

SURVEYOR

HOOISIER



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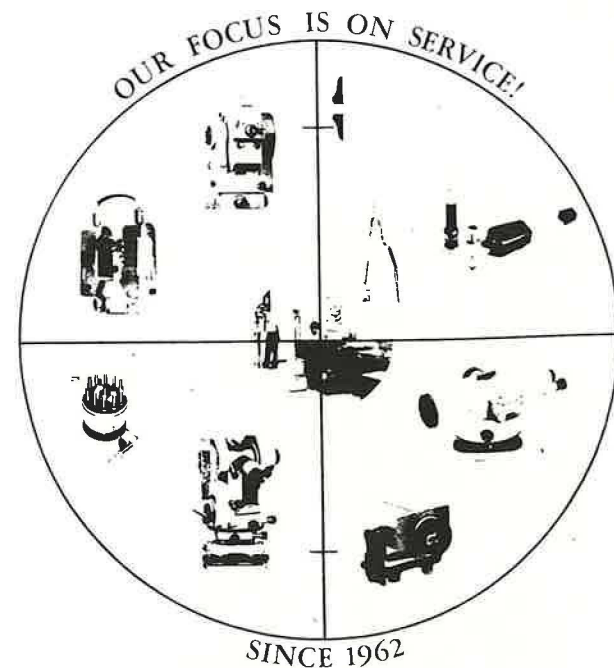


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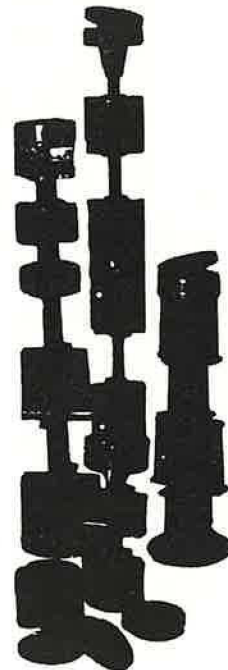


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HOOSIER SURVEYOR

VOLUME 12 NUMBER 2 & 3 FALL 1985

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EDITOR'S NOTE

Deadlines for copy for various planned issues of the HOOSIER SURVEYOR are as follows:

Winter issue - January 31 Summer issue - July 31 Spring issue - April 30 Fall issue - October 31

The HOOSIER SURVEYOR is published quarterly by the INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS, to inform land surveyors and related professions, government officials, educational institutions, libraries, contractors, suppliers, and associated businesses and industries about land surveying affairs.

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Gary Kent
Editor

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PRESIDENTS MESSAGE

The 1985 ACSM-ASPRS Fall Convention is now history. It provided a tremendous amount of information for us to absorb and put to use. It also opened lines of communication with our national organizations and Purdue University. We must now get on with the task of strengthening the Land Survey program at Purdue; and our legislative efforts to have a seperate registration board, mandatory 4 year degree for registration, and continuing education. We will also be continuing the work on our standards of practice. To achieve these goals, we will need the help and support of all our fellow practitioners. Therefore, I am asking all of you to volunteer your services in helping to make our society become the viable force in this state that it should be. Remember that the society is only as strong as the efforts of it's volunteers make it.



Robert B. Bigelow, President

RB/djb

Board Meeting Highlights

August 3, 1985: ISPLS Headquarter's Indianapolis

Attending: Bigelow, Cunningham, Anderson, Blankenbeker,
Pusey, McNamara, Hall, Manning, Bengel,
Beals, Woodfill.

- Motion was made and seconded to use the ALL Net System for long distance phone calls for headquarters.
- Motion was made and carried to sell all Manuals for \$15 each to members \$20 to non-members.
- A letter was written to the Board of Registration from ISPLS, ISPE, and CEI requesting the Board to discuss an update of the Registration Act.
- Legislative Committee expressed the need for a State Surveyor. Jake Hall was going to investigate this.

October 19, 1985: ISPLS Headquarters Indianapolis

Attending: Bigelow, Cunningham, Anderson, Blankenbeker,
Pusey, McNamara, Hall, Bengel, Beals, Woodfill,
Kent, Manning.

- A new shipment of tie tacks has arrived. They will be for sale. The first ad to appear in the Hoosier Surveyor.
- There is a need for a frivolous suit bill at the legislature, also a bill to limit liability. There will be a Legislative Forum on Nov. 26 at the Adams Mark Hotel.
- A number of members have not sent in their dues as of this meeting. An effort will be made to contact them.
- We are not as yet to the point of adopting standards, perhaps a manual is needed on standards.
- The Manual on Survey law needs to be undated.

CALENDAR

January 15 - 18, 1986	ISPLS Annual Conference, Evansville Jointly with Kentucky
March 16 - 21, 1986	ACSM-ASP Spring Convention, Wash., D.C.

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A LEGISLATIVE EXPERIENCE
1985
For Indiana's Scientific & Engineering Community

TUESDAY, NOVEMBER 26
Adams Mark Hotel
Indianapolis, Indiana

Breakfast Buffet Starting at 7:30 a.m.
Concluding about 10:30 a.m.

For the second year in a row Indiana's engineering, surveying and scientific organizations have put together an exciting legislative forum. Have breakfast with the fellow members of your profession and your legislators and learn from each other. The program may outdo last years because of the caliber of speakers we have lined up and because of the timeliness of the topics we plan to discuss.

Featured in this year's program are

LIEUTENANT GOVERNOR JOHN MUTZ (tentative)

DR. OTIS R. BOWEN, former Governor

SENATOR LOUIS MAHERN

Vital to all of our occupations and businesses today is the economic condition of the State. Lieutenant Governor Mutz will be our Keynote Speaker will discuss bringing new business to Indiana, what we can do to keep design project work for Indiana firms, and many other timely issues. Perhaps uppermost on the minds of many professionals these days are the high cost of liability insurance, the frequency of frivolous suits and the sometimes impossible task of getting professional liability insurance even though it may be required to do a job. Dr. Bowen will tell us what the medical profession did to at least partially solve the problem. A fellow engineer and attorney, Greg Caforous, will follow up with an outline of a legislative program to attack the problem. Finally, we will welcome Senator Louis Mahern, Assistant Minority Floor Leader of the Indiana Senate, to tell us about the "hot topics" of legislation this session.

INVITE YOUR LEGISLATORS

Invite you own Senator or Representative to attend the breakfast with you so that they will learn what issues are important to you and your profession. If you need the name and phone number of your Legislators, call Peggy Crawford at (317) 637-3563. This is a very important part of having a successful legislative effort for our professions.

This LEGISLATIVE EXPERIENCE is sponsored by :

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INDIANA SOCIETY OF PROFESSIONAL ENGINEERS
INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS
INDIANAPOLIS SCIENTIFIC & ENGINEERING FOUNDATION
and many other cooperating societies.

Remarks by Donald E. Bender, President-Elect
of the American Congress on Surveying and Mapping

THE POINT OF BEGINNING BICENTENNIAL CELEBRATION
EAST LIVERPOOL, OHIO
September 29, 1985

INTRODUCTION

It is certainly a privilege to come from the other side of the continent to celebrate this very special occasion.

It is indeed an honor for me as a surveyor to represent the professional surveyors and mapping scientists of the American Congress on Surveying and Mapping (ACSM) at this rededication of the First Point of Beginning. From the inscription on the monument, I see that ACSM was here in 1960.

If I might take a few minutes today, I would like to traverse a few of the significant events that transpired prior to the surveyors coming to this point in 1785 to begin the surveys of the Northwest Territory.

STATEMENT:

THE CONTRIBUTION OF SURVEYORS TO THE UNITED STATES

It is through the genius of Thomas Jefferson and other learned surveyors that the concept for the development of the United States evolved. Mr. Jefferson, as we know, was the author of the Declaration of Independence. He was also the son of a County Surveyor, and a County Surveyor of Virginia in his own right. He was very conversant in the affairs of the surveying profession.

In 1783 Thomas Jefferson was elected to the Congress to represent Virginia and in that role he was very instrumental in persuading Virginia to cede the lands that you presently occupy. By deed of March 1, 1785 Virginia ceded these lands to the USE and BENEFIT of the United States.

Mr. Jefferson went to work immediately devising a plan for the land development and submitted his first report in April. Unfortunately, Jefferson was called to other important duties. Thomas Jefferson departed for France to replace Benjamin Franklin as the Minister from the United States. He spent five years in France while his dream for the development of the United States was finalized and the implementation begun by other surveyors.

Those early surveyors were well educated in the principles of land economics. They knew that a system and policy concerning the land determines to a considerable extent the economic, social and political life of the people. They were conversant with the writings of Adam Smith and understood that the individual was motivated by profit and self interest. They also knew of the Physiocrats and

their philosophy that land and agriculture were the basis for all wealth. And, those early surveyors knew of John Locke's teachings that individual ownership and control of land was in fact a natural right, limited only by the extent of the land needed by the individual land owner.

The surveyors were also conversant in the Factors of Production. They knew that land was a raw material. If you mixed that raw material with labor and added with it some capital and the individual entrepreneurship and creative genius of the individual land owner, the maximum productivity from the land would be the result. The economic development of the people's land resource was the dream of Jefferson.

The surveyors, working from Jefferson's draft, devised a rather simple plan when we go back and examine it. The plan provided for the development and utilization of the very large land resource of the United States that stretched out to the west. One of the features of that plan was an allocation of large and small tracts. A second feature of that plan was a dedication of land for public uses. Another feature was the dedication of land for public schools. (Jefferson was a very strong proponent for public education so that every member of society could have a future). The plan also recognized the benefit of platting of the land, because with platting the value of the land is increased. The plan again recognized that prior knowledge of the quality of the land and its features would enhance the value of the land. And finally, the plan recognized the benefit that would flow from the sale of land after it was first surveyed.

This simple Jeffersonian Plan became the foundation for the continuing development and utilization of the land resource of the United States. The plan, perfect in its original design, became the foundation for the westward expansion known as our Manifest Destiny.

The surveyors assigned by Congress in 1785 with the responsibility of implementing the plan were assigned a few simple duties. Surveyors today, still execute their responsibilities to the public by carrying out the duties assigned by the legislature. One of the duties assigned by Congress in 1785 was to exactly describe the land on a plat of township. The surveyors were required to note on the plat of township the following information:

- the quality of the lands
- the water courses
- the mountains
- the millseats
- the salt licks and springs
- any other remarkable or permanent things
- 36 subdivisions of 640 acres each

The surveyors thereby contributed to the orderly development and utilization of the people's land resource. By identifying the condition and value of the land based on their individual knowledge

of land economics, land law, astronomy, geometry, and geography, they blended the physical and social sciences into the American concept of land use.

There were eight surveyors who visited this site two hundred years ago. I would like to remember their names.

- Isaac Sherman - Connecticut
- Robert Johnston - Georgia
- James Simpson - Maryland
- Benjamin Tupper - Massachusetts
- Edward Dowse - New Hampshire
- Absalom Martin - New Jersey
- William Morris - New York
- Alexander Parker - Virginia

And Thomas Hutchins, Geographer (Surveyor General) of the United States.

Each of these surveyors was prequalified by Congress before he was assigned to meet at this site. I am pleased to report that the states have followed the direction of Congress and now the fifty states continue the practice of prequalification of surveyors who survey and map your rights to the private ownership and enjoyment of land.

I am also proud to report that surveyors are continuing in the footsteps of those visionary surveyors who looked west in 1785. With survey satellites passing silently in the heavens at this moment and with global positioning instruments located on the ground, surveyors are continuing their contribution to the development and utilization of the land resource of the United States.

If those original surveyors could return today to share this moment with us, I feel they might be awed by some of the things that have transpired since they were here. But as men of science, I feel that would pronounce our effort to implement their plan, as a job WELL DONE!

CLOSING:

It is again my privilege to be here. My thanks to the Ease Liverpool Historical Society from the American Congress on Surveying and Mapping. We share a strong interest with you in preserving the history and heritage of the United States.

And particularly Jack Lanham, thank you sir for putting together this two hundred year remembrance of our first and most significant, POINT OF BEGINNING.

High-Tech Batteries

(and how to care for them)

It wasn't too long ago that surveyors used a transit, tape and rod to measure distances. Now they use an Electronic Distance Meter (EDM). The first one was called a "geodimeter." Some of the skeptical surveyors scoffed that they were nothing more than gadgets. The instrument was the result of an experiment to determine the velocity of light. After the experiment was successful and a reliable value for the velocity of light had been determined, the

inventor decided to reverse the process and measure distance. Thus in 1947 Eric Berstrand, a Swedish scientist, produced the geodimeter which measured distance by means of a highly collimated light beam projected to a distant reflector. When the reflected light returns to the device, the time the light takes to make the round trip is calculated electronically and from this it is possible to figure the distance accurately between the two points. Another

method, called a "Tellurometer," developed in 1955 by the African Council on Scientific Research, used radio waves instead of visible light. Since radio beams can be focused more narrowly over greater distances than light beams, the Tellurometer had a greater range, but this advantage was offset by the effect of humidity, which caused less accurate measurements. Today, infrared light is being used. Today E.D.M.s have revolutionized the surveying industry to the point that no surveyor can be without one, because of the speed, ease and accuracy of this remarkable device. However, E.D.M.s have to have a handy source of portable power. At first, crude and cumbersome wet cells were used. They were heavy, messy and dangerous because of acid spill. Many battery systems have been tried. Today, Nickel Cadmium batteries, because of their weight, size and low cost per hour have become the most popular source of power for E.D.M.s and related equipment.

This article deals with primarily cylindrical cells which have generally been standardized by the industry in size, shape and capacity. All cells are 1.25 volts and are connected together into many configurations. Usually, they are in series to give the desired voltage and ampere hours. Ni-Cad (Nickel Cadmium) battery packs are an ideal power source for a variety of applications. They can be discharged many times and recharged to full capacity at very little cost. They weigh less than many other types of batteries for the same power which makes them ideal wherever portable power is necessary. They can be stored charged or uncharged and operated in any position. With proper care, they will provide many hours of dependable power and will withstand more abuse than any other battery. They have good low temperature characteristics and are more competitive with other systems in terms of cost per hour of use.

The term battery is generally used to describe a single unit comprised of one or more cells. A battery can be a single cell, but usually it is a series combination of individual cells assembled in a pack containing ter-

minals and proper insulation. These batteries are referred to as multi-cell batteries or a battery pack.

A primary battery is one which produces electrical energy which for the most part is irreversible, that is, it may be discharged fully only once, then it must be discarded. A secondary battery is one in which the chemical reaction which produces the electrical energy is, for the most part, reversible. That is, it may be fully discharged, then recharged, then used and charged again, time after time.

The capacity of a Ni-Cad cell is the total amount of electrical energy which can be obtained from a fully charged cell. The capacity of a cell is expressed in ampere hours (H). The capacity value is dependent upon the discharge current, the temperature of the cell during discharge, the final cut-off voltage and the cell's general age. Charge and discharge rates are expressed in multiples of the "C" rate. At the 0.25C rate the rated capacity will be delivered in four hours, at the 4C rate in 1/4 hour, etc. The normal capacity of the Ni-Cad cell is that which will be obtained from a fully charged cell, discharged at 68 F for 5 hours to a 1.0 volt cut-off. This is called the C/5 rate. This capacity is much the same over a wide range of currents; however lower discharge rates will give slightly more capacity and higher discharge rates will give slightly less capacity.

In operation the voltage is about 1.2 volts per cell. This voltage remains pretty much the same until it approaches complete discharge, and in normal operation should not drop below 1.1 or 1.0 volts. However, if the battery is used to provide current above the rated value there is a severe drop in voltage when discharge is approached. This reduces the ampere-hour cycle and can discharge individual cells to zero voltage.

The battery can be stored for years without charge, with no significant degradation in performance and then, after just one or two charge and discharge cycles, will exhibit normal performance. Battery packs when not in use will lose about 1 percent of capacity per day. If stored more than 90 days, two or more cycles of full charge and discharge may be required to restore it to full capacity.

As mentioned before, as discharge carries below one volt, there is a rapid drop to zero voltage. In most packs the cells are connected in series. If

one cell reaches zero before the others, there may be a reversal in polarity. The cell which reaches full discharge first will be driven into reverse by the others. In order to provide long life, this should be avoided. This does not happen often. When it does occur the battery should be recharged at the ten hour rate to restore full capacity. Frequent recharging is a good way to prevent polarity reversal. If a pack has a bad cell, it should not be replaced. The whole pack should be replaced or re-celled with new matched cells.

The phenomena of battery memory frequently occurs when you use only partial amounts of a battery's capacity followed by a full charge and again only discharge partially, etc. Then one day, you want the full capacity and typically find that only the portion of capacity that you have customarily used is available. The battery developed a "memory" of its typical capacity usage and delivered only that portion. This defect is usually remedied simply by giving several (3 or more) charge deep discharge cycles to the battery. Another source of memory effect can occur when users leave fast charge batteries on prolonged (days) trickle charge between uses. Again, several fast charge/deep discharge cycles usually result in like new performances. A severely underused battery is very likely to become memorized, while a severely overused battery will exhibit sharply curtailed cycle life.

Charge acceptance efficiency is affected by a number of things: the age

of the battery, possible physical defects, residual capacity before charging and, most directly, by charge rate and temperature during charging. For example a battery removed from a closed car on a sunny day and immediately charged may accept only 1/3 of the amount of charge it would have taken if allowed to cool to room temperature prior to charging. Also a battery which is operating in near 32 degree temperature and is not allowed to warm up to room temperature before charging may, after several cycles, lose enough of its electrolyte through gassing to begin losing its capacity. A battery charged at a very low rate may never fully charge, while a battery charged at an abnormally high rate may, through self-heating, decrease its own final charge acceptance efficiency. A battery will take its most efficient charge at 50 F, which is somewhat below normal ambient temperature. If a battery is hot at the start of a charge, its efficiency will be significantly reduced and it will not fully charge. For example, if charged at 113 F, it will deliver only 70 percent of capacity; if charged at 140 F, it will deliver less than 50 percent of capacity. Do not charge batteries at temperatures of 95 F; bring batteries close to 70 F before charging.

The life of a Ni-Cad battery is measured in cycles. Each charge and discharge is a cycle. Normal life is about 500 to 1000 cycles. Batteries are like human beings and should be exercised regularly. For optimum life they should be operated at least every three months.

Credit August 1985
Side Shots

Do's and Don'ts For Peak Performance, Longer Life And Increased Reliability of NICAD Batteries

DO recharge regularly.

DO warm a cold battery up to room temperature for at least one hour before charging.

DO avoid overcharging, especially for long periods of time.

DO check and clean dirty contacts

DO avoid discharging to below one volt per cell.

DON'T charge below 45 F.

DON'T use a case damaged battery in a hazardous location.

DON'T return or discard a battery for reduced capacity until it has been checked for memorization.

DO try to de-memorize it by bringing its voltage down against a restrictive load (such as an unsquelched radio) to one volt per cell and then recharging it. Repeat the procedure a few times if necessary.

DO avoid forced discharge or discharge approaching capacity for memory erase. Only resistive load or an unsquelched radio should be used.

DO try to prevent memorization by varying use mode and discharge times whenever possible.

DO consider trying batteries with lower capacities if memory becomes a problem.

DON'T replace a bad cell in a pack. The whole pack should be replaced or recelled with new matched cells.

Lewis J. Reguly

REGULY BATTERY COMPANY, which specializes in replacement components for rechargeable portable power packs for surveyor's instruments such as electronic distance meters, data collectors, electronic levels, rotating lasers, radios and other related equipment, announces a new family of products and services. We will supply and/or re-cell most all rechargeable portable power packs with new inserts of equal O.E.M. quality and capacity at savings from 30 to 75 percent.

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Reguly Battery Co
17461 Bernardo Oaks Dr.
San Diego, CA 92128

or call (619) 485-7767
No answer, call (619) 486-3447



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BARTHOLOMEW COUNTY

E. R. GRAY III, SURVEYOR
COUNTY GOVERNMENTAL OFFICES
440 THIRD STREET - ROOM B1
COLUMBUS, INDIANA 47201

LOST SECTION CORNER PERPETUATED
ON COURTHOUSE SQUARE IN RECOGNITION OF
THE 200TH ANNIVERSARY OF THE

"UNITED STATES PUBLIC LAND SURVEY SYSTEM"

By Kathy Gray

On Monday May 20, 1985, in recognition of the 200th anniversary of the "Public Land Survey System," Bartholomew County Surveyor, Enoch R. Gray III, his staff, and County Commissioners Marvin Finke, Vernon Jewell, and Juanita Harden replaced a section corner originally set by B.F. Morris who first surveyed Bartholomew County in 1819.

The corner was "lost". County Surveyor Gray had perpetuated the corner, which lies within the courthouse, prior to the ceremony. Since the corner falls within the building, reference corners were established on the south and east sides of the Courthouse, giving coordinates needed to locate the corner precisely.

Indiana State Representative, Ted Craig, read a proclamation signed by the Bartholomew County Commissioners proclaiming, May 20th as a day of recognition for the "United States Public Land Survey System."

The local Eads Chapter of Indiana Society of Professional Engineers donated a large cake for the reception following the ceremony in the Bartholomew County Surveyor's office for the several guests in attendance.

Gray's office has perpetuated 80 percent of the 1,215 original government markers in Bartholomew County.

RACING INTO TOMORROW RECAP

By Gary Kent

The 1985 ACSM-ASPRS Fall Convention held in Indianapolis on September 8-13, 1985 in Indianapolis was an unqualified success in all aspects. Over 2000 persons attended the convention including the representatives from the largest exhibition of surveying, mapping and photogrammetric equipment ever at a Fall Convention. The technical sessions were very well attended and well received due to the efforts of the Program Committee headed by ISPLS member Jerry Carter. Social events, especially the Wednesday dinner at the Indianapolis Children's Museum, were a big hit with all participants. Former ISPLS President Orwic Johnson and his wife Betty were responsible for the various social events including functions at the Downtown Hilton Hotel, the Columbia Club, the Hyatt Regency, the Convention Center and tours to Conner Prairie Farm, Columbus, Nashville, the Speedway and the Indianapolis Museum of Art. The Johnson's advance preparation and efforts were obvious by the numerous positive comments received. Arrangements at the Convention Center and the Hyatt were handled without a hitch due to the work of Joe Blevins, Ron Wharry and Jake Hall. A computerized registration system performed admirably due to many hours of work by Carl Anderson in programming the system. As a result of having the computerized system, we were able to provide lists of attendees to exhibitors and ACSM and ASPRS within days of the close of the convention — something they had never had the benefit of. The computers also resulted in an easier job for Finance Director Bob Bigelow and Peggy Archer in handling the \$200,000 budget. Bob's vigilance in watching the budget seems to have been successful with the convention turning a modest profit for ACSM and ASPRS. The large exhibit hall was the direct result of Dan Pusey's efforts in drumming up interest in the convention across the country.

Professors Curtis and McEntyre from the Purdue Land Surveying School, assisted by Rodger Durham, raised interest in the convention and the surveying profession by contacting all of the high schools in the State and inviting the students to attend. Nearly 100 students turned out — raising hopes that a resulting interest in the Purdue program will be seen.

The National Aeronautics and Space Administration symposium was very successful according to the organizers. NASA even extended its participation to include sessions on Thursday and Friday. The BLM symposium on the Anniversary of the Land Ordinance of 1785 was received very well. Many interesting papers were presented throughout the 2 day program.

ISPLS and the Indiana Land Surveying community should be proud of the Convention Committee. The meeting went off without any problems due to nearly two years of preparation and planning. Many, many days were donated — representing a lot of personal and work time and income. Special thanks should go to, in addition to those already mentioned, Doug Herendeen and Tony Johnson. The convention would not have been as smooth nor as successful without their time and efforts.



Robert Bigelow, Tami Barnes President ASPRS, William Hudnut III Mayor of Indianapolis, Dr. Steven Beering President Purdue University and Keynote Speaker, John Bossler President ACSM, Gary Kent, Rev. Linda McCoy, and Daniel Pusey.



The convention Connection: Daniel Pusey, Jake Hall, Joe Blevins, Doug Herendeen, Gary Kent, Jerry Carter, Ron Wharry, Robert Bigelow, Orwic Johnson, and Betty Johnson as they were recognized at the Thursday night Birthday party.

PROGRAM

1986 BI-STATE LAND SURVEYORS CONFERENCE

EXECUTIVE INN
EVANSVILLE, IND.

JANUARY 15 - 18, 1986

Sponsored by:

INDIANA SOCIETY of PROFESSIONAL LAND SURVEYORS
KENTUCKY ASSOCIATION OF PROFESSIONAL SURVEYORS

Wednesday, January 15

7:00 P.M. (check with your board)
ISPLS Board of Directors Meeting
KAPS Board of Directors Meeting

Thursday, January 16

8:00 A.M. - 9:00 A.M.
REGISTRATION BEGINS
EXHIBITS OPEN - Florida Room
coffee & doughnuts will be served

9:00 A.M. - 9:50 A.M. - JOINT SESSION
International Room "C"
"COMMON LAW" - Your need to know
Speaker: Rodger Durham
Purdue University
Dept. of Engineering

9:50 A.M. 10:00 A.M.
International Room "C"
INTRODUCTION OF EXHIBITORS
Speaker: William Stodghill

10:00 A.M. - 11:00 A.M.
BREAK - EXHIBITS - COFFEE

11:00 A.M. - 11:50 A.M.
International Room "C"
"LEGAL ASPECTS OF MINE SURVEYING"
Speaker: Frank Hart
Professor of Civil Engineering
Technology
Bluefield State College West
Virginia

12:00 NOON - 1:50 P.M.
FORMAL OPENING OF CONFERENCE AND LUNCH
Convention Center

WELCOME: Michael Vandevor
Mayor of Evansville

Robert B. Bigelow
President, I.S.P.L.S.

William R. Paris, Jr.
President, K.A.P.S.

KEYNOTE ADDRESS

Speaker: John Daley
NSPS Area Director
Wheeler & Melena

2:00 P.M. - 5:00 P.M.
International Rooms "B" & "C"
"MOCK TRIAL" - Professional Testimony
Joint Session
Presiding: Judge John S. Palmore
Attorneys: David Clark
George Stigger III

5:00 P.M. ADJOURN

6:30 P.M. RECEPTION - Florida Room
Compliments of the Exhibitors

7:30 P.M. BANQUET
Convention Center
INTRODUCTION OF NEW OFFICERS

8:30 P.M. ENTERTAINMENT
"THE VAN DELLS"

Friday, January 17

8:00 A.M. - 8:30 A.M.
EXHIBITS - Florida Room
coffee & doughnuts will be served

8:30 A.M. - 10:00 A.M.
International Room "B"
"ADVERSE POSSESSION"
The Surveyor's Responsibility ?
Speaker: Darrell Dean
Civil Eng. Dept.
West Virginia University

8:30 A.M. - 10:00 A.M.
International Room "C"
"PROPERTY LINE AGREEMENTS"
Where and When ?
Speaker: Andrew Kellie
Dept. of Engineering
Technology
Murray State University

10:00 A.M. - 10:20 A.M.
BREAK - EXHIBITS - COFFEE

10:20 A.M. - 11:50 A.M.
International Room "B"
"DISCIPLINARY ACTION"
Can you lose your license ?
Speaker: Luther R. Condre
Chairman
Ind. Bd. of Reg.

10:20 A.M. - 11:50 A.M.
International Room "C"
"PROPERTY LINE AGREEMENTS"
Where and When ?
Speaker: Andrew Kellie
Dept. of Engineering
Technology
Murray State University

11:50 A.M. - 12:00 P.M.
BREAK EXHIBITS

12:00 NOON - 1:00 P.M.
LUNCHEON - Convention Center

1:00 P.M. - 1:50 P.M.
International Room "C"
"POSITIONAL TOLERANCE - PART 1"
Speaker: John Goodell
Goodell Eng. Assoc.

1:00 P.M. - 1:50 P.M.
International Room "B"
"SURVEYING CONTRACTS" - Panel Discussion
Speakers: J. William Bruner
Brad DeReamer
Al Matherly

1:50 P.M. - 2:10 P.M.
BREAK - EXHIBITS

2:10 P.M. - 3:00 P.M.
International Room "C"
"POSITIONAL TOLERANCE - PART 2"
Speaker: John Goodell
Goodell Eng. Assoc.

2:10 P.M. - 3:00 P.M.
International Room "B"
"STRATEGIES FOR DEBT COLLECTION"
Speaker: J. William Bruner
Attorney

3:00 P.M. ADJOURN

5:00 P.M. RECEPTION - Florida Room
(Sponsored by Exhibitors)

6:00 P.M. RECEPTION ENDS
EVENING ON YOUR OWN

Saturday, January 18

9:00 A.M.
International Room "C"
I.S.P.L.S. GENERAL MEMBERSHIP MEETING

9:00 A.M.
International Room "B"
K.A.P.S. GENERAL MEMBERSHIP MEETING

12:00 NOON
CONFERENCE ADJOURNS

ABOUT THE CONFERENCE

As our society grows more complex the role of the professional surveyor becomes of ever-increasing importance, requiring greater precision, current technology skills and equipment, and a more thorough understanding of his/her responsibilities to the client and the public. It has been estimated that the liabilities that the surveyor encounters today far exceed those of merely a decade ago, thereby necessitating a more complete understanding and working knowledge of the rules and laws that govern or affect his/her decisions. This conference has pulled together some of the basic legal topics which a surveyor may need to understand in order to provide quality professional services based upon sound surveying and legal principles.

CONFERENCE PURPOSE

To bring together professionals from all areas of the land surveying field, from the small town surveyor to the manufacturer of complex instrumentation, for an exchange of ideas, information and fellowship.

EXHIBITS

An important part of the conference is the exposure to new equipment for the land surveyor and the professional office. Leading manufacturers of surveying and office equipment will be in attendance. Exhibits will be open before and after each session, with ample time for investigation and discussion of their products.

LOCATION

The conference will be held at the EXECUTIVE INN Motor Hotel in Evansville, Ind. All room reservations should be made directly with the Executive Inn. When you request reservation, let them know that you are attending the 1986 Bi-State Land Surveyors Conference.

SPOUSE PROGRAM

This unique program will include guided tours of historical sites in Evansville and New Harmony, a shopping trip, 2 lunches, transportation, banquet dinner, and entertainment. Fee \$55.

REGISTRATION INFORMATION

The advance registration fee for the conference is \$125 for I.S.P.L.S. and K.A.P.S. members and \$150 for non-members. The fee includes attendance to all sessions, two lunches, Thursday evening banquet, exhibitors reception on Friday and all breaks. Registration begins at 8:00 A.M. on Thursday, with the luncheon and formal opening of the conference beginning at 11:20 A.M. Registration after Dec. 31, 1985 - \$150.

Hotel Reservations should be made individually by calling the Executive Inn - Evansville: IDENTIFY AS CONFERENCE REG.

Phone: 1-800-742 3878 Inside Indiana
1-800-457-3841 Outside Indiana



President Robert Bigelow presents Dr. Steven Beering, President of Purdue University a certificate conferring honorary membership in I.S.P.L.S. We feel the future of Purdue University and the Land Surveying profession must go hand in hand into the future.



Dr. Beering gave the convention attendees a very stimulating and timely keynote address.

Don't Miss the 1986 Bi-State Convention

Sponsored by: ISPLS and KAPS

Jan. 15-18, 1986

Place: Executive Inn 600 Walnut St. Evansville, IN

Theme is: "Surveyors and the Law"

for more information call Jim Morley Ph. 812-464-9585

PAC AUCTION TAKES \$5.5K; REPS. MYERS, SMITH URGE POLITICAL ACTIVISM

Gifts donated by sustaining members, state surveying societies and individual members drew bids totaling more than \$5,500 for contributions benefiting the American Congress on Surveying and Mapping/National Society of Professional Surveyors Political Action Committee (ACSM/NSPS PAC) at a live auction held during the Indianapolis Fall Convention. The September 10 cocktail party and auction featured gifts generously contributed by Computersmith; Topcon Instrument Co.; Schonstedt Instrument Co.; Wild Heerbrugg Instruments, Inc.; Kern Instruments, Inc.; Gee & Jenson Engineers-Architects-Planners, Inc.; Berntsen, Inc.; SECO Manufacturing Co., Inc.; Tobin Aerial Surveys; POB Publishing Co.; Rand McNally & Co.; Surveyors Supply Co.; Pentax Corp.; Kennedy Associates; Espey, Huston & Associates, Inc.; HASP, Inc.; David Lee Ingram; Francis H. Moffitt; Roger Brand; P. Porcher Gregg; Minnesota Land Surveyors Association; and Wisconsin Society of Land Surveyors.

If there is any doubt that surveyors and mapping scientists should be involved in the political process, that notion was dispelled by two Republican Congressmen who addressed recent breakfasts sponsored by the ACSM/NSPS Political Action Committee. Rep. John Myers (R-IN), an eighteen year House veteran spoke to a Monday morning gathering during the ACSM-ASPRS Fall Convention in Indianapolis and three term Rep. Denny Smith (R-OR) addressed a September 23 ACSM/NSPS PAC breakfast at the biennial conference of the Western Federation of Professional Land Surveyors in Portland, Oregon.

A common message the two Republican lawmakers carried to their surveying and mapping audiences was the need for men and women from business and the professions to get involved in the political process. Both urged ACSM members to be active as advocates of their profession's interests in the form of communicating with legislators and volunteering in election campaigns. Myers and Smith also urged surveying and mapping professionals to consider being candidates for public office. "Today, in Congress, we have too few people who have had the experience of meeting a Saturday night payroll," said Myers, a farmer, banker and businessman. For many "being in Congress is the best job they've ever had," according to Smith, an airline pilot and newspaper publisher before his election to the House.

Both Congressmen also commended ACSM for establishing a government affairs program and political action committee. Myers noted "its important to make money, but you must also protect your money" by communicating with elected representatives on issues affecting your practice. Smith, who said "I'm just Denny," noted that he and his Congressional colleagues "are people just like everybody else." He urged all Americans to "hold your Congressman accountable" on legislation affecting the profession and the Nation.

Credit: ACSM Field Notes Sept. 1985

Surveyor's Right to a Mechanics' Lien

BY HENRY S. CLAY, JR., ESQ

A most important aspect of a land survey is payment and this leads to a frequently asked question:

Does a surveyor have a lien on the land, or what is generally known as a "Mechanics' Lien"?

The architect is usually protected in this respect, so why not the surveyor?

The mechanics' lien, or a lien for labor and/or materials used in the erection of a structure or improvement of a parcel of land is a creature of statutory law, and is not a "common law" right or lien. Hence anyone wishing to assert such a lien must look to the local state statute; and such statutes vary widely.

Most such statutes or laws relate only to the erection of a building or other tangible improvement, and not to surveying or engineering plans preparatory to the erection of improvements.

The Minnesota statute is probably typical and reads as follows:

"Whoever contributes to the improvement of real estate by performing labor, or furnishing skill, material or machinery for any of the purposes hereinafter stated, . . . shall have a lien upon the improvement, and upon the land on which it is situated or to which it may be removed, for the price or value of such contribution; . . .

The section then lists the following purposes as being within the statute:

1. The erection, alteration, repair, or removal of any building, fixture, bridge, wharf, fence, or other structure thereon.
2. Grading, filling in, or excavating the same.
3. Clearing, grubbing, or first breaking.
4. Furnishing and placing soil or sod, or furnishing and planting trees, shrubs, or plant materials or performing labor in any of these.
5. Laying, altering, or repairing any sidewalk, curb, gutter, paving, sewer, pipe, or conduit in or upon the land or the adjoining half of the highway, street, or alley upon which the property abuts."

These are all tangible improvements. However, a few states do give mechanics' lien protection to surveyors. California is one such state.

In *Nolte vs. Smith* (1961), the court held that the setting of monuments for a subdivision, following extensive engineering services, gave rise to a mechanics' lien.

A similar result was reached in *Frank Pisano & Associates vs. Taggart* (105 Calif. Reporter 414) allowing a mechanics' lien for a boundary survey, topographic map and sewer location.

In *Tracey Price Associates vs. Hebard* (1968), the California court stated that the question was whether the surveyor's work amounted to the commencement of the work of **improvement**.

Also, in Oregon, in *Smith vs. DeKrassy* (1959), the court allowed a mechanics' lien for the cost of a survey for the location of a building.

Florida, in *O'Harra vs. Frazier* (1951), has allowed a mechanics' lien for staking land into lots.

In *Subdivision Planning Engineering, Inc. vs. Marra Development Corp.*, Louisiana upheld the right to file a mechanics' lien for engineering and subdivision work.

On the other hand, Arkansas has held that engineering services which were basically planning, and not construction, did not give rise to a mechanics' lien.

Also, Alabama, Minnesota, North Dakota and Washington are among the states which have denied a mechanics' lien for what is usually classed as surveying.

However, the following recent cases disclose a drift towards giving mechanics' lien rights to the surveyor.

In *Weather Engineering and Manufacturing, Inc. vs. Pinon Springs Condominiums, Inc.* (Colorado, 1977), the question arose as to when work was commenced on the erection of a building; that is, did the work commence prior to the execution of the mortgage (deed of trust). In this case Weiss, the surveyor, had established and staked the original lot boundaries on February 11, and on February 18, had prepared a boundary survey. In deciding the question in favor of the mechanics' lienor (not the surveyor, but his employer), the Court held that the staking of the lots and making a boundary survey was the commencement of the improvements and prior to the execution of the deed of trust on March 15.

In *Frank H. Connor Co. vs. Spanish Inns etc.* (1977), the Court of Appeals of North Carolina held that labor furnished by land surveyors, landscape architects, planners, consultants and other professionals, pursuant to a contract with the owner to provide such services, was not lienable. However, the labor performed for the plaintiff by General Surveys was part of the plaintiff's indivisible contract to improve the real property; and since performed prior to the recording of the defendant's deed of trust, it gave priority to the mechanic's lien claim of the general contractor, Frank H. Connor Co.

CONTINUED ON PAGE 18

Surveyor's Right to a Mechanics' Lien

CONTINUED

In a more recent case, 1978, *W.L. Development Corp vs. Tritort Realty Inc.*, the Court of Appeals of New York, a mechanics' lien claim for the installation of improvements for 77 lots and which claim included the construction of streets, curbs, road drainage, sewer mains, and gas and electric service mains did constitute an improvement to the lots and the Court sustained the lien against the lots in the subdivision. The lien statute quoted in this case defines improvements to "also include any work done or material furnished in equipping any such structure with any chandeliers, brackets or other fixtures or apparatus for supplying gas or electric light and shall also include the drawing by any architect or engineer or surveyor, which are prepared for or used in connection with such improvements."

Thus, it appears that surveying or engineering services, while not lienable per se (except in those states, such as California, Florida, Louisiana and Oregon) does become lienable when such services are involved in the improvement of the property.

The advantage of a mechanics' lien over a debt suit to collect your work is three-fold.

FIRST, is the time element. If you file a law suit to collect, it may be months before you obtain judgement, and by then your employer (client) may be without assets to satisfy your claim.

SECOND, in many states a mechanics' lien claim, if established, will come ahead of mortgages or other liens on the land, and

THIRD, the expense of filing a memorandum of mechanics' lien is often less than the legal fees for suing in a court of law.

A mechanics' lien is a shot-gun procedure, and the threat of one often gets results.

ACSM Convention 1979

From *The Cornerpost*, Vermont Society of Surveyors, September 1979

MISSOURI STORY by Robert L. Jump

While working with a survey crew near a small town in Missouri, a school bus came by and discharged some kindergarten children at a nearby corner. One of the little boys came down to investigate the activities of the crew.

To protect the surveying instrument from being knocked over, I pretended to be looking through it. "What are you looking at?" the boy asked. "I'm watching those men up there clear away that brush," I answered. "Well, I don't know why you have to use that thing," the boy scoffed. "I can see them from here."

The boy continued to play in the area, getting in the way and hindering our progress. To avoid the possibility of his getting hurt, I thought I'd make him think his mother was calling him to come home. "Listen," I said. "Was that your mother?" The boy stopped his playing and cocked his head to listen. "Did she whistle?" he asked. Thinking that must be the manner in which she called him, I answered, "Yes." The boy smiled with relief and said, "Then it wasn't her. She can't whistle."

RESOLUTION

WHEREAS, the American Congress on Surveying and Mapping relies on local organizations to host its fall meetings; and

WHEREAS, the 1985 Fall Convention Directorate has provided an excellent forum for the exchange of technical knowledge; and

WHEREAS, the 1985 Fall Convention Directorate has comfortably accommodated the meetings necessary for the conduct of the business of the Congress; and

WHEREAS, the 1985 Fall Convention Directorate has enlisted an outstanding display of surveying and mapping equipment; and

WHEREAS, the 1985 Fall Convention Directorate has organized convivial social events;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Direction of the American Congress on Surveying and Mapping, on behalf of the membership expresses its sincere appreciation and thanks to the entire Convention Directorate.

(Approved by the Board of
Direction, September 13, 1985)

President
JOHN D. BOSSLER
3717 Queen Mary Drive
Olney, MD 20832

President Elect
DONALD E. BENDER
3359 Longridge Avenue
Sherman Oaks, CA 91423

Vice President
ALBERTA AURINGER WOOD
Mem. Univ. of Nfld.
St. John's Nfld.
Canada, A1B 3Y1

Past President
LAWRENCE F. AYERS
7619 Hooes Road
Springfield, VA 22150

NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS

"A FASCINATING ADVENTURE CALLED SURVEYING"

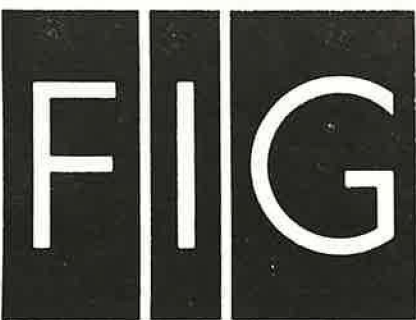
The Image Enhancement Media Development Committee (IEMDC) under the chairmanship of Robert Todd strives to raise the money necessary to continue with the film project entitled, "A Fascinating Adventure Called Surveying".

A script for the film was approved by the committee and fund raising efforts were begun in September 1984. Today the fund balance stands at about \$30,000. To keep the project moving ahead, \$20,000 is needed in the next 60-90 days. The committee has set a goal of \$50,000 in-hand before beginning the search for a production company.

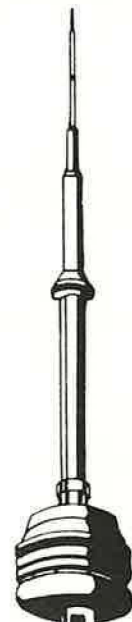
Thirty-three state affiliates, chapters or sections have made contributions along with one sustaining member firm and eight individual members. IEMDC Chairman, Robert Todd, states, "We are very optimistic that the goal can be met. The committee is preparing a fund raising campaign directed toward sustaining member firms and we are hopeful that it will succeed in helping us reach the immediate goal."

Todd continues by cautioning that "even when we reach the \$50,000 goal, we will need at least another \$100,000 to complete the project. The IEMDC has made a commitment to see the project through to a successful conclusion. We need everyone's help and support."

Anyone who would like more information, anyone who would like to make a contribution or who has ideas about fund raising is encouraged to call or write: IEMDC, 210 Little Falls Street, Falls Church, Virginia 22046, (703) 241-2446.



INTERNATIONAL
FEDERATION
of SURVEYORS



TM

XVIII CONGRESS

JUNE 1 - 11, 1986
TORONTO, CANADA

- * Nine Technical Commissions *
- * Commercial & Member Countries' Exhibits *
- * Technical Tours *
- * Spouse's Program *
- * Social Events and Excursions *

FOR MORE INFORMATION CONTACT:

FIG CONGRESS '86
REGISTRATION COMMITTEE
P.O. BOX 186, STATION Q
TORONTO, ONT.
CANADA M4T 1M2

WHEREAS,

The Indiana Society of Professional Land Surveyors, Inc. was chartered to promote the development of the Profession of Land Surveying in the State of Indiana and to elevate same to the highest plane of professionalism that may be obtained by man; and

WHEREAS,

good relationships between Land Surveyors and the Institutions of Higher Learning of the State of Indiana are paramount to reaching that goal; and


WHEREAS,

Dr. Steven C. Beering, M.D., Sc. D., President of Purdue University, West Lafayette, Indiana, represents the knowledge and education of those future Surveyors, Cartographers and Photogrammetrists that will follow in our footsteps.

NOW THEREFORE,

be it hereby proclaimed that Dr. Steven C. Beering, M.D., Sc. D., is hereby declared to be an Honorary Member of the Indiana Society of Professional Land Surveyors, Inc. from this day forth.

Witness our hands and seals this 10th Day of September 1985.


Robert Bigelow, President


Donald Bengel, Secretary/Treasurer



Member Notes

Status Report: Prof. John McEntyre

Many of you may not have heard that John suffered a heart attack at the Fall 1985 ACSM-ASPRS Convention in Indianapolis. After testing and evaluation of John's condition his doctors determined that he was in need of open heart bypass surgery. This miracle of modern medicine was done at St. Vincents Hospital in Indianapolis, Indiana with John undergoing surgery consisting of five bypasses. We are very happy to report that John is home and minding the advice of his doctors. John and Virginia we all hope and pray for a speedy recovery. John has asked that the following report also be included:

" My recovery from by-pass surgery is progressing very well. I wish to thank my friends in the surveying community for their cards, phone calls, and prayers. Each and every contact was a morale booster. I am indeed fortunate to be a member of the surveying profession. Your thoughtfulness is appreciated and will be remembered forever."

John can be contacted at; 160 Pathway Lane West Lafayette, Indiana 47906

Status Report: Prof. Larry Holderly, Agricultural Engineering, Purdue University

Common Cause of Indiana recently sponsored a contest for creation of Redistricting Maps for Indiana. The contest invited Indiana citizens to redistrict the State using criteria that did not discriminate against any political party or segment of the population using the following objectives:

- (1) use single member districts, 50 for the senate and 100 for the house
- (2) contiguous districts
- (3) keep counties and townships whole whenever possible
- (4) keep district perimeters as small as possible
- (5) keep district area as small as possible
- (6) keep population deviation from district to district at a minimum 3 percent for the senate and 7 percent for the house districts

Dr. Holderly's winning plan preserved 74 whole counties in the senate as compared to the present 50 and 61 whole counties in the house as compared to the present 22. His breakdown was done without benefit of voting preference, minority locations or other factors which might bias the redistricting.

Congratulations Larry from the profession for your involvement.

Information obtained from the Oct. 4, 1985 press release of Common Cause of Indiana.

ANNOUNCEMENTS

NOTICE NOTICE NOTICE

ISPLS SURVEYING PUBLICATION SERIES REPRINTS

Publication #1 The Perpetuation of Corners in Indiana
Available in reprint from ISPLS for \$15 to members

Publication #3 The Surveyor and the Law
Available in reprint from ISPLS for \$15 to members.

TIE TACKS TIE TACKS TIE TACKS

The tie tacks that you all have been asking about are now in stock at the ISPLS office. To order send your check to Peggy. Prices listed below.

Quantity	Price
1 - 9	\$7.50 ea.
10 - 24	\$7.00 ea.
25 - 49	\$6.75 ea.
50 - 99	\$6.50 ea.
over 100	\$6.00 ea.

BELT BUCKLES BELT BUCKLES BELT BUCKLES

The Scholarship Committee has arranged to have a limited number of these handmade logo belt buckles made in order to accomplish two important goals. One, profits from the sale will be designated for the ISPLS Scholarship Fund and two, these belt buckles will provide the members with a unique way of showing their professional affiliation.

The belt buckles are hand made on plate polished brass, acid etched, and the logo is enamel filled so that normal wear will not destroy the attractive blue on brass logo.

2" x 3.25" Wide Buckle _____ \$20 each * Postage & Handling included

2" x 1.50" Narrow Buckle _____ \$20 each * Postage & Handling included

Send orders to:

Buckles sent to:

Daniel Pusey
1738 Klondike Road
West Lafayette, Indiana 47906

NOTE: Checks are to be made payable to: I.S.P.L.S

Please allow 6-8 weeks delivery

* Note: Based on the total numbered ordered approximately 25% of the cost will go to support our Scholarship Fund.

1985 Application For Membership

ISPLS SCHOLARSHIPS - Reasons to Give

As the end of the year approaches, now is the time for ISPLS members to consider donating to the ISPLS Scholarship Fund at the University of their choice (Purdue or Vincennes).

When the facts are analyzed, it can be shown that a \$100.00 donation actually costs only about \$20.00 to give.

The 50% Indiana tax credit for donations to state universities automatically cuts your out-of-pocket expenses in half. The entire donation is then also a deductible expense on your federal tax form. If you are in the 30% tax bracket, then the \$100.00 donation breaks down as follows:

\$100 (initial donation) minus \$50 (Indiana tax credit) minus \$30 (30% of \$100 donation- deductible expense) equals an actual cost of \$20.

Consult with your accountant for your particular case. The Indiana tax credit is good up to a maximum credit of \$100.

Our scholarship fund at Purdue allows your donation to be designated to any of the regional campuses.

Those wishing to donate money towards the Scholarship at Vincennes should make their check out to "Vincennes University, Surveying Scholarship Fund" and send them to:

Foundation Office
Vincennes University
Vincennes, Indiana 47591

Those wishing to donate money towards the fund at Purdue should make their checks out to "Purdue University". They should also attach a letter to the check identifying 1) the ISPLS Scholarship Fund and 2) the specific Purdue campus to which they wish their funds be credited. The letter and check should be sent to:

Division of Financial Aids
ATTN: Ann Lyons
Purdue University
West Lafayette, Indiana 47906

These scholarships help some fine students through school and encourage them to become conscientious professionals.

PLEASE GIVE !!

Criteria:

This application for concurrent memberships in the American Congress on Surveying and Mapping (ACSM) and a Member Organization. The Member Organizations of ACSM are as follows:

American Association for Geodetic Surveying (AAGS)
American Cartographic Association (ACA)
National Society of Professional Surveyors (NSPS)

Member:

Any person who has attained the required qualifications in surveying, mapping and related fields as specified below:

AAGS—

Bachelor's or higher degree in a discipline related to geodetic surveying with eight years experience. Up to four years of relevant education may be substituted for experience.

ACA—

Bachelor's or higher degree in a field of study which would qualify the person for a professional position in cartography or related fields, or four years of active professional experience in cartography or related fields.

NSPS—

- Any person licensed to practice the profession of surveying, according to state or provincial statutes; or
- a GS-1373 employee classified as a Land Surveyor or Supervisory Land Surveyor; or
- an academian holding a Bachelor's or higher degree and the rank of assistant professor or higher and teaching in an ABET or CAB accredited or a state land surveying registration board approved surveying program; or
- a practicing surveyor or a surveying teacher who has attained a minimum of six years experience in responsible charge of surveying activities or four years of education and two years of experience may submit credentials for consideration.

Associate Member:

Any person with an interest in surveying, mapping, and related fields, not eligible to be a Member as defined but meeting the criteria stated below.

AAGS/ACA—

Any person with an interest in geodetic surveying/cartography who is not eligible to be a Member.

NSPS—

Any person who by employment is actively engaged in a program leading to a career in the profession of surveying.

Student Member:

Any person pursuing a course of study as a graduate or undergraduate student on a full-time basis (as defined by the academic institution) leading to a career in geodetic surveying (AAGS), cartography (ACA), or surveying (NSPS).

How to Apply:

- Determine the highest grade of membership for which you are qualified.
- Determine which Membership Organization you wish to join (in addition to ACSM).
- Complete the Application for Membership.
- Return the completed application to:

ACSM
210 Little Falls Street
Falls Church, Virginia 22046
(703) 241-2446

Membership dues include annual subscriptions to *Surveying and Mapping*, \$5.00; *ACSM Bulletin*, \$8.00; and *ACSM News*, \$3.00. This notice is required by U.S. Postal Service regulations. These subscriptions are part of your membership benefits and cannot be deducted from your annual dues.

Dues For 1985

Member Organization	ACA	AAGS	NSPS	ACA AAGS	ACA and NSPS	AAGS and NSPS	ACA, AAGS and NSPS
Member	\$65.00	\$65.00	\$70.00	\$75.00	\$80.00	\$80.00	\$90.00
Associate	\$45.00	\$50.00	\$50.00	\$55.00	\$55.00	\$60.00	\$65.00
Student	All Student Member Dues are \$20.00						

Name: _____
Address: _____
City: _____
State: _____
Zip: _____

Education:

High School: _____ College: _____ (Years completed) _____
Highest Degree: _____
Experience: (Years) _____
Date of Birth: _____
Occupation: _____

Company's or Organization's Name: _____
☐ Private Business: _____
(If licensed, give type, state and number.)
☐ Government: _____
(Position Classification)
☐ Education: _____
(Position Title)
☐ Other: _____
(Specify)

If in Government, Education or Other, but also licensed, give type, state and number:

Read criteria above, then check membership applied for:

(Check only one) (You may check more than one, but see instructions)
☐ Member ☐ American Association for Geodetic Surveying
☐ Associate ☐ American Cartographic Association
☐ Student* ☐ National Society of Professional Surveyors

Sponsor's Name (if applicable): _____

Signature of Applicant: _____

Date: _____

*Applications for Student membership should have the following certificate completed:

I certify the applicant is a full time student.

Faculty Member Signature: _____

Date: _____ Educational Institution: _____

Payment

Enclose the appropriate payment dues with the application. Make check or money order payable to ACSM (For applicants in foreign countries, please draw and remit U.S. dollars payable in the United States.) or charge to your MasterCard, VISA, or Choice.

☐ Payment Enclosed ☐ MasterCard ☐ VISA ☐ Choice

Account Number: _____

Expiration Date: _____

Signature: _____

Date: _____

ISPLS APPLICATION FOR MEMBERSHIP

(Type or Print all information - check box for mailing address desired.)

NAME _____ AGE _____
 Last First Middle
☐ HOME ADDRESS _____ PHONE _____
 Street and Number City State Zip
☐ BUSINESS ADDRESS _____ PHONE _____
 Street and Number City State Zip
 PRESENT OCCUPATION _____
 Firm Name Position
 SCHOOL ATTENDING _____
 Name Grade
 REGISTRATION STATUS _____
 L.S., P.E. or S.I.T. Number State
 MEMBER OF AMERICAN CONGRESS ON SURVEYING AND MAPPING _____
 Yes No
 MEMBER OF LOCAL CHAPTER OF I.S.P.L.S. _____
 Yes No Chapter

TYPE OF MEMBERSHIP DESIRED

- ☐ MEMBER \$90.00
☐ JUNIOR \$50.00
☐ ASSOCIATE \$50.00
☐ STUDENT \$10.00

Check One

REFERENCES

Name Address Phone

I hereby certify the above statements are true and correct and that I will abide by the Constitution and By-Laws of the "Indiana Society of Professional Land Surveyors" and will promote and uphold its principles and objectives.

Signature

Date

MEMBERSHIP CLASSIFICATIONS

- Member:** A member of this Corporation shall be limited to Registered Land Surveyors in good standing with the Indiana State Board of Registration for Land Surveyors. A member shall be eligible to vote, hold office and to participate fully in the affairs of the Corporation.
- Junior:** A Junior Membership will be granted to those non-registered individuals who are endeavoring to make Surveying their chosen career. A Junior Member is entitled to vote and participate fully in the affairs of the Corporation but shall not be entitled to hold office.
- Associate:** An Associate Membership will be granted to anyone who is associated or affiliated with the Land Surveying profession but is not otherwise pursuing registration or any non-resident who is registered and in good standing as a Land Surveyor. An Associate Member is not entitled to vote or hold office but will receive Newsletters and be invited to participate in meetings.
- Student:** A Student Member shall have the same eligibility requirements as those of a Junior Member, except that this class of Membership shall apply for a period of four (4) years only. A Student Member is not entitled to vote or hold office but will receive Newsletters and be invited to participate in meetings.

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