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VOLUME 6 NUMBER 3 SUMMER 1979

Indiana Society of Professional Land Surveyors, Inc.

Affiliated with the American Congress on Surveying and Mapping

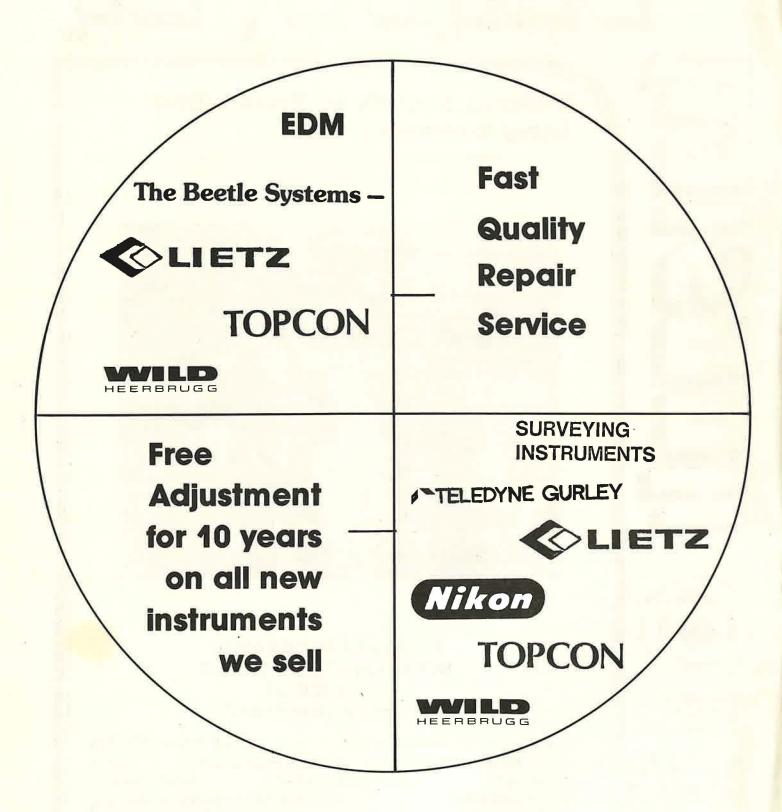


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HOOSIER SURVEYOR

VOLUME 6, NUMBER 3, SUMMER 1979

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COVER: Vincennes University is offer-The Hoosier Surveyor is published quarterly by the ing a two-year surveying technology program and is filling a real need. Arthur Haase, right, associate professor of surveying technology, instructs a fresh-man class on a field topo problem using

EDITOR'S NOTE: Deadlines for copy for various planned issues of the HOOSIER SURVEYOR are as follows: Winter issue – January 31 Spring issue – April 30

Summer issue - July 31 Fall issue – October 31
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Indiana Society of Professional Land Surveyors, to inform land surveyors and related professions government officials, educational institution libraries, contractors, suppliers, and associated businesses and industries about land surveying

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Kenneth S. Curtis

Gary Kent

THE PRESIDENT'S PAGE

PRESIDENT'S MESSAGE

By: Orwic Johnson

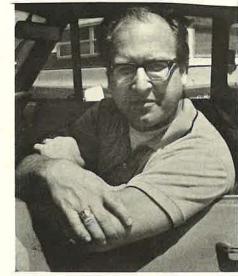
STANDARDS; Webster offers many definitions for the word "standard". Among them are "substantially uniform and well established by usage in the speech and writing of the educated and widely recognized as acceptable". Do your surveys conform to any standard? Could you call upon me to testify in court, as a practicing land surveyor and elected president of the state society of land surveyors, that I found your work to be in accordance with well-established standards? I would be hesitant to so testify.

I know what local practices are. I don't know what they are in Indianapolis, South Bend, or English, I know what "Volume I Standards of Practice for the ISPLS" published in 1965 says and with modern EDM. I find that a recommended closure of one part in 2500 is ridiculous.

In July, copies of proposed new standards were sent to all members of this society. On August 10 approximately 30 members spent four hours tearing them apart. Lets hear from the rest of you. If we are to be true professionals, we must adopt new standards that are consistant with current equipment and methods at our next annual meeting. Lets hear from you!

As a help in developing new standards and to give others an idea of what different surveyors do in different parts of the state, a plat competition is scheduled for the next annual convention. Get ready to enter your best 1979 plat now and show your competition what they are up against. We must be technically accurate, but good presentation is also needed.

On August 17, headquarters moved to new interim offices at 3675 North Post Road, Indianapolis 46226. Peggy Archer is on call at (317) 899-3685 Monday, Wednesday, and Friday and works for us only. Lets keep her busy.



Orwic Johnson President



Peggy Archer is back as a secretary in ISPLS' new headquarters. Office is open only on Monday-Wednesday-Friday.



ISPLS new headquarters is in the Schneider Engineering Building at 3675 North Post Road in Northeastern

IMPORTANT DATES TO REMEMBER

September 17-21,1979.

Fall Convention of American Congress on Surveying and Mapping, Sioux Falls, South Dakota.

November 4-8, 1979

Fourth International Symposium on Computer Assisted Cartography, AUTO CARTO IV, Sheraton Inn, Reston, Virginia.

January 31 - Febuary 2, 1980

1980 Annual Convention of Indiana Society of Professional Land Surveyors, Holiday Inn-North (I-465 and US 421) Indianapolis.

March 10-14, 1980

Annual Convention of American Congress on Surveying and Mapp. ing, St. Louis, Missouri.

THE LEDGER SHEET

Albert McConahay, Secretary-Treasurer, ISPLS

In an attempt to keep the membership informed as to the business conducted by the Board of Directors, I have isted a resume of each meeting held thus far this year. In reading the resume, you will note that two items of business occupied a majority of the Board's attention thus far this year. — that of the headquarters situation and sunset legislation. As you probably know by now, the Board of Directors voted to move the offices out of ISPE offices to our own place at 3675 North Post Road in Indianapolis. This was done primarily in order that we may control our own destiny, so to speak. In reading the resume of the meetings be reminded that these are just the highlights of what was discussed in these meetings.

I am also going to take this opportunity to advise you of the progress of the 1980 convention scheduled for January 31, Feburary 1, 2, 1980 to be held at the Holiday Inn-North in Indianapolis, The overall theme for the convention this year will be "1980 threshhold of the 21st Century." We will try to present our idea of what surveying may be in the 21st century. Remember, keep the dates open, January 31, Feburary 1 and 2.

I want to apologize to anyone who received a second dues notice that had already paid their dues this year. Needless to say we have had a considerable problem in the first six months of this year with the filing and posting of the day to day business. Hopefully this problem has been taken care of.

If I, or any member of the Board of Directors, can be of service to any member, please contact us at our new headquarters.

2/16/79 — 11 Board members in attendance — Election of Officers — President - Orwic Johnson, President-Elect Charles Budnick, Vice-President - David Wolf, Secretary-Treasurer - Albert McConahay

2/17/79— 9 Board members in attendance — Headquarters Committee appointed — Central Indiana Chapter invited ISPLS to hold 1980 convention in Indianapolis — New Board members updated on old business.

3/2/79 — 10 Board members in attendance — Committee reports given at annual business meeting are to be available to the membership if requested — Committee appointed to review mortgage inspection situation — Allen C. Sterling, Executive Director, Indiana Society of Professional Engineers, presented a 7 point expansion of services plan — Sunset legislation questioner from State Board of Registration answered — Accounting firm of Walker & Weber retained to advise and assist the Board — Board accepts invitation of CIC to hold 1980 Convention in Central Indiana area — 46 applications read and approved.

3/30/70 — 8 Board Members in attendance — 1980 convention to be held at Holiday Inn, North, at I-465 and U.S. 421 in Indianapolis January 31, February 1 and 2 — Orwic Johnson reported on a recent visit to the campus of Vincennes University to observe the second year surveying class — Matter of person "Plan Stamping" referred to the ethics committee — Sunset legislation discussed — Headquarters Committee report presented as a result outside secretarial help will be sought — Report on ACSM meeting in Washington, D.C.

5/11/79 — 9 board Members in attendance — Headquarters Committee gives brief report — Mr. Edward Good of ISPE addressed the Board concerning the ISPLS-ISPE relationship — Workshop to be held in Kokomo area with General membership meeting to discuss the proposed standards — Scholarship committee recommends Garry Brown to receive \$1,000 Scholarship — 2 applications read and approved.

7/13/79 — 8 Board Members in attendance — Board of Directors vote to move headquarters offices to 3675 North Post Road, Indianapolis — Legislative Committee report presented — Meet with Indiana State Board of Registration for Professional Engineers and Land Surveyors to discuss mutual problems and goals. Main topic of discussion was Sunset Legislation. New roster to be compiled — Presentation to be made to ACSM to hold one of it's future conventions in Indianapolis — 2 applications read and approved.

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NEWSNOTES

Mr. Herman A. Moench. Vice President of Rose-Hulman Institute of Technology, Terre Haute, and long-time member of the Indiana State Registration board, received the Distinguished Service Certificate with Special Commendation from the National Council of Engineering Examiners at their 58th Annual Meeting in Norfolk, Virginia, August 7, 1979. Congratulations! It was well deserved!

Roger Woodfill, Lawrenceburg, immediate pastpresident of ISPLS, has accepted the position of Chief, Surveying and Mapping, Division of Water, Indiana Department of Natural Resources, Indianapolis, effective September 1, 1979.

ISPLS CHAPTER ACTIVITIES

ST. JOSEPH VALLEY CHAPTER (centered at South Bend and Elkhart)

The 1979 officers of the Chapter are:

President: Ed Voss Vice President: Bernie Feeney Secretary-Treasurer: John McNamara

Meetings are held the last Wednesday of the months of January, March, May, July, September and November. The July meeting usually being a cookout with wives invited. There are 31 dues paying members with about 20 or 25 in attendance at the meetings.

One hundred foot standard length monuments have been placed in the floor of the County-City Building in South Bend. Most of the work of installing them was done by Lang-Feeney and Associates of South Bend.

ACSM applications were handed out and everyone was strongly urged to join. The Chapter is working on putting together a review class for the ISPLS exam. The Chapter is also working on passage of a Chapter Constitution.

NORTHWEST INDIANA CHAPTER (Porter-Lake-LaPorte-Newton-Jasper and Starke Counties)

The 1979 officers of the Chapter are:

President: David L. Pilz President Elect: Donald Shapiro Secy/Treas.:James A. Gorski

Directors: Wm. T. Davies, Chas. Hendricks, Emil P. Beeg, Ordell L. Gertsmeier

The Northwest Chapter has had a very active year to date, participating in discussion/work sessions involving fees, mechanics liens, small claims court, and "Madson's Methods". The chapter also spearheaded the effort to properly recognize William Morthland, "public servant." In the near future are sessions on nuclear power, constitutional revisions, and surveying standards.

NORTHEAST INDIANA CHAPTER (Centered at Fort Wayne)

1979 officers of the Chapter are:

President: Carl A. Hofer Vice-President: Joseph B. Stoody, Jr. Secretary-Treasurer: John J. Madden

Past meetings have included: January 31, 1979 - Paramount Grill, Fort Wayne, 38 in attendance to discuss Society business and the matter of fees, "The Surveyor's Position, the Client's Position, and the Attorney's and Realtor's Position".

June 5, 1979 - Pine Valley Country Club, Fort Wayne, 17 golfers and 21 for dinner with business meeting and discussion of "Legal Surveys and what we should watch out for".

CENTRAL INDIANA CHAPTER (composed of the following counties: Marion, Hamilton, Hancock, Hendricks, Shelby, Johnson, Boone, and Morgan)

The 1978 officers of the Chapter were:

President: Albert McConahay Vice President: John Horner Secretary: H. Lee Jarvis Treasurer: Marland Myers

Directors: Brad DeReamer, Allan H. Weihe, Dennis L. Grump

The Chapter had a resurgence of activity in 1978. The Chapter initiated a scholarship fund, sponsored a review course for the land surveyor's exam in cooperation with IUPUI which was taught by David Whalestrom and very well received by the students.

The Chapter also toured the Regional Air Traffic Control Center. The social event of the year was a night out at the Black Curtain Dinner - Theatre in early December.

The 1979 officers of the Chapter are:

President: John Horner Vice-President: H. Lee Jarvis Secretary: James E. Campbell Treasurer: Marland Myers

Directors: Allan H. Weihe, Dennis L. Grump, Albert McConahay

The Chapter hosted the ISPLS Convention held at the Airport Hilton. A large turnout helped the festive mood. Did you notice that the Governor of the State of Indiana, the President of ACSM, and the entire State Board of Registration were in attendance at the Thursday luncheon? Too bad the convention chairman was unable to find a seat!

The Chapter awarded it's first scholarship to Garry Brown, a student in land surveying at Purdue University and a member of CIC. Election of officers for 1980 will be held in November.

TECUMSEH CHAPTER (centered at Lafayette)

The 1979 officers of the Chapter are: President: Paul Couts (resigned) Vice-President: Robert Martin Secretary-Treasurer: Pat Cunningham

(No activity report received)

PHOTO HIGHLIGHTS OF BEN BUCKNER SEMINAR

August 10-11, 1979 Kings Crown Inn Kokomo, Indiana



Dr. Ben Buckner, registered surveyor, engineer, and planner, conducted the two-day seminar on "Understanding Surveying Measurement".





Thirty-eight surveyors took advantage of the opportunity to attend the Buckner worksnop. He is Associate Prefessor at Ohio State University, chairman of the coordinating committee which oversees the B.S. In Surveying degree program, and currently is writing a book on Surveying Measurements.





After taking a number of readings with theodolites having optical micrometer coincidence knobs, the reading and pointing errors were analysed with respect to precision. Topics discusseed included the nature of measurement, systematic and random errors, precission, mistakes, specifications, standards, and care of instruments.

New from Hewlett-Packard – Survey System One – boosts productivity from field to finish.

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component is the **HP 9871A Page Printer**, which makes working plots in minutes and provides convenient pagewidth printouts.

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A senior class in Surveying Technology work on a traversing problem using sophisticated equipment available for instruction.

VINCENNES UNIVERSITY OFFERS TWO-YEAR SURVEYING TECHNOLOGY PROGRAM

"Graduates from Vincennes University's program of Surveying Technology not only have the expertise they need in field procedure but also possess the theoretical skills to take positions of responsibility with industry," explained Arthur Haase, associate professor of Surveying Technology at Indiana's only public, comprehensive junior college.

Until this year the program which annually graduates 12 students, has been known as Civil Engineering Technology. The Indiana Society of Professional Land Surveyors suggested that the name be changed, and after careful consideration by officials, it was decided that Surveying Technology did, indeed, more clearly indicate the intensive training these graduates complete.

A typical first year program of study is as follows: Surveying Fundamentals, Surveying Computations and Construction Techniques, Mapping and Drafting, Speech, College Algebra, Trigonometry and Physical Education. Three electives totaling nine credit hours are also required. Two in Social Science might include Community Development and Personal Financial Management which are often suggested by advisers. Another elective which is strongly advised is Abstracting so that students can become proficient in documenting and researching property and learn proper court house procedure.

The second year includes Cadastral Surveying, Structures and Testing, Computer Graphics, General Physics, Physical Education, Route Surveying and Highway Layout, Construction Estimating, Real Property Law and Technical Writing. Because many graduates join mining companies, Field Geology is suggested as an elective. Only first order work is acceptable for second year.

"Students know when they enter the classes that exams must be 100 per cent correct," said Haase, "for no partial credit is given. There can be no mistakes in the field. That, no doubt, partially accounts for the fact that each graduate averages three job offers, and he -- or she -- need only decide whether he wants to relocate or stay near his hometown."

Graduates are now located in Indiana, Illinois, Ohio, New Mexico, Texas, Wyoming, Colorado, Washington, Alabama, Arkansas and Kentucky, and the starting salary averages \$13,000 or more annually.

Graduates can be found in the coal industry, with private surveying and engineering companies, and in the construction industry. Although most choose developmental drilling and surface operations with the coal companies, one graduate chose to enter the mines for underground surveying.

Some graduates continue their education, usually going into engineering or an allied field. One is currently studying Construction Technology at Purdue University, while others are attending Tri-State College at Angola.

"That is one of our selling points," said George Ridgway, chairman of the Drafting Technology Department, "for graduates can go to work immediately following graduation, or they may choose to continue their education. Because of the broad general education background, most have little difficulty transferring into an allied field, yet they have a marketable skill which enables them to work while they are completing their education."

"Our students are taught with very sophisticated equipment," recounted Haase. "In their first year they use transits, levels and tapes. In their second year they use theodolites and E.D.M.: K&E One-Second, Wild T1 and T2, Zeiss TH 2, as well as several 20-second theodolites. E.D.M. systems include the Microranger, DI-3S & Auto Ranger. The latest acquisition is an Auto Ranger coupled with the Total Station Vectron System.

"We are the only institution of higher education in the country which offers two-year programs in Laser Technology, Abstracting and Surveying Technology so that students can benefit from all three programs," he concluded.

Each student enrolls in a Computer Graphics course, and, before he can complete his work, he must write a surveying program. Later the student will use his program to compute field data.

The required course in Structures and Testing covers the basic statics and strength of materials. Construction Estimating requires the students to design a dam from a topo map to final construction drawings. In addition, price estimates are made with emphasis on quantity and quality.

The philosophy of the program is to teach pride in individual accomplishment, and each student must know his work is right. The following is a brief outline of the required surveying courses:

SURVEYING I (Surveying Fundamentals)

Covers the care and appreciation of all surveying equipment; chaining procedures; level work in B.M. circuits; establishing control, shooting elevation, azimuth angles and stadia distance in topography; layout and shooting x-sections; transit work in turning simple angles; converting angles to bearings and construction staking and stationing. In addition, error corrections are taught in temperature, curvature and refraction, mechanical errors in levels (2-Peg Test) and double centering tests of transits.

SURVEYING II (Surveying Computations and Construction Techniques)

Covers the entire system of construction staking including horizontal and vertical curves, piping surveying, inaccessible horizontal and vertical points, and slope staking. The primary emphasis is to provide a learning experience in the practical form of constuction procedures. The students' knowledge of curves is superior in both theory and practice. In addition, students are tought hands-on use of E.D.M. and one-second theodolite by self-paced instruction. In addition, mechanical adjustments for level and transit error are covered.

SURVEYING III (Cadastral Surveying)

Covers U.S. public land surveys, other systems, legal records and documents, surveyors' rights and responsibilities, surveying ethics, and state plane coordinate system. In addition, traverse closure with error adjustments are taught. (Note: Each student will be given approximately 5 property surveys to research and field stake with closure figured on each.)

SURVEYING IV (Route Surveying)

A continuance of Surveying II. Route Surveying covers a wide variety of road curves including unsymmetrical vertical curves; traverse lines both open and closed; radial design and staking of subdivisions; inversing; road design; traffic and flow patterns. This class is taught as a Senior Project with all work being done with theodolite and E.D.M. systems. In one problem, the students are expected to start from a point (approximately 5 miles from campus), establish a true North Line, run an open traverse to a point and compute inline bearing and distance. In addition, side shot or radial property surveying by coordinate system is taught and practiced in the field. It should be noted that in these two problems, the student uses the computer, not with "canned" programs but with selfdeveloped programs, for his solutions. (These



"programs" are developed by the student in the Computer Graphics class taken the previous semester.)

Included in the curriculum are Mapping and Drafting, Structures and Testing, Computer Graphics and Construction Estimating. These courses provide the student with the ability to understand and draw from notes engineering drawings, the testing of materials found primarily in highway and building construction and an understanding of quality estimating from x-sections plus design work.

General Education courses such as mathematics, social science, English and the sciences are also required.

Haase is responsible for the instruction of Surveying I, II and IV and Construction Estimating.

Professor George Ridgway instructs the classes in Structures and Testing, Surveying III and Mapping and Drawing.

Jeff Elliott, instructor in Drafting Technology, and like Haase and Ridgway an alumnus of Vincennes University, is the computer specialist. It is his task to teach Computer Graphics.

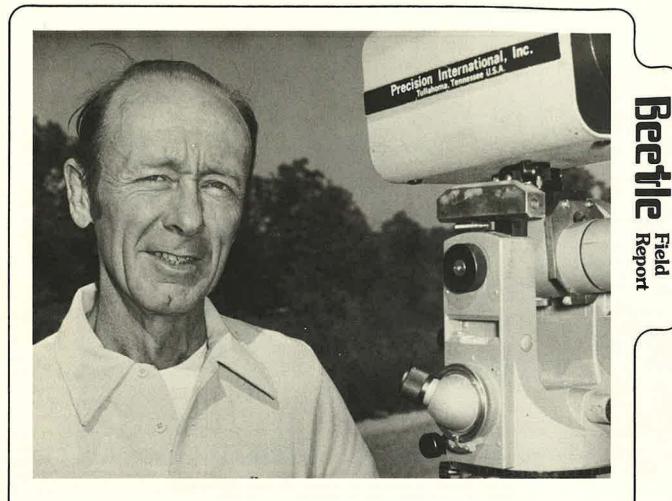
"We have found that industry had a tendency, in the past, to think our graduates were not academically qualified to assume real responsibility with the company, but that trend is being reversed because they are competent; they are well-trained in field operation and can certainly be trained for the office work which accompanies those jobs. We definitely feel that our purpose is to help students make a choice in their life goals and to provide trained, competent surveyors for the industry," concluded Haase.



Female students have excellent opportunities for advancement in Surveying Technology. This year's freshman class has 25 men and two women. Other women have completed the program throughout the years, although the number who enroll is still small.



While instructors and class members watch, a student in Structures and Testing Class tests a wood and paper space frame which was made to fulfill requirements for a class project.



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INDIANA SURVEYORS PARTICIPATE IN DEDICATION OF NEW INITIAL POINT MEMORIAL AT PAOLI



Three of those who spoke at the dedication were, left to right, State Congressman Deem; Charles Condra, New Albany; an Nelson Prail, Bedford.



The principal speaker at the Dedication Ceremony, September 10, 1979, was Roger Woodfill, Lawrenceburg, president of the Indiana Society of Professional Land Surveyors. Members donated over \$1100 for the memorial.



By consent of the Orange County Board of Commissioners, the Indiana Initial Point Memorial was reestablished on the southwest quadrant of the Orange County court House Jawn In Paoli.



The information plaques are reproduced on the pages that follow.



Four land surveyors that have been dedicated supporters of the Memorial are, left to right, Garner Willey, Charlestown; Walter Strahl, New Albany; Nelson Prail, Bedford; and Charles Condra, New Albany, and vice-president of Indiana Historical

A BRIEF HISTORY CONCERNING THE LOCATING OF THE INITIAL POINT.

THE INITIAL POINT AT THE INTERSECTION OF THE BASE LINE WITH THE SECOND PRINCIPAL MERIDIAN FROM WHICH THE MAJOR PORTION OF THE PUBLIC LANDS IN INDIANA ARE DESCRIBED AND HAVE THEIR BEGINNING IS LOCATED SOUTH 30 04 50. WEST 359 18 FFET FROM THIS PLAQUE AND IS IDENTIFIED BY A SMALL LIMESTONE MARKED ON TOP S31. THIS STONE WAS SET DURING THE LATTER PART OF THE 19TH CENTURY ABOUT 1879 TO 1886. TO REPLACE A WOOD POST AND TO PERPETUATE THE INITIAL POINT ESTABLISHED ON SEPTEMBER 1. 1803 BY U. S. DEPUTY SURVEYOR EBENEZER BUCKINGHAM, JR.

THE BASE LINE WAS ESTABLISHED BY E BUCKINGHAM, JR. BY RUNNING A LINE DUE EAST FROM A POINT ON THE SOUTHERLY LINE AT OR NEAR THE WESTERLY CORNER OF THE VINCENNES TRACT AS SURVEYED BY THOMAS FREEMAN IN 1803. THE SECOND PRINCIPAL MERIDIAN WAS ESTABLISHED BY MR. BUCKINGHAM 12 MILES EAST OF THE SOUTHERLY CORNER OF MR. FREEMAN'S SURVEY OF THE VINCENNES TRACT. THE INTERSECTION OF THIS BECOND PRINCIPAL MERIDIAN WAS ESTABLISHED IAN FORMS THE INITIAL POINT. THE SECOND PRINCIPAL MERIDIAN WAS ESTABLISHED TO BE IN THE GEOGRAPHIC CENTER OF THE STATE OF INDIANA. THERE BEING 15 RANGES OF TOWNSHIPS WEST TO THAT PART OF THE FIRST PRINCIPAL MERIDIAN NORTH OF THE GREENVILLE TREATY OF 1795.

THE FIRST PRINCIPAL MERIDIAN MARKS THE BOUNDARY LINE BETWEEN THE STATES OF OHIO AND INDIANA AND ITS LONGITUDE IS 84"49 13. WEST OF GREENWICH, ENGLAND AND WAS ESTABLISHED BY ISRAEL LUDLOW IN 1795. THE LONGITUDE OF THE SECOND PRINCIPAL MERIDIAN IS 86 27 20. WEST AND THE EXTREME WEST BOUNDARY OF THE STATE OF INDIANA IS LONGITUDE 83 05 31. WEST. THE LATITUDE OF THE BASE LINE IS 38 28 10. NORTH OF THE EQUATOR.

A BRIEF HISTORY OF THE INDIANA HISTORICAL LANDMARKS INC.

THE INDIANA HISTORICAL LANDMARKS INC. CAME INTO EXISTENCE PRIMARILY IN ORDER TO BRING TO THE ATTENTION OF THE CITIZENS OF INDIANA THE IMPORTANCE OF THE RECTANGULAR SYSTEM OF THE U.S. PUBLIC LAND SURVEYS WHICH HAD ITS BIRTH IN THE STATES OF OHIO AND INDIANA IN THE LATE YEARS OF THE EIGHTEENTH CENTURY. AND ALSO TO MEMORIALIZE OUR FOUNDING FOREFATHERS FOR THEIR WISDOM AND FORESIGHT. THE INDIANA INDIANS THEIR TRIBES, THE U.S. DEPUTY LAND SURVEYORS WHO LAID OUT THE SECTIONS. TOWNSHIPS AND RANGES IN INDIANA, THE EARLY PROMINENT LAND SURVEYORS OF EACH INDIANA COUNTY AND TO ALL THOSE WHO HAVE CONTRIBUTED SO GENEROUSLY, FUNDS AND OR SERVICES TO MAKE THIS PROJECT POSSIBLE.

FIVE MEMBERS FROM EACH OF THE FOLLOWING ORGANIZATIONS. THE INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS, THE INDIANA COUNTY SURVEYORS ASSOCIATION AND AN INSPIRED GROUP OF CITIZENS AT PAOLI INDIANA, KNOWN AS THE ORANGE COUNTY PIVOT POINT ASSOCIATION, FIRST MET AT PAOLI ON JANUARY 12, 1965 AND THEREAFTER FORMED THE INDIANA HISTORICAL LAND MARKS WHICH WAS INCORPORATED ON MARCH 17, 1965

A BOUNDARY LINE SURVEY WAS MADE OF THE 18 ACRE TRACT. THE LAND PURCHASED AND AN ACCESS ROAD CONSTRUCTED BY CONTRIBUTING ASSISTANCE.

ON JULY 22, 1968 A CO OPERATIVE AGREEMENT WAS ENTERED INTO WITH THE U.S. FOREST SERVICE TO ASSIST IN THE CONTINUATION OF THE IMPROVEMENTS, CONSTRUCT A MINIATURE STATE OF INDIANA AROUND THE INITIAL POINT AND TO PROVIDE PROPER MAINTENANCE AND SUPERVISION OF THE MEMORIAL PROJECT SHORTLY THEREAFTER TITLE TO THE SITE WAS CONVEYED TO THE U.S. FOREST SERVICE

FUNDS FOR THE PURCHASE OF THE SITE. THE EARLY CONSTRUCTION OF THE ACCESS ROAD, THE ERECTION AND CASTING OF THE PLAQUES, ETC. WERE OBTAINED FROM DONORS WHOSE NAMES OR NAMES SELECTED BY THEM AS A MEMORIAL APPEAR ON THE TWO OUTER BANDS OF THE MEMORIAL PLAQUE.

BY THE GRACE OF GOD

DEDICATED OCTOBER 14 1973

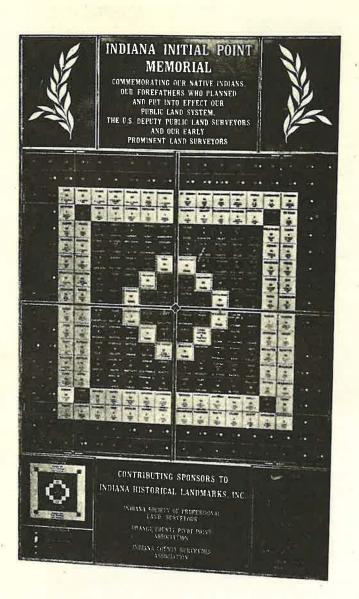
THIS MEMORIAL MARKER CONTAINS ZINC REPRODUCTIONS OF THE ORIGINAL COPPER MEMORIAL PLAQUES PLACED ON A LARGE LIMESTONE MARKER AT THE INITIAL "PIVOT" POINT PARK LOCATED APPROXIMATELY SOUTH FIVE DEGREES EAST, FIVE AND THREE-QUARTER MILES FROM THIS LOCATION, AND ABOUT ONE HALF MILE WEST OF INDIANA STATE HIGHWAY No. 37, WHERE THE ORIGINAL COPPER PLAQUES WERE DEDICATED ON OCTOBER 14TH, 1973 AND THEN DESECRATED AND COMPLETELY DESTROYED BY VANDALS SOMETIME DURING THE SUMMER OF 1977.

TRUSTING THAT FUTURE GENERATIONS WILL OVERCOME VANDALISM AND WANTON DESTRUCTION, SO THAT A REPRODUCTION OF THIS PLAQUE MAY BE PLACED ON THE MEMORIAL STONE AT THE INITIAL "PIVOT" POINT PARK WHERE IT RIGHTFULLY BELONGS.

THIS MEMORIAL IS PLACED AT THIS LOCATION BY CONSENT OF THE PRESENT MEMBERS OF THE ORANGE COUNTY, BOARD OF COMMISSIONERS BY THEIR ACTION ON NO-VEMBER 7, 1977 AS RECORDED IN THE ORANGE COUNTY COMMISSIONERS RECORD BOOK No. 26, PAGE 51.

DEDICATED THIS 10TH DAY OF SEPTEMBER, 1978.

ERECTED BY INDIANA HISTORICAL LANDMARKS, INC.

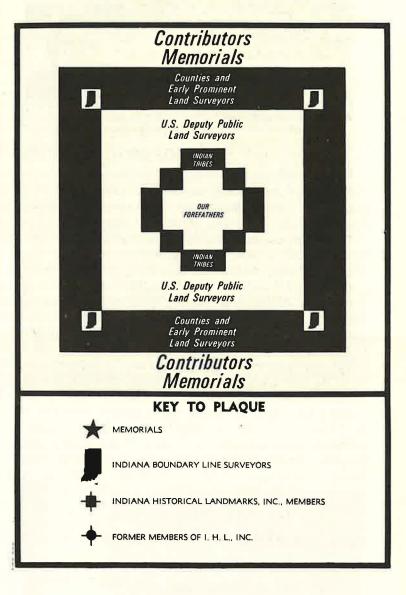


DEDICATION CEREMONY

INDIANA INITIAL 'PIVOT' POINT MEMORIAL

REESTABLISHED ON THE SOUTHWEST QUADRANT OF THE ORANGE COUNTY COURT HOUSE LAWN BY CONSENT OF THE ORANGE COUNTY BOARD OF COMMISSIONERS.

FESSIONAL LAND SURVEYORS



VOCABULARY QUIZ

Can you define the word ZYGOCEPHALUM as given in a real estate dictionary?

(see answer on page 21)

The People of CARBEN Surveying Reprints





Ben Buckn

OUT-OF-PRINT SURVEYING BOOKS AGAIN AVAILABLE

The surveying and mapping profession is indebted to two of their distinguished land surveyor colleagues for reprinting several out-of-print surveying books and manuals. Some of these reprints are more for those interested in surveying history, but several are a must for every land surveyor's bookshelf. It has often been said that the land surveyor must be involved in history as he attempts to "follow the original surveyor's footsteps" in his retracements. He must be familiar with the instructions under which the original survey was made. A knowledge of surveying instruments used in previous years helps in evaluating and interpreting early survey measurement and plats.

Carlisle Madson of Hopkins, Minnesota and Ben Buckner of Columbus, Ohio have joined forces in creating CARBEN Surveying Reprints and, as of this date, have nine reprints available for purchase. Postage and handling of \$1.00 is charged on orders of 1-3 books. No charges for orders of 4 or more books. Books should be ordered from CARBEN Surveying Reprints, 274 Winthrop Road, Columbus, Ohio 43214. Most of the books concentrate on the Public Land Survey System. This system was the most important surveying problem for land surveyors in most of the U.S. in the mid-late nineteenth century. As most know, the first government manual for original layout of the system wasn't published until 1855. The first circular for retracements was printed by the government in 1883. As with most government publications, these were apparently incomplete or, at least not fully adequate to explain the surveying problems so that the private surveyors and county surveyors could work with the system. So, some private surveyors, former GLO clerks, and others occasionally wrote their own manuals and handbooks. Some of the most significant of these, in chronological order, were by Burt (1854), Hawes (1868), Clevenger (1874), Dorr (1886), Hodgman (1891). Each of these was prepared independently and for essentially the same reason -- to fill a need for additional instructions and principles for understanding some facet of surveying public lands. The books can be considered as a "family" of references, each prepared from a slightly different perspective. They are valuable as historical references and more particularly as manuals and handbooks for retracement surveyors of today.

CARBEN SURVEYING REPRINTS

BOUNDARIES AND LANDMARKS by A.C. Mulford

\$7.50

This is a practical manual for those who hunt landmarks to locate boundaries. Mulford describes the problems and confusion caused by poorly written deed descriptions and suggests ways to solve resurvey problems. The book explains how to recognize boundary evidence and how fences, stakes, stones, and ditches were used in land descriptions. This is a significant retracement book that will help unlock the keys to the past -- an essential to determine the intent of parties expressed in the land description. The book also explains unfamiliar terms found in deed descriptions in the eastern United States. Mulford does not tell how to measure lines -- instead he furnishes suggestions to help find the line to be measured. Partial contents: Landmarks -- stakes, stones; relations with lawyers; road layout and re-running; houselots; relative legal value of boundary evidence; sources of error in descriptions. 90 pages, Softcover, illustrations 1912 edition.

LAND SURVEYING by Francis Hodgman

\$14.00

Hodgman dedicated this book by saying "Let things that can be done be learned by doing them." His book makes "doing" easier by telling in simple language how things can be done. It provides the modern surveyor with 80 rules for interpreting conflicts in land descriptions; 94 boundary rules; 31 public land survey rules; 45 water boundary rules; 8 rules on adverse possession; 21 answers about public land survey problems encountered by private surveyors. It also includes "The Judicial Functions of Surveyors" by Cooley -- probably the most famous paper on the subject -- and excerpts from the author's paper on recovering U.S. Survey corner monuments. It is one of the few books that distinguishes between original and first surveys and contains substantial extracts from the hard-to-find 1902 Manual of Instructions for survey of the Public Lands. Numerous references are made to legal boundary decisions both on and outside the public lands. Originally printed in 1913. Hardbound, illustrated; 472 pages, 1913 editions.

PUBLIC LAND SURVEYS: HISTORY, INSTRUCTIONS, METHODS by Lowell O. Stewart

\$13.0

As essential book for any person interested in public land surveys. Stewart covers the beginning of the system, including the discussion leading up to the first legislation, initial surveys, related problems, and the workday life of the early surveyor and their confrontations with Indians and the elements. Other contents are field techniques, some original instructions to the surveyors, and the contract system. The book provides historical and technical background necessary to understand the public land surveys. The story is told from the unusual perspective of a surveyor in a relaxing and easy to read style that will enable both the general reader and technical reader to understand and enjoy. Bibliography, index, 11 illustrations, 185 pages hardbound, Originally printed in 1935.

MANUAL OF UNITED STATES SURVEYING by J. H. Hawes

\$11.00

This is a "complete textbook of Government Surveying" written for anyone wanting to understand the system, to subdivide sections, restore missing corners, or solve other problems arising from public land surveys. Hawes wrote this "manual" to supplement the 1855 U. S. Manual of Instructions to explain the background of various government rules. SPECIAL FEATURE: copies of GLO letters responding to questions about special problems encountered by surveyors. An appendix covers pre-emption, homestead rulings, military warrants, and other GLO rulings and forms regarding entering, locating, purchasing, and settling public lands. Partial contents are: survey of swamplands; restoration of corners; meandering; field books; marking lines; and corner perpetuation. Hardbound, 27 illustrations, appendix, index, 240 pages, originally printed in 1868; reprinted from an 1882 version.

RESTORATION OF LOST AND OBLITERATED CORNERS AND SUBDIVISION OF SECTIONS

617 00

This handsome hardbound book assembles all seven circulars issued by the U. S. Government to instruct private and County surveyors in restoring lost or obliterated corners and subdivision of sections. The modern retracement surveyor needs to have not only the manual in force at the time the original survey was conducted, but also the instructions in force at the time, about restoring lost and obliterated corners. This compilation is not only useful but rare since some of the editions are extremely difficult to locate. Each version is different. They, in their entirety, are what any retracement surveyor needs to study. Hardbound, 216 pages, illustrations and preface. 1883-1974 circulars.

A KEY TO THE SOLAR COMPASS AND SURVEYORS' COMPANION by William Austin Burt

7 50

This is actually a treatise on public lands, although the title wouldn't suggest it. The focus is on the solar compass, an instrument invented by Burt in 1836 which proved indispensable in original surveys of public lands. It was eventually required on all surveys, replacing the needle compass. Burt was one of the true pioneers of his day, an ingenious inventor, and a man of high standards. He was a U. S. Deputy Surveyor for 20 years. Paperback, 96 pages, 1881 edition.

A TREATISE ON THE METHOD OF GOVERNMENT SURVEYING by Shobol V. Clevenger

\$7.50

Clevenger was also a U.S. Deputy Surveyor. He served in this government position in the Dakotas. The treatise contains practical explanation of field principles and is very concise – actually rather academic in style. Clevenger, as many such versatile individuals so often do, possessed a desire to invent, was ahead of his time in many ways, had an extreme dislike for sham and corruption, and sought to improve and reform whenever he could. It is an interesting fact that in his later years he became internationally known in the fields of psychiatry and neurology. Paperback, 96 pages, 1883 edition.

THE SURVEYOR'S GUIDE AND POCKET TABLE-BOOK by Benjamin F. Dorr

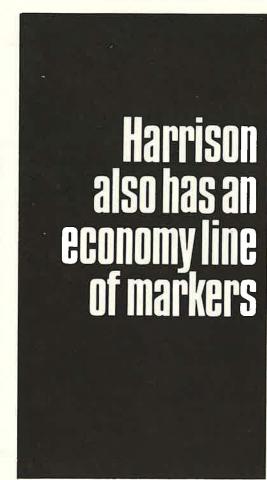
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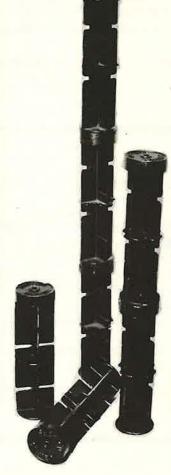
This handbook, which came a little later than the others, seems to emphasize problems in retracement a little more, as experience accumulated in that area. It is informal in style, as one would expect a pocket guide for the field surveyor to be written. Many practical suggestions will take the reader back 100 years in time. Dorr was both a county surveyor and a private practitioner in public lands retracement work. Paperback, 112 pages, 1909 edition.

SURVEYING INSTRUMENTS: THEIR HISTORY by Edmund R. Kiely

\$18.50

This book contains the history of surveying instruments from ancient times through the renaissance. It is probably the only single reference available for the period. Surveyors may be familiar with this book through the sketches and descriptions of instruments borrowed from it by recent surveying authors. Dr. Kiely states in his preface that the original publication was written for both the high school mathematics teacher and the educators of future engineers, particularly civil engineers. We assume that, had the book been prepared a few years later, he might have recognized even more possible interest by teachers of future surveyors, as well as students and practitioners of surveying. This book would serve as a text for a course in surveying history or as a supplementary text for other basic surveying courses, either in surveying degree programs or in programs for the education of civil engineers or surveying technicians. It is particularly appropriate as a reference for instructors and practicing surveyors who wish to gain appreciation for the early development of the profession. Continued use by high school mathematics teachers should benefit them also. Hardbound, 290 pages, originally published in 1947.





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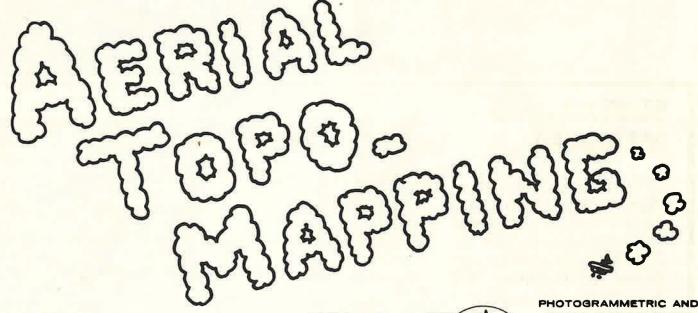
By Roger Woodfill

The Indiana Society of Professional Land Surveyors is Supporting A.C.S.M. Activities.

During our membership drive last winter, I urged I.S.P.L.S. members to join the American Congress on Surveying and Mapping. From an April 12, 1979 A.C.S.M. membership computer print-out, I have determined that Indiana increased membership more than any other state. We were followed by the more populous states of Pennsylvania, 31; California, 28; and New York 28. Several I.S.P.L.S. members also donated \$5.00 each to offset the assessment we had anticipated from A.C.S.M. The five dollar assessment plan did not develop, but the I.S.P.L.S. board of directors recently voted to forward those special donations to the A.C.S.M. Legislative Fund.

Professors Kenneth Curtis and John McEntyre are both on the A.C.S.M. Board of Direction, and Professor McEntyre also serves on the Land Surveys Division Board. I have been appointed to the L.S.D. education committee and to the A.C.S.M. ad hoc committee on accreditation. In August I made a two-day trip to Washington, D.C. in order to meet with several accediting agencies. My mission was to determine the propriety and the cost of A.C.S.M. accrediting various surveying curricula.

Thirdly, at the A.C.S.M. in Sioux Falls, I.S.P.L.S. will be making a presentation inviting the national convention to Indianapolis during the Fall of 1985. Should our presentation be accepted, it will require an extension effort from our membership, but it should boost I.S.P.L.S. membership and enthusiasm enormously. We already received letters of encouragement from Governor Bowen and Indianapolis Mayor Hudnut. We are presently working with the guidance of the Indianapolis Visitors and Convention Bureau and the Indianapolis Convention Center.



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HIGHLIGHTS OF 7TH ANNUAL RECOGNITION DINNER OF PURDUE STUDENT CHAPTER A.C.S.M. - I.S.P.L.S., APRIL 1979



Guest speaker for the evening was Jon Leverenz, Rand McNally Co., Chicago, Illinois, the immediate past president of ACSM. His wife, Janet, accompanied him to Purdue.



Handy Sexton, lett, or Kendaliville, Indiana, receiving the Faculty Award from Prof. Curtis as the Outstanding 1979 Graduating Senior Award.



Two students wno did outstanding work for the Student chapter during the 1978-79 school year were Brenda Schlosser, Auburn, IN, chairman and Steve Kopach, Silver Spring, MD, vice-chairman and program chairman.



Two other outstanding seniors receiving ACSM membership awards were Don McCleary, Clarion, PA, left, and Curtis Cole, State College, PA.



May 1979 graduates attending dinner included, seated left to right, Don McCleary, Greg Kennedy, Brenda Schlosser, Scott Iseminger, Terry Lang; standing, Curtis Cole, Michael Bishop, Tom Orlsich, Charles Dunbar, and Perry Cloyd.



Several seniors will be graduating in December 1979. Attending the dinner were seated, left to right, Ray Buckel, Randy Sexton, Garry Brown; standing, Herschel Manhart, and Randy Brown.



1979-80 school year officers of Purdue Student Chapter, ACSM-ISPLS, are, seated left to right, Scott Beagles, director; Pam Sostarich, treasurer; Mike DeBoy, director; standing, Brian Catlin, vice-chairman; Larry Rosenbalm, director; and Chris Marbach, secretary. The elected president has resigned and a new one will be selected in the Fall.



Garry Brown of Indianapolis, being congratulated by Prof. John McEntyre, was the recipient of both the ISPLS Scholarship (\$1000) and the new Central Indiana Chapter Scholarship (\$500). Picture was taken at a later date.

1979 PURDUE SUMMER SURVEYING FIELD PROJECT IN PERRY COUNTY, INDIANA



Nineteen senior land surveying students attended the course this summer. The staff was composed of teachers Curtis, McEntyre, Dean, Durham, and Burkholder, and surveying equipment technician Parks. Pictured are first row, left to right, Prof. McEntyre, Bob Wilkinson, Shelbyville; Randy Brown, Lafayette; Garry Brown, Indianapolis; Pam Sostarich, Louisville, KY; Second row, Prof. Darrell Dean, WY; Bryan Catlin, Campbellsburg; Larry Rosenbalm, Martinsville; Mark Titus, Middletown, OH; Ray Buckel, Lafayette; Prof. Curtis; Third row, Dave Cooley, Fort Wayne; Randy Byers, Lafayette; Herschel Manhart, Peru; Fourth row, Rodger Durham, NC; Paul Ogren, Elkhart; Doug McDonald, Lafayette; Michael DeBoy, West Lafayette; Daniel DeRolf, Munster; Earl Burkholder, MI & WV; Fifth row, Chris Marbach, South Bend; Garry Welch, Hartlord City; Jay Poe, Huntington; Michael Raimondi, Deerfield, IL; Robert Parks. These students will generally graduate in December 1979 or May 1980.

18

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(Since March 1978)

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| 10.50 | | |

VOCABULARY QUIZ ANSWER

The Real Estate Dictionary, by John Talamo, J.D., Publication No. 510, Second Edition, 1979, Financial Publishing Company, Boston, defines ZYGOCEPHALUM AS "In civil law an inaccurate measure of land. The area of land a yoke of oxen could plow in one day." (We are indebted to Emil Beeg, Valparaiso, for this bit of Knowledge!)

SERVICES AND EFFECTIVENESS CHARACTERIZED ASSOCIATION'S COLLECTION SERVICE

Members of the Indiana Society of Professional Land Surveyors enrolled in the collection service provided by L. C. System, Inc. have recovered thousands of dollars in past-due accounts. In Merrillville, a member recovered \$3,899. In Indianapolis, one member collected \$3,307 and one in Lafayette got back \$2,878. A North Manchester member recovered \$2,452 and one in Elkhart collected \$1,599.

Nationally, the company collected an all-time record of \$28.8 million during 1978. Close to 1,000 associations, including 21 land surveyors associations, all across the country now endorse the service for their members -- and for good reason.

Service is personalized, localized and effective. Collections are guaranteed to return at least eight times the initial cost of the service. At the same time, you, the creditor, retain full control and are the only one who can make adjustments, accept partial payments or even forgive a debt entirely if such course of action seems appropriate.

The company has been in active operation since 1938. During the 1960's growth outstripped existing systems, necessitating adoption of ever more modern methods of doing business. All this culminated in 1975 with construction of a new centralized Information Center in St. Paul, Minnesota. Here, customer service specialists have the latest on-line computer equipment available. Thus, they can handle all customer inquires on a "right now" basis.

Members enrolled in the program can write, or, phone the Information Center direct via toll free hot line. The office is open Monday through Friday. And, if customer service can't handle a problem, they will see to it that a local representative makes a personal call just as soon as possible.

To learn more about how the service can help you, simply contact the Society office.

EMPLOYING A PURDUE LAND SURVEYING GRADUATE?

What should be expected of a four-year land surveying graduate? He is ready to serve his internship--the registration law requires four years under a professional land survyor before he may apply to take the examination to be a professional land surveyor. He is ready to learn with responsible professional supervision and, within a few months, his education, supplemented by experience, will enable him to contribute effectively to a firm or an agency. He can become an effective field leader in a few months. He can gradually assume responsibility in office work, such as for subdivision design, after guidance by a responsible and understanding professional land surveyor.

With the knowledge gained in his four-year professional program and with the increase of competency gained while working <u>under the supervision</u> of a registered land surveyor he will be ready to become a professional land surveyor. The professional educator and practitioner will have the satisfaction of sharing in his development.

BOOKS TELL DEBTORS HOW TO STALL EFFECTIVELY

"Buy this book if you want to discover how to lead a comfortable life on other people's money. . ." is the lead phrase on the flyleaf of a book called, Your Check Is In The Mail. This is just one of many books now counseling debtors on how to counter a businessman's efforts to collect on a bill or make good on a bad check.

The books are all pretty much alike. They start out by helping the debtor rationalize his situation. It soon becomes apparent to the reader that he is a mere reed buffeted by the winds of too much advertising, too easy credit and too much salesmanship. What's more, the businessman who advertises, extends credit and sells his goods or services is, himself, preceived to be a grasping friend who enjoys the same credit advantages in his business that he refuses to extend to his customers. In short, the businessman is a devil, and, everybody knows, "the devil made me do it!"

Then comes the advice. The debtor learns such things as how to use the mail to delay payments; how to rate his creditors according to collection effectiveness; how to make a good check bounce; how to cope with different types of creditors; and, how to sue the creditor if he gets carried away in his effort to collect. And the advice is given in a very practical way.

In certain situations the debtor is told to write a letter. But the advice doesn't stop there. A form letter is provided. Sometimes a series of form letters are shown. All the debtor has to do is fill in the blanks and he can stall off paying a bill for weeks, for months or forever. The stall is the most important tactic recommended.

For all his faults, the businessman is granted one virtue. He is viewed as busy. Too busy to stick with a persis tent debtor long enough to see a bill paid or a bad check made good.

Here is where I.C. System, Inc., your association approved Collection service, can help. They are also persistent. Depending upon the situation, they will maintain contact with a debtor for six months in an effort to make good a bad check or debt. Contact the Society office to learn more about the service.

INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS FORMED TWENTY-FIVE YEARS AGO

The following is quoted from the history of ISPLS:

On November 28, 1951, letters were sentout from Purdue University to many practicing land surveyors in Indiana to determine the feasibility of establishing a two-day conference on land surveying. Professors W. E. Camp and K. S. Curtis had attended successful similar meetings in Michigan and thought it would be desirable to write to the land surveyors of Indiana. Land surveyors, registered through the State Board of Registration, until that time did not have any method of meeting together to discuss their mutual problems.

The results of the letter indicated that such a conference would be worthwhile. A program-planning meeting was held on May 21, 1952, on the Purdue campus. It was attended by the following land surveyors to whom much credit must be given for their enthusiastic interest: S. W. Burres, Indianapolis; D. W. Carpenter, Veedersburg; C. E. Condra, New Albany; W. E. Morthland, Valparaiso; E. E. Phillips, Huntington; M. R. Scholl, Connersville; S. M. Shartle, Danville; W. S. Souders, South Bend; Guy Shrum, Salem; F. L. White, Quincy; W. E. Camp and K. S. Curtis, representing the School of Civil Engineering; and M. M. McClure and K. E. Glancy, representing the Division of Adult Education.

The arrangements for this conference were worked out by this committee; Professors W. E. Camp and K. S. Curtis acted as co-ordinators for the conference.

The first conference, which was held on January 14-15, 1953 as a cooperative venture between the School of Civil Engineering and the Division of Adult Education, was attended by 66 people. The breakdown percentage-wise was approximately: 40 per cent private survey practice, 40 per cent county surveyors, 10 per cent city engineers, and 10 per cent educators. Those attending this conference felt that there should be a definite organization for the perpetuation of such meetings. As a result, the group formed a temporary Indiana Society of Professional Land Surveyors until a constitution committee could report a year later with a proposed constitution. The constitution was adopted on January 15, 1954 at the second annual meeting attended by 70 people.(end of quote)

On Sunday afternoon July 1, 1979 citizens of Porter County and Valparaiso, Indiana paid tribute to Wm. Morthland, public servant. The recognition was organized under he direction of the Northwest Indiana Chapter of ISPLS. Chairman was Mr. Ordell L. Gertsmeier. Also serving on the committee were, John Hardwick, the city engineer for Valparaiso, Bill Tanke, the Porter County Surveyor, and David Pilz. The newspaper clipping below gives a good background to the service of Mr. Morthland.





William Morthland was a charter member of ISPLS. Shown precenting a Life Membership certificate, are ISPLS members, left to right, Bill Tanke, William Morthland, Ordell Cestempler, and Fmill Beeg.



The City of Valparaiso is naming U.S. Hwy 30 through Valparaiso as Morthland Drive.



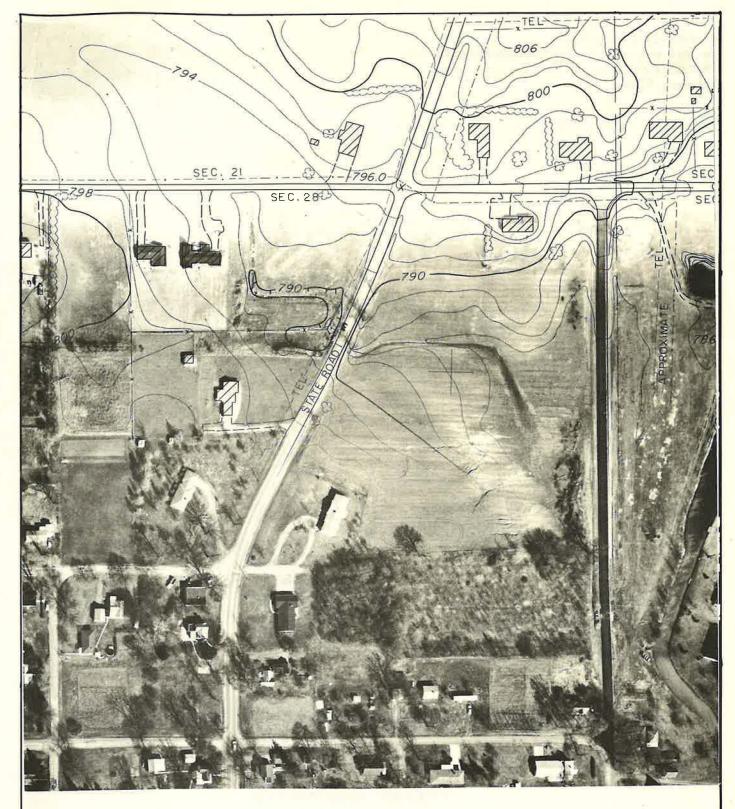
INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS, INC.



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MEMBERSHIP APPLICATION

| | nior \$25.00 and Student \$5.00. | |
|-------------|---|---|
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| City | Zip | Business Address |
| Te lephone | ()- | City Zip |
| County | State | Business Phone ()- |
| S.I.T.# | R.L.S.#_ | R.P.E.# |
| MEMBER | | nd Surveyor. Member is entitled to vote, hold ly in the Society. |
| JUNIOR | Actively pursuing the goal of becoming registered as a Land Surveyor. Junior is entitled to vote and participate fully in the Society, but is not entitle to hold office. | |
| ASSOCIATE - | qualified to become register | th the Land Surveying Profession but is not red. Associate is not entitled to vote or hold valetter and will be invited to participate in |
| STUDENT | Same eligibility requirements as for Junior, except membership may be used | |
| | only by full time students, and for four years only. Students are entitled to the same benefit as Associates. | |



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