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Mapping

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"LAND SURVEYORS WEEK IN CALIFORNIA" OCTOBER 4-11, 1969

PLAN "A" ENGULFMENT

Quotes from "Report of Professional Registration Committee, of the California Council, meeting of April 19, 1969, item 6 (c): "--- and the licensing of land surveyors as such would be discontinued."

This, gentlemen, is "Plan A" supported by your organization. Unless it is your desire to be a member of a dead profession you must act at once to change this plan.

"Plan A" appeared in 1966, entitled "Proposal to modify the Land Surveyor's Act to make land surveyor a title in civil engineering", dated June 27, 1966. This plan may appear good at first glance, however there are several serious defects.

Article 4, paragraph 8740: "All land surveyors licenses valid on June 30, 1968, will expire on that date. In lieu of each license held by a person who is not also registered as a civil engineer in this state the board will issue a certificate of registration as a civil engineer. The person so registered shall be subject to the same regulations" (not entitled to the same privileges) "as a civil engineer who has been registered under the provisions of Chapter 7. The certificate authorizes him to practice only that civil engineering set forth in Section 8726 of this chapter." (Land surveying, basically as it is now defined).

When there is no provision for perpetuation of a profession (or anything else) it must die. Once all holders of land surveyors licenses are issued "limited" civil engineering registrations there will not be any more "limited" civil engineering registrations issued as Section 8742 (a) provides: "No person shall represent himself as, nor use the title of, licensed land surveyor, land surveyor, or geomatic engineer unless he holds a valid certificate of registration as a civil engineer and also a certificate of authority to use the title 'land surveyor', both issued by the board."

It is unlikely that many civil engineering graduates would be interested in doing graduate work to acquire a land surveying education. This would be necessary since the civil engineering curriculum is already overflowing a four year program. It is also hard to believe that many civil engineers would be interested in gaining this necessary education through the apprenticeship system (6 years) as land surveyors must.

WHICH ACT SHOULD REGULATE LAND SURVEYING COMPANIES

The purpose of this paper is to focus attention on the conflict between the Civil and Professional Engineers Act (CAPEA) and the Land Surveyors Act (LSA) wherein both Acts regulate companies which can engage in the practice of land surveying.

The CAPEA authority develops from Section 6733 of that Act, which spells out the requirements of the officers of a civil engineering company and from Section 6731 which includes land surveying under the practice of Civil Engineering.

The LSA authority over surveying companies develops from Section 8729 of that Act and differs from the CAPEA by requiring all members of a surveying company to be individually licensed or registered. The CAPEA specifies only that a registered civil engineer be in responsible charge of work and makes no other professional requirements of the other members.

This more lenient provision of the CAPEA has made it possible for unlicensed people to organize and have interest in companies whose business is land surveying as well as civil engineering. The fact that a civil engineer is an officer of the company and is a legal figurehead is not pertinent. The point is that a company so organized and practicing land surveying is in direct conflict with the Land Surveyors Act both in word and in intent.

I believe it is reasonable to say that the CAPEA was enacted to regulate the entire field of engineering including the broad field of civil engineering. It may very well be that the organizational provisions of this Act as it is now written are entirely adequate and proper to regulate this field.

I believe it is also reasonable to say that the LSA was enacted to provide special regulation for control of that branch of professional engineering which we call land surveying. The LSA specifically includes the civil engineer by name as well as the licensed land surveyor in its sections. Nowhere does the LSA, or for that matter the CAPEA, exempt the civil engineer from the provisions of the LSA or grant him special consideration except, of course, for the licensing provision.

PLAN "A" (Cont'd.)

The amount of education and training required to receive the certificate of authority to use the title "land surveyor" may be somewhat questionable however, since Section 8744 states: "After June 30, 1968, a civil engineer registered in the state may qualify for the certificate of authority to use the title "land surveyor" under rules established therefore by the board." There is no commitment as to what these rules may be.

Likening "land survey authority" to "structural authority" lacks validity as land surveying is based on fundamentals of mathematics, the science of measurement, evidence and boundary law vastly different than the fundamentals of mathematics, physics, mechanics and materials of civil engineering. Structural engineering, on the other hand, is an extension of or a specialization within civil engineering based on the same fundamentals.

Under "Plan A" the teaching of land surveying at the college level would necessarily come within the civil engineering program where there is neither the room for nor the desire to house it. The land surveyor needs a four year college course in land surveying completely separate from civil engineering. This can only be accomplished after the separation of the two professions.

It is difficult to believe, at this point in time when nearly every state in the union has passed land surveyor licensing legislation, that anyone could support a plan which would discontinue the licensing of land surveyors. Particularly since California has had such land surveyor licesning for 78 years.

by RICHARD J. STEPHAN
L.S. No. 3193

1970 ANNUAL MEETING

The New Holiday Inn at Santa Cruz is the place of the Fourth Annual Meeting of the California Land Surveyors Association. The time will be February 27 and 28. It is not too early to start making your plans to attend. People flying to the convention will land at the Monterey Airport where they will be met by a car from the Holiday Inn. Ross Armstead, of Soquel, is Chairman in charge of arrangements and Chuck Wooldridge of Monterey is Chairman in charge of the program. Excellent speakers, lots of fun time and tours have been promised and surely you will not want to miss this memorable experience, the time of your life.

1971 ANNUAL MEETING

Sacramento, the Capitol City, the Camellia City, has been chosen for the site of the Fifth Annual Meeting of your Association in the month of May, 1971. The time will be near the 20th of May which is the anniversary of the enactment of the first United States Land Ordinance in 1785. Air travelers will come out of the sky at the beautiful new Metropolitan Airport and be whisked away to the city and two or three days of conventioning. No definite plans have been made yet, since it is nearly two years away, but some unique ideas are being kicked around and few will want to miss it.

WHICH ACT (Cont'd.)

If both the licensed surveyor and the civil engineer are regulated equally by the LSA, it is reasonable to conclude that the LSA has preempted the regulation of the entire field of surveying practice. This includes the CAPEA land surveying provision as well as the organization of companies engaged in any degree of land surveying.

Unfortunately this interpretation has not always been applied to the problem. Surveying companies can and are being formed of one civil engineer and several unlicensed people as officers under the CAPEA provision. This is entirely permissible if they list their main line of business as "civil engineering".

One instance is brought to mind where a company was organized under the CAPEA provision to do "civil engineering". In actuality its main source of business appeared to be land surveying. What was most surprising of all was the company's name, that was shown on the application to the State Board, inferred the business activity to be land surveying. It was common knowledge that one of the unlicensed principals of this company was in effect procuring surveying work for his company and otherwise practicing surveying functions normally requiring licensing to show competency in this field.

It also was common knowledge that the registered civil engineer had no surveying experience. This company could not have been organized under the LSA and it was the CAPEA provision that provided the loophole.

Because of this loophole we now have a situation where an unlicensed individual can practice land surveying using the registration of a civil engineer who is not qualified in land surveying. Instances such as this one can only be expected to increase as the state requirements for land surveyors become more strict and selective.

The professional status of land surveying can be raised only in the same proportion as the qualifications of its practitioners. I do not see how we can advocate higher qualifications in the profession and condone a situation where the unqualified and the unlicensed are permitted to compete with the professionally licensed man.

The situation calls for complete separation of the practice of land surveying from the practice of civil engineering. It is axiomatic that all licensed land surveyors are surveyors. It does not follow that all registered civil engineers are surveyors.

by MAURICE E. LAFFERTY
L S. No. 3157

PERSONNEL DEPARTMENT CITY OF RIVERSIDE

Salary: \$843-1186 (proposed salary \$907 - 1276) (Effective July 1, 1969)

Requirements: Graduation from High School supplemented by completion of recognized courses in land surveying and five years or more experience. Must be registered as a land surveyor in the State of California.

Apply: Personnel Department, City Hall, Riverside, California, 92501.

STATE BOARD NEWS

MUIR APPOINTED

Charles J. Helin, of Los Angeles, President of the Board of Registration for Professional Engineers, has announced the appointment of Logan Muir, PE, 55, as Executive Secretary of the Board, effective July 1st, 1969. For the past two years, Muir has been the Executive Director of the California Society of Professional Engineers headquartered in Sacramento. He is a registered civil engineer in California, Nevada, Oregon, Montana, and Wyoming, and a registered land surveyor in the two latter states.

Born in Chicago, Illinois, he is a 1941 graduate of the University of Illinois and a member of Tau Beta Pi.

In 1953, after serving for several years as a civil engineer in the State Division of Beaches and Parks, Muir was co-founder of the firm of Muir & Train, later to become Packard, Muir and Train, Civil Engineers and Land Surveyors, Sacramento. He retired from the firm, now known as PMT Associates, in 1966.

He was a member of the State Board of Registration for six years, 1960-1967

A World War II Navy-Seabee veteran, Muir is now a retired Captain, USNR, has a private pilot's license, and is licensed as an amateur radio operator.

Muir is a member of the California Society of Professional Engineers, the American Society of Civil Engineers, the American Congress on Surveying and Mapping, the Society of American Military Engineers, the Sacramento Engineers Club, and is a counselor and past-president of the Sacramento Valley Engineering Council.

Muir is married and resides at 1639 Lakeside Drive, Folsom - El Dorado County

RECENT BOARD ACTIONS

At its meeting held in Sacramento on July 11, 1969, the Board of Registration for Professional Engineers approved the following recommendation for interpretation of a portion of the Land Surveyors' Act:

"The term 'material evidence', as used in Section 8762 (a) of Chapter 15, Division 3 of the Business and Professions Code (Land Surveyor Act) does not relate itself to either old or new (found or set) evidence."

"Conversely, survey points found or set do not necessarily constitute 'material evidence', which would require recordation of a map according to Section 8762 (a). If the evidence (found or set) is not significant enough to make a difference, then it cannot be deemed 'material evidence'."

"However, it can be stated that recordation of a map is not required according to Section 8762 (a) if points were set which do not appear on any map, but which points would not significantly affect the outcome of the survey; and the best interest of the public would not be significantly enhanced by the recordation."

Additionally, the following determinations were made by the Board regarding the functions of a Licensed Land Surveyor in activities related to earthwork:

"It is within the intent of Section 8726 (d), and Section 8726 (f) to allow a Licensed Land Surveyor to take cross-sections (or other method of determining configuration of the earth)."

"It is within the intent of Section 8726 (f) to allow a Licensed Land Surveyor to plot cross-sections (or other method)."

"If grades, side slopes, pad elevations, etc., have been determined by a Registered Civil Engineer; it is permissible for a Licensed Land Surveyor to calculate earthwork volumes exclusive of determinations related to shrinkage and swell."

"It is permissible for a Licensed Land Surveyor to estimate or calculate quantities according to grades, elevations, or side slopes which are arbitrarily assigned as long as such arbitrary grade or side slope assignment is not made for the purpose of changing the earth's configuration."

MARIN CHAPTER

Report on activities of S. F. /Marin County chapter of C. L. S. A. for calendar year 1969 to date.

Early in the year the County road Commissioners Office asked the S. F. /Marin Chapter of the California Council & the S. F. /Marin chapter of the C. L. S. A. to investigate the feasibility of having the surveying of future road projects done by private firms. A joint committee was formed and made recommendations for establishing the criteria for this work. So far none of this county work has been put out for our consideration --- however, we are hopeful that some of the route surveying in the future will be done by our members.

Our chapter has also established a list of standards pertaining to subdivision maps and parcel maps. It is our belief that if the various cities and the county will adapt a set of standards to be used uniformly by all surveyors and engineers they will see that the C. L. S. A. is trying to upgrade the surveying profession.

At our last dinner meeting in June we initiated the practice of inviting other chapter representatives to our meetings. We had representatives from Sonoma, Alameda and Santa Clara; we had representatives from the legislative and educational committees as featured speakers. The idea of sharing ideas and information with other chapters through personal contact seems to have merit and should make for closer cooperation between chapters.

Respectfully submitted,

William O. Lockhart Jr.

Secretary

1861 INSTRUCTIONS

The following instructions of the U. S. Surveyor General to deputy surveyors with respect to confirmed land claim surveys, were abstracted from the transcript of the Case, *U.S. vs. Sutter*, 62 U.S. (21 How.) and 69 U.S. (2 Wall.). They appear printed here in the hope that the reader will find them both interesting and educational. Principles are involved here which many of our land surveyors will encounter in attempting to "follow in the footsteps of the original surveyor" and with which he should be familiar.

Editor.

General instructions from the U. S. surveyor general for California, to the deputy surveyors engaged in surveying the finally confirmed land claims in the State.

Instructions.

1. In making the survey of ranchos that have been
673 finally confirmed, you will not only use great diligence and precaution in ascertaining the true locality of each claim, but exercise much care and discrimination in establishing the boundary lines in such a manner as to preclude any reasonable ground of complaint or opposition on the part of any person who may be interested in the same. A strict adherence to this mode of procedure is of paramount importance, and is absolutely essential, in all cases, in order to do justice to the proper owners of the land, as well as to obviate the necessity of a resurvey, the expenses of which the department would not be likely to sanction.

2. If other land claims, held under legitimate titles, adjoin any claim to be surveyed, you will, before commencing operations, ascertain all the information you can respecting such claims, and notify the claimants, in writing, of the time at which any lines in which they may be interested will be run; and if they themselves, or their agents, are presented at the time of running such lines, that fact must be stated. In case any line, as run by
674 you, between any such adjoining land claims, shall be agreed upon between the respective claimants of the lands, you will obtain their written assent to such agreements; and in case any of the claimants shall make a written protest against any such lines you may establish, you will note the same, and return all such agreements, protests, and other relevant documents to this office, with your field-notes.

3. With a view to ascertain the precise locality and boundaries of each claim with as much accuracy as possible, you will consult the most reliable witnesses that can be obtained, who may have resided in the vicinity, or have been more or less connected with the former government officials in the disposition of lands, and who may, from personal knowledge, be intimate with the boundaries and landmarks mentioned in the grant, and other documents relating thereto. You will
675 enter in your field-book all information that may have a tendency to throw light upon any matter in controversy, or to show the propriety of the course you adopt in making the survey.

4. Upon making these preliminary examinations, should you have good reason to believe that, in any instance, by the phraseology of the final decree, lands are included therein which are clearly not embraced within the limits of the claim as originally granted, you will be particular in your endeavors to ascertain the exact nature and cause of such variance, and report all the facts to this office for further instructions.

5. When a confirmee is limited to a less quantity of land than is embraced within the boundaries of his original title papers, he may select out of any portion of such larger tract the quantity to which he is entitled; but the quantity thus selected must form a compact body of land; and if any portion of the original grant has been sold, as such, by the owners thereof, such portion is to be included within the limits of the claim
675 thus selected, if practicable, without destroying the compactness of the survey.

6. It is required, in locating these claims, that the boundaries shall conform, as near as the nature of each case will admit of, to the lines forming the legal subdivisions of the public lands; and hence, when the boundary is not the bed or bank of a river, or other water-course, the margin of a swamp, or other overflowed land, or a line separating different claims, it should, if possible, be established by running to the cardinal points, so as to correspond to what otherwise would be the general course of such boundary line, and at the same time dispense with fractions of the legal subdivisions of sections when the adjacent public lands are surveyed.

7. When a river, creek, arroyo, or other water-course is not navigable, or declared to be so by the laws of the State, forms a boundary of any rancho, you will run the line along the channel or middle of the bed of such stream, and not on either of its banks; and when swamp or other overflowed lands
677 constitute the boundary, you will, unless otherwise specially instructed, if upon tidewater, establish such boundary, so as to coincide with the line of ordinary high tide; but if not upon tide-water, with the line where the land becomes of such a marshy or overflowed character as, in ordinary seasons, to prevent the proper cultivation of the soil, or the raising of planted crops.

8. These surveys must be connected with the nearest established corners on the lines of the adjacent public surveys, in order to indicate the precise locality of each claim, and a post must be established at the point where any such line
678 line is intersected by the boundary line of any claim, properly marked with reference to the private grant as well as the public lands.

9. If, upon testing such intersections with the courses and distances of the lines of the public surveys, you find that the actual connections so made differ materially from what, by calculation, they should be, there must be some error, either in your own work, or in the reported public lines, and therefore, while in the field, you must critically enquire
678 into the cause of the discrepancy, correct the error if in your own work, and if in the public surveys, state the precise nature and extent of it.

10. The distances must be measured in chains and links, with a chain duly tested by the standard in this office, and the bearings taken with a transit, or other proper instrument, with due corrections for the declination of the magnetic needle, to ascertain with the necessary astronomical observations must be made.

11. The "corner monuments" must be established in a permanent manner, of durable materials, and conformably, in all respects, to the instructions relative to the surveys of the public lands, with the exception that the posts are to be marked with the initial letters of the name of the rancho, and numbered in regular succession, instead of the sectional numbers.

12. The field-book must be neatly kept, in the same manner as in the surveys of the public lands, and furnish all the requisite information in regard to notable objects and other matters specified in the instructions to the U.S. deputy surveyors. The field-notes are to be made on the prescribed kind of paper, and to be accompanied by a neat and accurately protracted map, upon a convenient scale, say 20 or 40 chains to the inch; and also by the proper tabling, showing the lines as run, with their latitudes and departures, the balancing of the work, and the computation of the area of the survey.

13. The field-notes must be verified by your own affidavit and those of your assistants, in the same manner as is prescribed in the instructions for the surveys of the public lands.

14. In all cases you will consider the judicial league equal to 5,000 Spanish lineal varas; 4,635 English yards, or 210.6818 chains, and consequently the vara equal to $\frac{33 \cdot 372}{1000}$ English inches, and the sitio mayor or square league containing $4,438 \frac{638}{1000}$ acres.

15. You are prohibited from receiving payments from any party other than the United States for running the exterior lines of private land claims, and no survey thereof will be approved in this office where such compensation has been received.

16. A rigid compliance with these instructions, in every particular, will be invariably expected.

Addenda, explanatory of the foregoing.

In order that the foregoing may be clearly understood by the deputy surveyors, I have thought proper to make some remarks on the same, based upon the experience of the returns made during the past year, and you will consider these as part of the printed instructions in all matters herein set forth.

You will, upon making a contract for public surveys, or upon receiving instructions for the survey of private land claims, call upon the examiner of surveys for the form of oath for deputies for this fiscal year, which, when duly attested and filed with the examiner, will be the only preliminary oath required from yourself until your appointment is revoked. In the surveys of private land claims the oaths of your assistants, before entering on the work and after the completion thereof, will be taken before yourself. Your own final oath is required to each return.

In returns of public surveys, as each field-book becomes a separate record, it will be necessary to have the preliminary and final oaths of assistants, and your own final oath, in their respective places in each book. Your own oaths should be taken before a notary public, or some competent officer with a seal.

Secs. 1, 2, 3 of the printed instructions. You are expected to place before this office, in your field-notes, immediately after the preliminary oaths, a general summary of the steps taken by you to comply with these sections of the instructions, stating fully from whom you received protests, agreements as to boundaries, &c., &c., and return all original papers so received with your field-notes.

Secs. 4 and 5. You will report all facts under these sections to this office in your summary above alluded to.

Sec. 6. You are required to comply with this section as set forth in the printed instructions.

Sec. 7 requires no explanation.

Sec. 8. You cannot be too particular in obtaining correct information with regard to the lines of the public surveys connected with your work before leaving this office and when in the field. A post must be established at all intersections, marked, &c., as required, and the whole matter set forth distinctly in your field-notes.

Sec. 9. You will be careful to comply with these instructions, and report in your field-notes all discrepancies, or errors, found in the lines of previous surveys.

Sec. 10 requires no explanation.

Sec. 11. "Corner monuments." Corners are to be regarded as at every point where the course changes, except in meandering rivers, bays, sloughs, &c., &c.; you will report in your field-notes the manner of conforming to the instructions.

Sec. 12. You will make your returns in the prescribed forms of the office, specimens of which will be handed to you by the examiner.

When notable land objects, marks, &c., are mentioned in your instructions as having been on the lines or boundaries of the judicial possession, or are noted on the disenos, you will

be careful to note their true position in your returns with reference to your survey, by name, topography, &c.

You are expected, in all cases, to return perfect plans of your surveys. The form used for title in this office can be seen in the office of the examiner.

You will observe that the field-notes and plat must agree as to topography, &c.; should the scale of 40 chains to the inch be too small to delineate the topography, use that of 20 chains to the inch.

In running boundaries of ranchos the methods of offsetting or triangulation should not be resorted to, except in cases where they become inevitably necessary. The deputy is required to establish a post at the point where he ceases to run the line by chaining; this point is to be established agreeably to the instructions given for establishing sec. cor. in public surveys, with the modification to mark them with the initials of the rancho, instead of the rule of marking there prescribed. A similar post has to be established at the point where the actual boundary is taken up again by chaining. The deputy is required to enter in his field-book all notes and calculations by which he arrives at the length and direction of any line not actually marked out and chained on the ground.

Any information you may require in the progress of your surveys will be cheerfully given at all times upon application to this office.

It is my wish to have the work returned by the deputies in such a manner as to preclude the possibility of a suspension thereof, either in this office or at Washington; and a strict attention to the foregoing instructions will cause the work to be forwarded with despatch, and, as a consequence, the prompt settlement of the accounts of the deputies will follow.

San Francisco, Sept. 1st, 1858

J.W. MANDEVILLE
U.S. Sur. Gen'l.

Endorsed: Filed Jan'y 5, 1861

W.H. CHEVERS, Clerk.

OLD BOOK

These three columns contain the title page, advertisement and preface of a 171 year old surveying textbook owned by Gene Foster. It is thought that there is some sort of message in the preface.

Editor

TREATISE

OF

PRACTICAL SURVEYING;

WHICH IS DEMONSTRATED

FROM ITS FIRST PRINCIPLES.

WHEREIN

EVERY THING THAT IS USEFUL AND CURIOUS IN THAT ART,
IS FULLY CONSIDERED & EXPLAINED.

PARTICULARLY

Three new and very concise Methods for determining the Areas of Right-lined Figures Arithmetically, or by Calculation, as well as the Geometrical ones heretofore treated of.

THE WHOLE ILLUSTRATED WITH COPPER-PLATES.

The Eighth Edition.

By ROBERT GIBSON, *Teacher of the Mathematics*

With alterations and amendments, adapted to the use of American Surveyors.

New-York:

PRINTED BY WILLIAM A. DAVIS & CO.

For Gaine & Ten Eyck, T. Allen, S. Campbell, E. Duykinck & Co. N. Judah, T. & J. Swords, B. Gomez, New York; M. Carey, Philadelphia, and C. R. & G. Webster, Albany.

1798.

ADVERTISEMENT.

THE first New-York edition of Mr. Gibson's Treatise of Practical Surveying is, in some particulars, different from the copy published by the Author.

Alterations have been made, adapting it to our country. Some articles of little or no importance have been

entirely omitted; and others of more utility introduced; amongst which are a complete set of tables of latitude and departure to the distance of 100, and to every 15 minutes of the quadrant; a table of logarithms from 1 to 10,000; and a table of artificial sines, tangents, and secants; also an example of calculating the contents of a survey, according to the method commonly practised in the surveyor general's office of Philadelphia.

New-York, Jan. 10, 1798.

PREFACE.

THE word *geometry* imports no more than *to measure the earth*, or to measure land; yet in a larger and more proper sense, it is applied to all sorts of dimensions. It is generally supposed to have had its rise among the Egyptians, from the river Nile's destroying and confounding all their land-marks by its annual inundations, which laid them under the necessity of inventing certain methods and measures to enable them to distinguish and adjust the limits of their respective grounds, when the waters were withdrawn. And this opinion is not entirely to be rejected, when we consider that Moses is said to have acquired this art, when he resided at the Egyptian court. And Achilles Tatius, in the beginning of his introduction to Aratus's *Phænomena*, informs us, that the Egyptians were the first who measured the heavens and the earth (and of course the earth first) and that their science in this matter was engraven on columns, and by that means delivered to posterity.

It is a matter of some wonder, that though surveying appears to have been the first, or at least one of the first of the mathematical sciences, that the rest have met with so much greater improvements from the pens of the most eminent mathematicians, while this seems to have been neglected; inasmuch that I have not been able to meet with one author who has sufficiently explained the whole art in its theory and practice: for the most part, it has been treated of in a practical manner only; and the few who have undertaken the theory, have in a great measure omitted the practice.

These considerations induced me to attempt a methodical, easy, and clear course of *Surveying*; how far I have succeeded in it, must be determined by the impartial reader: the steps I have taken to render the whole evident and familiar are as follow:

In section the first, you have decimal fractions, the square root, geometrical definitions, some necessary theorems and problems; with the nature and use of the tables of logarithm numbers, signs, tangents, and secants.

The second section contains plane trigonometry right angled and oblique, with its application in determining the measures of inaccessible heights and distances.

The third section gives an account of the chains and measures used in Great-Britain and Ireland, methods of surveying and of taking inaccessible distances by the chain only, with some necessary problems; also a particular description of the several instruments used in surveying, with their respective uses.

The fourth section contains two methods of finding the areas of maps from their geometrical construction, more concise than any heretofore made public.

The fifth section contains a new, and much more concise method of determining the areas of surveys from the field-notes, or by calculation than any hitherto published; and I venture to assert, that it is impossible (from the nature of right-lined figures) that any method or methods more concise than this, can be investigated.

To these methods is annexed a short table of difference of latitude and half departure, to every degree and quarter of a degree of the quadrant, the stationary distance being one chain; which will be found as ready, by a little practice, and perhaps more exact, than those already published.

Truth calls upon me to acknowledge, that the methods by calculation, herein set forth, got their rise from those of the late Thomas Burgh, Esq. who first discovered an universal method for determining the areas of right lined figures, and for which he obtained a parliamentary reward. I hope therefore it cannot be construed as an intention in me to take from his great merit, when I say, that the methods herein contained are much more concise and ready than his.

Section the sixth contains the nature of off-sets, and the method of casting them up by the pen: the nature and application of enlarging, diminishing, and connecting of maps: variation of the compass by amplitudes and azimuths, with some of its uses; to which is added, a table of the sun's declination: how to find by what scale a map is laid down, having the map and area given: how to find the content of a ground that is surveyed by a chain that is too long or too short: the method of dividing lands: And the whole concludes with some necessary directions and remarks on surveys in general.



VICE PRESIDENT ROBERT W. CURTIS

Bob was born in Pennsylvania in 1932 and served in the U. S. Army in Europe from 1949 to 1952. Starting his surveying career with PG&E in 1952, he worked in the Northern California area on all types of survey work with various private surveyors. In 1965 he joined with Richard J. Stephan to form the company of Stephan and Curtis in Healdsburg and Santa Rosa.

Bob was a Charter Member of the Land Surveyors Association back in 1966. As a matter of fact, he had a great deal to do with the writing of the Constitution and By-laws. Besides being Association Vice-President, he is President of Sonoma Chapter, Chairman of the Membership Committee and Member of the Constitution and By-laws Committee.

SANTA CLARA - SAN MATEO CHAPTER

Our Chapter meeting was held on June 3, 1969 at Mariani's Restaurant in Santa Clara. Only 15 members, both regular and associate, were in attendance.

Our guest speaker was Joseph McGuillan from Risk Analysis Research, and his topic was Liability in Land Surveying. (AB 2296 might be a step towards lowering the premiums for liability insurance).

Jim Foulk (Chapter Representative), who was selected by Don Ward for the committee to meet with the Consulting Practicing Committee of C.C.C.E. & L.S., was directed to attend such a meeting with an open mind to possible compromises regarding AB 2296, but was specifically instructed to make it known that our Chapter was against the proposition that to become a land surveyor, a candidate must first become a civil engineer. This was the unanimous wish of the members present.

Very truly yours,

EARL R. CROSS
Chapter Representative

MEMBERSHIP CROSS-SECTION

- 46 Licensed in other states
- 72 Are members of local civic organizations
- 4 Retired
- 64 Self-employed
- 80 Employed by firms (various)
- 24 Employed by the State of California
- 24 Employed by Counties of California
- 10 Employed by Cities of California
- 4 Employed by the Federal Government
- 126 Members of ACSM
- 52 Members of Northern California Section
- 32 Members of Southern California Section
- 30 Members of California Society of Professional Engineers
- 16 Members of National Society of Professional Engineers
- 28 Members of California Council of Civil Engineers and Land Surveyors
- 14 Members of American Society of Civil Engineers
- 8 Members of East Bay Council on Surveying and Mapping
- 4 Members of American Society of Photogrammetry
- 36 Of present membership attended 1966 Seminar at Berkeley

We have members in:

Canadian Institute of Surveying
Society of American Foresters
Association of Engineering Geologists
American Society of Agricultural Engineers
American Right of Way Association
American Association of Cost Engineers
Engineers and Architects Institute
County Engineers Association of California
Society of American Military Engineers
Municipal Engineers Association

1. Do you think land surveying is a part of civil engineering?
Question No. 1. Yes 48 No 150

2. Do you think the Land Surveyors Act needs modernizing?
Question No. 2. Yes 162 No 14

Eugene Foster, Chairman
Fact Finding Committee

Committee Report to the Board of Directors
August 24, 1968
Anaheim, California

SANTA BARBARA MEET

The week of October 4-11, 1969 has been proclaimed "Land Surveyors Week" by Governor Reagan. The Governor will not be able to attend the 1969 ACSM California Conference, but he has designated Mr. James Stearns, Director of the Department of Conservation as his official representative to attend the Conference.

Mr. Charles H. Andregg, President ACSM, Washington D.C. will be in attendance. We are most fortunate and honored to have Mr. and Mrs. Andregg on hand. Also, two national Directors of ACSM will be in attendance - William A. Angeloni and Francis H. Moffitt.

ISLAND REDISCOVERED

Land Surveyor Don Ward, partner in the engineering firm of Rickett, Reaves & Ward and Western Photoair, photogrammetric engineers, addressed the Ninth San Joaquin Valley Surveyors Conference held April 5 at the Fresno State College.

Mr. Ward's topic embraced the use of photogrammetry in property line surveying. He pointed out that the modern techniques of photogrammetry allow the land surveyor to measure points on the earth's surface more accurately and at lesser cost than most other accepted methods of measurement being used today. But added that simply stating it was used to measure points on the earth's surface was like stating Shakespeare was an author.

Take the case of the hidden island.

In 1832 a government surveyor had made ties to either end of a small island along the coast line of the State of Louisiana that had completely disappeared by 1968 by silt deposited in the adjacent water channels due to flooding waters, and had grown over with cypress trees. The area had valuable oil deposits under ground and if the island could be located, a lease from the State of Louisiana could be secured and the oil would go to the finder.

The modern techniques of photogrammetry were employed, involving boundary surveys, control surveys, aerial photography, riparian boundary law, aerotriangulation, complex computer programming and analysis, multi-spectral imagery and photo interpretation.

To make a long story short, infrared color aerial photography coupled with land surveying techniques and know-how allowed the retracement of the 1832 survey, location of those ties to the island on 1968 aerial photographs and tracement of the island's shape by photo interpretation of the true cultural growth of the old cypress trees on the original island location graduating to the newer growth of cypress trees as the channels filled with silt and the trees were allowed to grow. With this method the island was accurately measured and a legal description of its perimeter as it existed in 1832 was written. The miracle of modern technology.

SO. CALIFORNIA SECTION A.C.S.M.

The May 27th meeting of the Southern California Section of the A.C.S.M. was held in the Los Angeles County New Hall of Records Building. John V. Brock, western manager of Aero Service Corporation, gave an interesting look into photogrammetric and data processing applications for transmission line design.

A lively debate then followed over the California Land Surveyors Association sponsorship of Assembly Bill No. 2296. Donald E. Ward of Rickett, Reaves and Ward, Bakersfield, gave the C.L.S.A. position: removal of the Civil Engineering exemption from the Land Surveyors Act. Clifford C. Hood of Jennings, Halderman and Hood, Santa Ana, opposed the legislation. He presented a plan sponsored by the California

Council of Civil Engineers and Land Surveyors: Land Surveying would become a specialty of Civil Engineering, and would require a separate examination after one had first become a Registered Civil Engineer. Currently licensed Land Surveyors would be grandfathered into this specialty.

REBUTTAL TO FINANCE

This letter was written by your Editor and directed to Kirk West, Deputy Director, Dep't. of Finance.

With the hour running late, Chairman Dick Mitchell called the discussion to a close and read a letter by the S.C.S. - A.C.S.M. Executive Board stating its opposition to Assembly Bill No. 2296. Copies of the letter were sent to C.L.S.A. and the California Council of Civil Engineers and Land Surveyors.

Dear Mr. West:

In rebuttal to your analysis, dated May 12, 1969, concerning AB 2296 (Bagley). First, let me state that "The public purpose and need for the enactment of AB 2296 is to require professional land surveying to be done by professionally qualified land surveyors, by requiring civil engineers (specially exempted since 1939) to meet the same standards."

A brief business meeting followed

FACTS SUPPORTING THE ALLEGATION THAT CIVIL ENGINEERS ARE NOT EXAMINED IN LAND SURVEYING

Exam.	pts req	Subject matter of civil engineer examinations				
		hydraulics structures municipal highway etc.	route calculation & layout	control surveying	photo- grammetry	land boundary surveying
Nov 68 A	50	105	15	0	0	15
Nov 68 B	50	130	10	0	0	0
Apr 68 A	50	75	12.5	0	0	0
Apr 68 B	50	100	0	0	0	0
Aug 67 A	50	75	12.5	0	0	0
Aug 67 B	50	175	0	0	0	0
Nov 66 A	50	75	12.5	0	0	0
Nov 66 B	50	225	0	0	0	0
Apr 66 A	50	39	30	0	0	1
Apr 66 B	50	250	25	0	0	0
Aug 65 A	50	65	0	0	0	0
Aug 65 B	50	250	25	0	0	0
Nov 64 A	50	75	25	0	0	0
Nov 64 B	50	275	25	0	0	0
Apr 64 A	50	70	0	0	0	10
Apr 64 B	50	300	0	0	0	0
Aug 63 A	50	70	0	10	0	0
Aug 63 B	50	250	0	0	0	0
Totals	900	2604	182.5	10	0	26

REBUTTAL TO FINANCE (Cont'd.)

The inclusion of land surveying in the definition of civil engineering took place in 1959 after a period of nearly 75 years during which the practice of land surveying was pre-empted by the Land Surveyors Act. It is a well known fact that, today, there is, in the definition of land surveying, an overlapping area which may be practiced by both registered civil engineers and licensed land surveyors. Amendment No. 3 of the enclosed 3 amendments defines this overlapping area for the first time.

In your analysis, the statement "There is no public need for this bill" will become obviously false as our argument continues. The objective of the bill cannot be professional protection for land surveyors, as a group, if the grandfather-

ing section of AB 2296 is examined and understood. It is estimated that 2500 or 3000 civil engineers, now practicing land surveying under the exemption, will be "grandfathered" into the profession and that can hardly be called "protection".

The problem and the conflict which exists is due to the fact that land surveying (real property and boundary location and definition) and engineering and construction surveying are lumped together in the definition of land surveying. Public agencies have been suffering from this same "special" exemption.

I think your fiscal impact analysis is incomplete in that it does not include the one-time additional revenues, estimated by the Department of Professional and Vocational Standards, to be \$139,000.

FACTS SUPPORTING THE ALLEGATION THAT CIVIL ENGINEERS ARE NOT EDUCATED IN LAND SURVEYING

Number of units of surveying subject matter in certain California college civil engineering curricula:

College	elementary, route, control surveying units		photogrammetry units		land boundary surveying units	
	available	required	available	required	available	required
UC Berkeley (180 quarter units req.)	8 elem. 4 route 7 control	4 elem.	8 un. gr. 24 grad.	0	0	0
UC Davis (180 quarter units req.)	3 elem.	0	0	0	0	0
UCLA (180 quarter units req.)	0	0	0	0	0	0
San Jose St. (136 semester units req.)	6 elem.	3 elem.	0	0	0	0
LA State (198 quarter units req.)	4 elem.	0	0	0	0	0
Fresno St. (136 semester units req.)	6 elem. 2 route 2 control	3 elem.	2	0	2	0

CHAIRMEN AND REPRESENTATIVES

Below is a list of Committees and Chapters. If you find that any are incorrect or incomplete, please advise us as soon as possible. Thank you.

<u>COMMITTEE</u>	<u>CHAIRMAN</u>
Constitution & By-Laws	E. Robt. Jacobson
Editor	Gene Foster
Education	Ed Kulhan
Fiscal & Administrative	R. J. Stephan
Interprof. Relations	Don Ward
Legislative	J. Scherf
Liaison w/Govt.	Jim Dowden
Membership	Bob Curtis
Nominations	Bill Gentry
Public Relations	Gene Lockton
Publications	R. J. Coughlan
1970 Convention	R. Armstead (Conv.) same C. Wooldridge (Program) same

<u>CHAPTER</u>	<u>BOARD REPRESENTATIVE</u>
Bakersfield	Don Ward
East Bay	Ed Griffin
Lake-Mendocino	Tom O'Connor
Marin	John Stuber
Monterey Bay	S. O. Nielsen
Sacramento	John Beaver
San Joaquin	Ed Kulhan
Santa Clara/San Mateo	Earl Cross Jim Foulk
Sonoma	Jim Adams
Southern Counties	F. Henstridge
Northern Counties	Ken Burton



DECALS

Order your Windshield Decals from George Colson, 1414 Fourth Street, San Rafael. The cost is 50¢ apiece or three for \$1.00. They are white, black and gold, just like the Association emblem. If licensed in California you should display one.

LAPEL PINS

Order lapel pins by sending your order and a check for \$5.00 to Edward A. Boris, Jr., 561 Lebanon St., Hayward, California 94541. All members should have one of these beautiful pins and wear it whenever practical. If licensed in California you should be wearing one.



WARDS L. A. SPEECH

With the submission to the Legislature of AB 2296, the Land Surveyors are trying to salvage the profession of land surveying from the encroachments of the unqualified so that the public interest can be better served and protected.

There have been cries from the engineering profession to the effect that the Land Surveyors are creating a dichotomy in the engineering profession. It appears from this writer that the evidence does not support this cry. (1) The Land Surveyors already have a practice act which is separated from the engineers. (2) The Land Surveyors Act first came into existence in 1891, 38 years before the first Engineers Act. (3) The Engineers Act has so many subdivisions and categories that it is difficult to tell what an engineer does unless he outlines his specialty in some detail. This has all come about since the first Engineers Act became law, whereas the Land Surveyors Act has suffered no such division. But instead, it has been the engineers who have tried to divide the land surveying profession.

There have been cries to the effect that the architects are trying to infiltrate the profession of engineering and, therefore, the Land Surveyors must unite with the engineers in this battle so as to create strength with unity. This writer points out that the architects are exempt from the Engineers Act, but not exempt from the Land Surveyors Act, that to join the engineers would invite an *encroachment from still another unqualified* body of people practicing in a field in which they, too, have had no training or experience and the Land Surveyor would be powerless to fight back. By straightening out the Land Surveyors Act, the Land Surveyors could demand that only persons who are licensed to practice land surveying can so practice. Today our hands are tied because more people who are unqualified to practice can practice through a loophole in the Act then there are Licensed Land Surveyors who have been tested and examined to show competency.

There have been cries from the engineering profession to the effect that the Bill 2296 takes away a right to practice land surveying even though they may not be qualified to practice and would not so practice because ethics would not permit them so to practice if they weren't qualified.

WARDS L. A. SPEECH (Cont'd.)

This writer has been in the surveying profession for more than twenty years and during that time has seen many engineers practicing who had no idea when they started to practice what should have constituted ordinary land surveying practice. They learned, of course, but at the expense of the unsuspecting public and many of the problems created by such a group of unqualified practitioners are still being aired in the courtrooms today and causing great difficulty at county surveyors' offices throughout California, and even greater difficulty to the legitimate Land Surveyors who must correct and work with this type of problem.

AB 2296 is an attempt by the Land Surveyors to remove this cancer which tends to engulf the profession. AB 2296 requires that all persons who practice land surveying be tested, examined to show specific competence, and then to be licensed in order to practice.

To accomplish this the exemption clause permitted civil engineers to practice land surveying without being tested and licensed as land surveyors must be removed from the Land Surveyors Act. This is precisely what the Bill AB 2296 does.

by DON WARD
L.S. 2863

LAND SURVEYORS ACT

TO DEFINE THE DUTIES OF AND TO LICENSE LAND SURVEYORS

(Approved March 31, 1891)

The People of the State of California, represented in Senate and Assembly, do enact as follows:

Section 1. Every person desiring to become a licensed land surveyor in this State must present to the State Surveyor-General of this State a certificate that he is a person of good moral character; also, a certificate signed by three licensed surveyors, or a certificate signed by the Board of Examining Surveyors (provided for in section five of this Act), which certificate shall set forth that the person named therein is, in the opinion of the person signing the same, a fit and competent person to receive a license as a land surveyor, together with his oath that he will support the Constitution of this State and of the United States, and that he will faithfully discharge the duties of a licensed land surveyor, as defined in this Act.

Sec. 2. Upon receipt of such certificate and oath by the State Surveyor-General, it shall be his duty to forthwith to issue to such applicant a license, without charge, which license shall set forth the fact that the applicant is a competent surveyor, or that he has had at least two years' experience in the field as a surveyor or assistant surveyor.

Sec. 3. Such license shall contain the full name of the applicant; the technical institution from which he is a graduate (if he be a graduate); or if he be not a graduate, the fact must be stated in the license; his birthplace, age, and to whom issued; the name of the person upon whose certificate the license is issued, and the date of its issuance.

Sec. 4. All papers received by the State Surveyor-General on application for licenses shall be kept on file in his office, and a proper index and record thereof shall be kept by him, and a list of all licensed land surveyors shall be kept by him, and he shall monthly transmit to the County Recorder of each county in this State a full and correct list of all persons so licensed; and it is hereby made the duty of such Recorders to keep such lists in their offices in such a way as they may be easily accessible to all persons.

Sec. 5. Within twenty days after the passage of this Act, the Governor shall appoint three surveyors in good standing, members of the Technical Society of the Pacific Coast, and two other surveyors in good standing, not members of such society, as a Board of Examining Surveyors, who shall conduct such examinations and make such inquiries as to them may seem necessary to ascertain the qualifications of applicants for surveyors' licenses.

Sec. 6. A majority of the Board of Examining Surveyors shall meet on the first Friday of each month during their term of office, in the rooms of the Technical Society of the Pacific Coast, in San Francisco, and at such other times and places as they may select. The members of the Board shall hold office for the term of one year from the date of appointment, and shall serve without compensation.

Sec. 7. Every licensed surveyor shall have a seal of office, the impression of which must contain the name of the surveyor, his principal place of business, and the words "Licensed Surveyor"; and all maps and papers signed by him, and to which said seal has been attached, shall be prima facie evidence in all the courts of this State.

Sec. 8. Surveyors' licenses, issued in accordance with this Act, shall remain in force until revoked for cause, as herein-after provided.

Sec. 9. Every licensed surveyor is authorized to administer and certify oaths, when it becomes necessary to take testimony to identify or establish old or lost corners; or, if a corner or monument be found in a perishable condition, and it appears desirable that evidence concerning such corner or monument be perpetuated; or whenever the importance of the survey makes it desirable, to administer an oath, for the faithful performance of duty, to his assistants. A record of such oaths shall be preserved as a part of the field-notes of the survey.

Sec. 10. Every licensed surveyor is hereby authorized to make surveys relating to the sale or subdivision of lands, the retracing or establishing of property or boundary lines, public roads, streets, alleys, or trails; and it shall be the duty of each surveyor, whenever making any such surveys, except those relating to the retracing or subdivision of cemetery or town lots, whether the survey be made for private persons, corporations, cities, or counties, to set permanent and reliable monuments, and such monuments must be permanently marked with the initials of the surveyor setting them.

Sec. 11. Within sixty days after a survey relating to the sale or subdivision of lands, the retracing or establishing of property and boundary lines, public roads or trails, original cemetery or town sites, and their subdivisions has been made by a licensed surveyor, he shall file with the Recorder of the county in which such survey or any portion thereof lies, a record of survey. Such record shall be made in a good draughtsmanlike manner, on one or more sheets of firm paper of the uniform size of twenty-one by thirty inches. This record of survey shall be either an original plat or a copy thereof, and must contain all the data necessary to enable any competent practical surveyor to retrace the survey. The record of survey must show: All permanent monuments set, describing their size, kind, and location, with reference to the corners which they are intended to perpetuate; all bearing or witness trees marked in the field; complete outlines of the several tracts or parcels of land surveyed, within courses and lengths of boundary lines; the angles as measured by Vernier readings, which the lines of blocks or lots, if the record relate to an original town-site survey, make with each other and with the center lines of adjacent streets, alleys, roads, or lanes; the variations of the magnetic needle with which old lines have been retraced; the scale of the map; the date of survey; a proper connection with one or more points of an original or larger tract of land, and the name of the same; the name of the grant or grants, or of the townships and ranges within which the survey is located; the signature and seal of the surveyor; provided that nothing in his section shall require record to be made of surveys of a preliminary nature, where no monuments or corners are established.

Sec. 12. The record of surveys thus filed with the County Recorder of any county must be by him pasted into a stub book provided for that purpose, and he must keep a proper index of such records, by name of owner, by name of surveyor, by name of grant, city, or town, and by United States subdivisions; and he shall make no charge for filing and indexing such records of surveys.

Sec. 13. Upon the failure of any licensed surveyor to comply with the requirements of this Act, and the furnishing of satisfactory proofs of such fact, the State Surveyor-General must revoke his license, and no other license shall be issued to him within one year from such revocation. A violation of section eleven of this Act shall be a misdemeanor, and any person convicted of such violation shall be punished by a fine not to exceed more than one hundred dollars, or imprisonment in the county jail not exceeding thirty days.

Sec. 14. In case said Board shall refuse to meet and examine the applicants for licenses as in this Act provided, and issue to such applicants the certificate or certificates mentioned in this Act, if such person be a fit and competent person to receive the same, they may be compelled to do so by mandamus; and if upon the hearing of such mandamus it appears that they have willfully and wrongfully refused to examine any applicants, or to issue him a certificate when he is entitled to the same, such Board so refusing or failing shall be, jointly and severally, liable for all cost of said mandamus proceeding, including attorney's fee of five hundred dollars, and shall be so jointly and severally liable to any person aggrieved by such refusal, in the sum of five hundred dollars, as fixed, settled, and liquidated damages, which may be recovered in any court in this State, and the judgment (if it be for plaintiff) in mandamus shall be prima facie evidence of such injury and damage in any action which may be brought to recover damages under the provisions of this Act.

Sec. 15. All that part of the Code of Civil Procedure of this State relating to mandamus is hereby made applicable to the provisions of this Act; and all proceedings in mandamus under this Act shall be in accordance therewith.

Sec. 16. This Act shall take effect on the first day of July, eighteen hundred and ninety-one.

GROWTH OF AN ASSOCIATION

Selected excerpts from a speech delivered by Mr. A. Phillips Bill at the 1968 National Fall Convention of the American Congress on Surveying and Mapping at Minneapolis, Minnesota, Sept. 18-21.

"Over the past 20 years it has been my privilege and pleasure to participate in considerably over 100 Annual Meetings of State and Provincial Surveyors Associations. These years have seen the number of active state surveyors associations in the United States grow from two to more than 40. This phenomenal growth certainly indicates that ours is a vital and healthy professional endeavor, rather than the defunct profession that would seem to be indicated by the attitude towards it taken by most of our schools of civil engineering.

First, it appears that membership must be open to All licensed to practice within the jurisdiction represented. I have often heard the complaint in this connection that incompetents would foul up the membership if it were thrown open to all. Experience here has indicated that it is more in the interests of better land surveying to have these so-called incompetents within than without. This gives the association a chance to watch over them - and them a chance to learn.

The primary authority in an Association should rest in Its Executive Officers and Board of Direction rather than with those of the regional groups of which the whole may be composed. Progress in definitive matters is seriously impeded if it is a constitutional necessity to refer every matter of significance to the association back to the regional groups for individual approval.

A major indication of the vitality and effectiveness of an association is the diversity and extent of its committee activity. The primary cause of Committee failure is lack of knowledge as to exactly what the committee is supposed to do. Even "so-called" Standing Committees should be reminded, in writing, of their duties at least once a year. A working committee of one is a lot more effective than a non-working committee of ten.

The continuing appearance of new faces on the association scene is a primary indication of the vitality of the profession and the health of the association itself. Many associations are

GROWTH (Cont'd.)

seeking ways to continue to benefit from those who have already proved themselves. At least two associations have a Council Advisory to the Board of Direction on which Past Directors and Executive Officers are invited to serve.

Benefits which develop within an organized professional group do not come cheaply. I would say that the one factor that has restricted association growth more than any other, country-wide, has been an unrealistically low dues structure. Set the dues structure to permit healthy committee activity. Any committee than can work on a ten-dollar annual budget should be discharged. Make sure that the budget provides for dignified representation of the Association at meetings of sister associations and at National Congresses.

Constant attention to proposed legislation is a primary duty of the Society to the profession it professes to represent. Selfish interests are ever seeking to create special privilege to the detriment of the public interest. In the more populous states, a professional should be employed to conduct this constant legislative review. The activities of the California Council of Civil Engineers and Land Surveyors in this regard are especially noteworthy.

A well-considered public relations program is most important for an active association. Activities of the association, unusual and significant projects accomplished, historical background and future possibilities are all proper material here.

A primary requirement for association growth is the frequent distribution of an association newsletter or bulletin. It is highly productive to put your newsletter on exchange with other associations. The newsletter should be mailed to all licensed to practice in your area of service. Such will probably be the most effective catalyst to membership increase that can be found.

A well organized ladies program, at least for the time of the Annual Meeting of the Association, appears to contribute to the attendance at the technical sessions. However, meetings must be planned in areas of interest to the ladies and there must be considered effort to schedule their affairs."



C.S.E.A. RESOLUTION

RESOLUTION

August 6, 1969

Submitted by the California Land Surveyors Association and supported by many CSEA Chapters.

FOR THE CONSIDERATION OF THE PAY AND CLASSIFICATIONS COMMITTEE AND FOR A BASIS OF RECOMMENDATION TO GENERAL COUNCIL 1969, OCT.

PC / Use of Land Surveyor and Supervising Land Surveyor Classifications by the State Division of Highways.

WHEREAS (1) the Land Surveyor and Supervising Land Surveyor Classifications are in current use by several State agencies other than the State Division of Highways, e. g. Architecture and Construction, Bay Toll Crossings, Forestry, State Lands, Parks and Recreation, Water Resources and Reclamation Board, and

WHEREAS (2) present classifications used by the Division of Highways provide no inducements and stimulate little incentive, through monetary benefits or professional recognition for the dedicated career survey employee to seek professional registration, and

WHEREAS (3) the Land Surveyor License is now prerequisite for admission to the Land Surveyor civil service examination and study for licensing as a land surveyor is beneficial both to the employee and to the State through increased proficiency and development of a professional attitude, and

WHEREAS (4) the Professional Engineers Act and the Land Surveyors Act of the California Business and Professions Code specify that certain types of surveys relating to streets and highways be done by or under the direct supervision of a Licensed Land Surveyor or a Registered Civil Engineer, and

WHEREAS (5) the Land Surveyor and Supervising Land Surveyor Classifications are, in fact, already in existence, now therefore be it

RESOLVED (a) that the California State Employees Association make a thorough study of the Division of Highways' reasons for not using the classifications of Land Surveyor and Supervising Land Surveyor in their survey and right of way departments, and

RESOLVED (b) that the qualifications for these classifications remain unchanged and be it further

RESOLVED (c) that C. S. E. A. take a strong stand in the form of an executive letter to the State Personnel Board urging that board to take whatever steps necessary to have the Division of Highways use the classifications of Land Surveyor and Supervising Land Surveyor.

COUNTY LINE SURVEY

Strange how news items in the paper are so brief and terse. One never dreams of the real story behind the news. In fact, the survey of the county line, along Dry Creek was performed by two very able members of the California Land Surveyors Association. They are Robert Leger and Curtis Brown. The Record of Survey Map was recorded in San Joaquin County May 23, 1969 in Book 19 of Surveys at Page 55 after having been approved by Mr. Clement A. Plecarpo, County Surveyor of San Joaquin County.

The Survey Report states, in part, as follows:

"The original section and quarter corner monuments near Dry Creek were set more than 100 years ago. No witnesses remain alive today that could have been present at the time of the original survey. Since the date of the original survey, the area has been farmed and roads built on section lines. No original monument material or witness trees exist today.

In San Joaquin County The County Surveyor has carefully preserved section and quarter corner positions by setting replacement monuments. All such corners within one mile of Dry Creek were located and coordinated.

In Sacramento County in the area near Dry Creek there has been no public tie-pointing program. Corner monuments are scarce. There are numerous fences, roads and other possessions that indicate the original lines. Extensive search was made with a mine detector for buried metal and in a few instances pipes and railroad spikes were found as noted on our record of survey. Also tin cans, bottle tops, nails and other useless evidence were uncovered."

Your Editor smelled a story. A phone call to Stockton disclosed the fact that San Joaquin County has always had a County Surveyors Office. This is over a period of perhaps more than 100 years. Two or three more phone calls divulged that Sacramento County has not had a County Surveyors Office for 36 years. In 1933, the County Charter was changed in Article 9, Section 43 to combine the County Surveyors Office with the newly created office of County Engineer. Fourteen years ago the County Engineers Office became a part of the County Department of Public Works. Again your Editor is prompted to make some caustic remarks but decided to let the reader ponder awhile and draw his own conclusion.

THE SACRAMENTO BEE

Local, Radio, Television And Superior California News
SACRAMENTO, CALIFORNIA, Tuesday, July 1, 1969 Page B1

ONCE UPON A TIME Dry Creek formed the boundary between Sacramento and San Joaquin Counties.

But Dry Creek over the years has changed its course and Sacramento County officials about 10 years ago decided it might be a good idea to establish the proper boundary.

Thomas Campbell, county public works director, got San Joaquin County to go along with the idea of making a new survey.

Numerous switches in the boundaries were made. The largest single change resulted in about 100 acres thought to be in Sacramento County going to San Joaquin. The largest single switch from San Joaquin to Sacramento was 38.8 acres.

When all the changes were made the net gain was in favor of Sacramento County—7.3 acres.

EDUCATIONAL

According to Prof. Edward F. Kulhan, our delegate to the 1969 National Council of Land Surveyors, California has as good or better land surveying education than many other states. However, that falls a little short of "poor". Some research has been conducted with respect to surveying education in California colleges and the courses taught, although not "mickey mouse" are very basic and elementary.

There is a rumor that Humboldt State College is dropping its surveying courses. A Mr. Dan L. Reed, at the College of the Redwoods at Eureka, reportedly is working toward the goal of installing a four year curriculum at that college. Your editor has written to him but as of now has not received an answer. Closer to home, at Sacramento City College, an attempt is being made to organize a half dozen or so surveying courses listed there but for which no teachers are available, with the thought of getting started by spring semester. Member Merwin F. Rose, a licensed Geologist and Geology teacher is tentatively organizing the courses and is seeking people to help with the extended day, or whatever, teaching assignments.

Member Wayne Hauge is checking out the courses at Sierra college where the situation is that the president of the college is a licensed land surveyor, Harold Weaver. Member Homer Banks, Jr. is checking on what is available at American River Jr. College. So you see, some progress may be in the making. Thing for sure is, Land Surveyors are needed to teach the courses.

LEGISLATIVE

The legislative efforts of your association perhaps yielded a far greater benefit per dollars and hours expended than did the efforts of the so-called "massive opposition". While the effort of the association was drawing attention to a very serious problem, the efforts of the so-called opposition were merely expressing dissatisfaction and unhappiness.

If the only purpose of attempting legislation was the drawing of attention to a problem then it could be said that using the legislature as a sounding board is questionable. However, the intent of 1969 land surveyor legislation was to both call attention to the problem and attempt to gain statutory relief.

As has been said this is a continuing activity. Research is being expanded, new avenues of communication are being sought out and the most comprehensive explanation of the problem and its possible solutions are being pursued. It takes time to heal an ulcer that took thirty years to grow and the same principle is involved here. Your legislative committee had to act and act fast. There just wasn't enough time to get around to all the people involved to explain and negotiate.

Speaking of negotiating, there is some talk about the fact that we must compromise with them, whoever they are. No more compromising should be done. The amendments which were formally presented at the time the bill was heard by Ways and Means and which have never been actually put in the bill, will be in the bill when it is printed in January. That will be the 1970 bill.

PROFESSIONAL CODE

It shall be considered professional and consistent with honorable and dignified professional conduct for any member of the California Land Surveyors Association:

1. To devote effort and support programs to raise the professional, ethical and social status of Land Surveying.
2. To maintain a campaign for public recognition of professional contribution to the ethical, economical and social well-being of citizens of California and of the United States.
3. To accept and maintain standards of professional conduct of the highest order to win the respect and admiration of all citizens.
4. To protect the profession of Land Surveying and the public against the unqualified.
5. To promote an effective program of exchange, communication and cooperation amongst it's professional members.
6. To maintain a constant effort of understanding between professionals in government service and private consulting, recognizing the common aims and philosophies and mutual respect of the professional society.
7. To promote and stimulate leadership in public service on a community, state and national level.
8. To promote and maintain an effective and continuous program of expanding our knowledge of social and technical advances.
9. To protect the professional reputation, prospects and practice of another profession with the same vigor and determination as he would his own.
10. To manage his professional ethics with the courage to uphold his integrity over all other considerations.

11. To publish thoughtful and subdued public announcements free from ostentatious complimentary or laudatory implications. Professional cards, brochures, posted projects, press releases of worthy news items and project participation notices are acceptable forms of public announcements.

The above professional code was adopted by the Board of Directors October 19th, 1968 at Ventura, California as the Official Code of Ethics of the California Land Surveyors Association.

USE OF THE NEWSLETTER

This is your newsletter. Please use it for announcements, inquiries, personal news, committee or chapter news, surveying as well as other items of interest. A short summary of committee or chapter activities at all levels is particularly requested. Suggestions for the improvement of the publication and all contributions will be appreciated.

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The California Surveyor

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