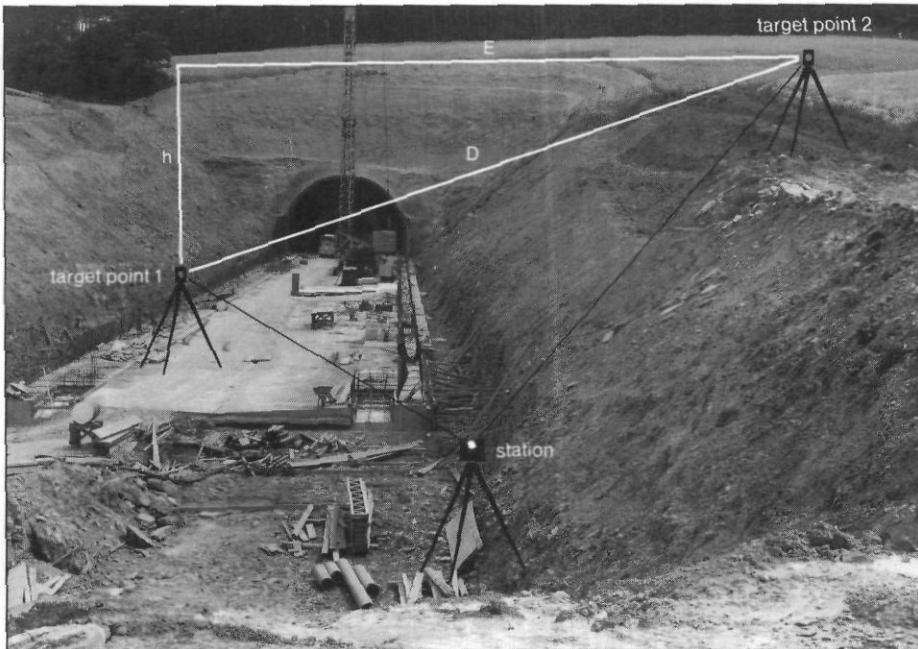
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