

SURVEYOR

HOODS

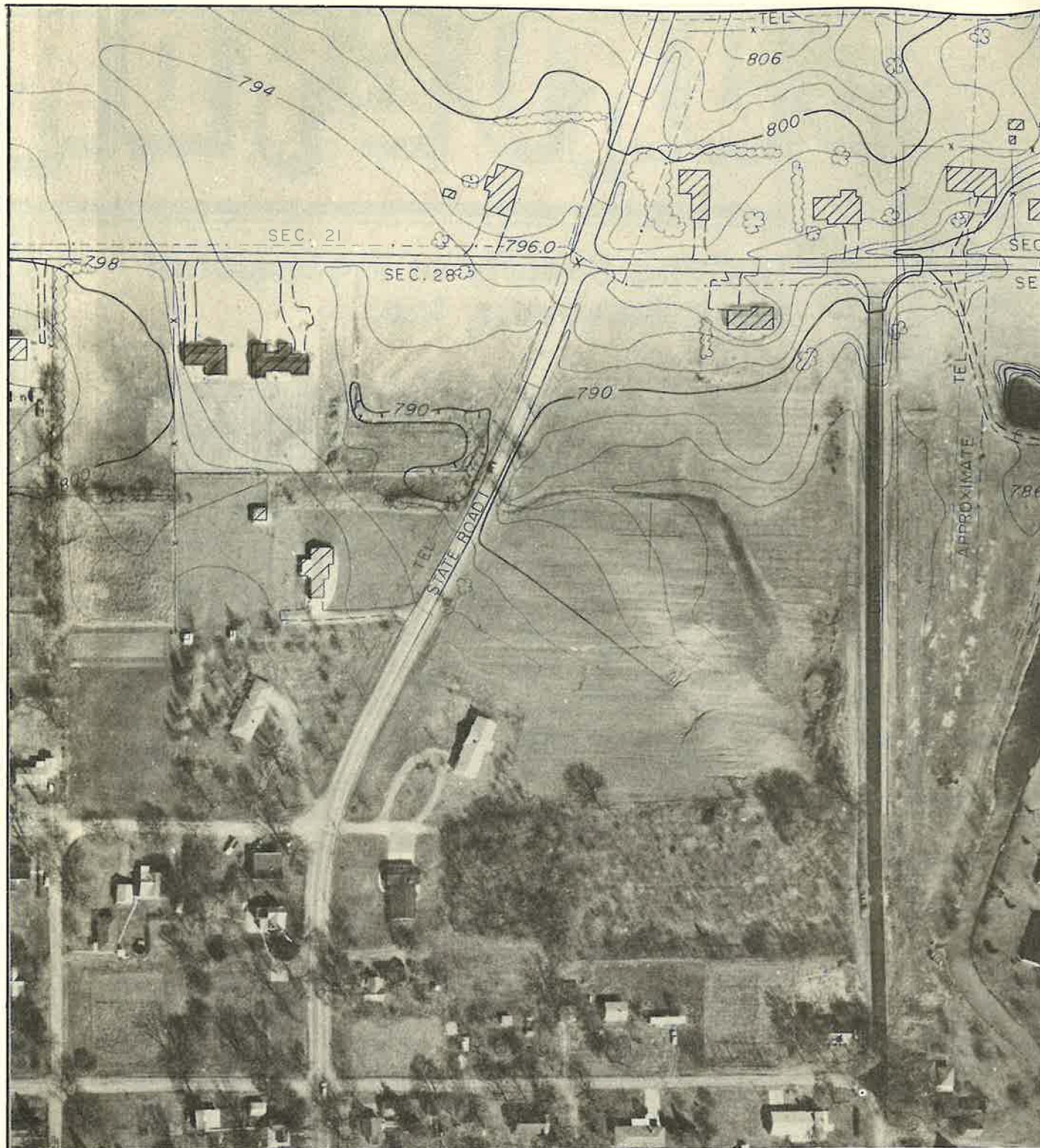
**Indiana Society of Professional
Land Surveyors, Inc.**



**VOLUME 3
NUMBER 3
FALL 1976**



- CLARK MILITARY GRANT • 1977 CONVENTION PROGRAM
- OFFICIAL BICENTENNIAL PRINT • COSA DELEGATE REPORT
- MODERN LAND DATA SYSTEMS • LEGISLATIVE PROPOSALS
- CHAPTER ACTIVITIES • COMPUTER MANUAL #5



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BRIAN M. DICKERSON PE, LS

HOOSIER SURVEYOR

VOLUME 3, NO. 3, FALL 1976

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COVER: The cover picture is a much reduced version of a beautiful color print (16 x 20 inches) endorsed by the Indiana American Revolution Bicentennial Commission as Indiana's official Bicentennial print. The artist, Edward M. Blackwell, is a well known designer-illustrator with Purdue University's visual aids department. See explanation of print on pages nine and ten. Used through the courtesy of Indiana Educational Environments Inc.

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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Kenneth S. Curtis
Editor

THE PRESIDENT'S PAGE

KEEPING CURRENT

By Brian Dickerson

Throughout history, Man has attempted to improve himself both by study and training. The most recent example of this was the ISPLS sponsored workshop held at Indianapolis on October 23, 1976. There were 64 people who attended this Fall Workshop with representation from the farthest corners of the State.

Barry Elkin, training engineer for the Indiana State Highway Research and Training Center, did an outstanding job of presenting a review on route surveying including computation of horizontal and vertical curves, structures and slopes, side ditches and curbs, and concrete-asphalt design. Those in attendance earned 0.6 continuing education units (c.e.u.).

There is a strong general trend beginning to move across the country which will require that most professionals take a certain amount of review courses before they will be eligible to renew their license. This program is known as the Recertification Act. At the present time, it is being considered in several states, including California and Kentucky, and has become a law in Iowa.

Your ISPLS Society began last year on a voluntary recertification program in an attempt to acquaint you with the program and also to be able to assist our legislators with drafting a successful bill at such time as the Indiana Legislature sees the need for such a law.

Probably the best thing we can do to be ready for this situation, is to participate in the ISPLS voluntary program. Richard Beck, chairman of the Registration Committee, will publish a summary, in the winter newsletter, of the c.e.u.'s earned by members during the past year.

In the meantime, your next opportunity to earn some more c.e.u.'s and to improve your own skills will be at the Annual Meeting, January 27, 28 & 29, 1977. I believe that your annual workshop program committee has another excellent program lined up.

Remember, all full time employees of Member Firms, get a 20% reduction in registration fees - a real incentive to help your people to improve their own skills.



1976 ISPLS Officers - (left to right) Secy.-Treas. Orwic Johnson, Columbus; President Brian Dickerson, Lafayette; President-Elect John Schneider, Indianapolis; and Vice-President Zohrab Tazian, Fort Wayne.



Brian M. Dickerson
President



Stouffer's Indianapolis Inn will again be the site of 1977 ISPLS convention, January 27-28-29, 1977.

1977 ISPLS LEGISLATIVE PROPOSALS

The Board of Direction of the Indiana Society of Professional Land Surveyors, Inc. met on Thursday, August 5, 1976 in Indianapolis to review the legislative committee's report presented by Luther Condre, chairman. After considerable discussion and suggestions, the board directed the legislative committee to proceed with immediate action based on the following priorities:

1. Plat act amendment
2. Funding of the corner perpetuation act
3. Trespass act
4. Legal survey act revision

Preliminary drafts of two bills have been forwarded to the Legislative Council for writing. One will be introduced by State Representative William L. Soards and the other by one of his colleagues. Since these are the only bills the Society intends to introduce this year, the cooperation of all ISPLS members is urgently requested in supporting these efforts.

The preliminary drafts of the proposed bills are as follows and any questions should be addressed to Luther Condre (317/898-8282):

DIGEST

Adds IC 1971, 17-3-43-4 to prevent granting of title to real estate which is not all of the grantor's original tract, without recording of plat in subdivision book of the county recorder or providing a drawing of the parcel conveyed.

A BILL FOR AN ACT to amend IC 1971, 17-3-43 concerning conveyance of land,
BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF INDIANA:

SECTION 1, IC 1971, 17-3-43 is amended by adding a new section 4 to read as follows: Sec. 4, Any conveyance of the title to real estate which is not the total of the real estate originally conveyed to the grantor in one (1) conveyance shall not be accepted by any county auditor for transfer unless:

(a) a plat of same has been recorded in the subdivision plat book in the county recorder's office in compliance with IC 1971, 25-31-1-19 (b); or

(b) a drawing of the conveyance has been prepared, signed, and sealed by a land surveyor registered as such in the state of Indiana, showing its relationship to the total real estate from which it is taken, and is attached to the conveyance.

(c) In order for the Auditor to quickly ascertain whether the conveyance is for all or part of the grantor's land, a notation shall be made on all conveyances at the conclusion of the description of the parcel, stating whether it is all, or a part of, or the remaining part of the land conveyed to the grantor in a certain conveyance stating where the conveyance is recorded. A conveyance shall be in compliance with this section if it contains a statement in the following form:

"Being part (or all) or the remaining part of the land conveyed to John and Mary Doe in Deed Record _____ page

(d) A fee of One Dollar (\$1.00) for each conveyance so recorded shall be collected by the County Recorder on Real Estate matters. This conveyance fee shall remain in the County where the transaction is made and shall be dedicated for the exclusive use of perpetuating Section Corners. In the event that any provision of this Act shall be found to be unconstitutional, the remaining provisions shall stay in effect.

DIGEST

An Act to provide Land Surveyors with a right of entry and to limit liability.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF INDIANA:

SECTION 1, As used in this act, "surveyor" means either of the following:

(a) A person who is a Land Surveyor registered in this State.

(b) A person who is under the direct supervision of a person who is a surveyor under subdivision (a) and carrying on his person sufficient identification as to employer.

SECTION 2, A surveyor may enter upon public or private lands or waters in this state except buildings, for the purpose of retracing the record lines courses and boundaries established by Section Corners, Quarter-Section Corners, Center Quarter-Section Corners, Closing Corners, and Meander Corners. No such retracement shall be so executed as to impair the bona fide rights or claims of any claimant or owner of lands affected by such retracement. A vehicle used for or during entry pursuant to this section shall be identified on the exterior by a proper and ethical sign listing name, address, and telephone number of the surveyor or firm.

SECTION 3, A surveyor making entry pursuant to Section 2, shall be liable only for actual damage to crops or other property, or for actual damage due to negligence of the surveyor during the entry.

SECTION 4, The surveyor by his entry shall forfeit any and all claims for damage or injury to his person and equipment while on the lands or waters, unless the damage or injury is caused by intentional tortious conduct of another. This act is ordered to take immediate effect. In the event that any provision of this Act shall be found to be unconstitutional, the remaining provisions shall stay in effect.

CHAPTER ACTIVITIES

TECUMSEH CHAPTER (centered at Lafayette)

The 1976 officers of the Chapter are:

Chairman: John Irr

Vice-chairman: Russ Ticen

Secretary: Burton Vester

The meetings during the Fall have centered around the problem of the jurisdiction of local governmental agencies and unlicensed persons with respect to construction plans and plats. A meeting in late October was a rewarding discussion of guidelines on ethics and procedures with respect to practicing land surveying and engineering with Mr. T. Virta, Executive Director of the Tippecanoe County Area Plan Commission, and members of the executive committee of A.P.C. The problem appears to center around the fact that land development both in Lafayette and West Lafayette as well as the county is taking place via an Area Plan Commission making engineering decisions without the advice of an engineer or land surveyor. This is resulting in some serious problems. For example such items as drainage, percolation, sewage treatment and transportation are being judged by non-engineers without any engineering input.

NORTHWEST INDIANA CHAPTER (composed of the following counties: Lake, Porter, LaPorte, Newton, Jasper, and Starke)

The 1976 officers of the Chapter are:

PRESIDENT — Jose Julio La Frossia

PRESIDENT-ELECT — William Andrews

SECRETARY-TREASURER — James Keil

THREE YEAR DIRECTOR — Emil Beeg (3 years)

TWO YEAR DIRECTOR — William S. Tanke (1 more year)

THREE YEAR DIRECTOR — Charles D. Hendricks (2 more years)

ONE YEAR DIRECTOR — Robert A. Krull (1 year)

The Chapter has a membership of 25 land surveyors of which only 10% are not registered. Thoughts of organization began in March 1974 and, after four organizational meetings, officers were elected and installed in December 1974. During 1975 the Chapter had four general meetings, plus a few other meetings of committees studying fees and location surveys. As a rule the chapter intends to meet at least 4 times a year.

Among the subjects which have been included in past meetings are the following: (a) Role of the County Surveyor; (b) O.S.H.A. and the Surveyor; (c) Mortgage Loan Inspection Plats; (d) Discussion of Minimum Fees for Various Types of Surveys; and (e) The Metric System and the Surveying Profession.

Future meetings will concern the enunciated areas in which the Chapter intends to help the surveyor, namely: (a) support of the Indiana State Society; (b) establishment of local and state standards; (c) furtherance of professional status and community education; (d) support of county surveyors; (e) establishment of a local code of ethics; (f) standardization of equipment and methods; and (g) new concepts and methods of land surveying.

NORTHEAST INDIANA CHAPTER (centered at Fort Wayne)

The 1976 officers of the Chapter are:

President: William Davis

Vice-president: Jerry Walker

Secretary-Treasurer: Joseph Stoodly

One of the chief accomplishments during 1975 was the development of minimum standards for surveys which had been requested by the Allen County Bar Association.

CENTRAL INDIANA CHAPTER (centered at Indianapolis)

The 1976 officers of the Chapter are:

President: James K. Vinton

Vice-President: Luther R. Condre

Secretary: Charles M. Hillery

Treasurer: Joe M. Blevins

Director: Brad DeReamer

Director: John V. Schneider

Director: Charles C. Campbell

Plans for 1976 called for a calendar of eight meetings during the year including a family outing in July and a holiday meeting in December. Eleven Chapter committees have been organized and members assigned.

Two of the programs have been: (a) Setting Field Corners for Survey Projects and Certification of Survey Projects by Al McConahay, Wes Day, Jim Dankert, and Allen Weihe; and (b) Invoicing and Fee Collection for Survey Projects under the Legal Committee chaired by Neil Franklin.

The following is a list of ISPLS member firms:

Anderson & Associates, Engineering
222 East Main Street
P. O. Box 585
Lebanon, IN 46052

B & K Engineering, Inc.
P. O. Box 546
Kendallville, IN 46755

H. R. Blankenknecht & Son
P. O. Box 157
Jeffersonville, IN 47130

Edwin O. Boyd
602 Main Street
Petersburg, IN 47567

Brady Land Surveying, Inc.
55308 Jay Dee Street
Elkhart, IN 46514

Paul I. Cripe, Inc.
150 East Market Street
Indianapolis, IN 46204

Richard E. Davidson
125½ West Main Street
Portland, IN 47371

Dickerson Aerial Surveys
729 S. Fourth Street
Lafayette, IN 47905

District 9 Land Survey Co.
202 West High Street
Lawrenceburg, IN 47025

John R. Donovan
2030 Inwood Drive
Fort Wayne, IN 46805

John E. Fisher
1526 Main Street
Lafayette, IN 47905

Indiana Surveying Co., Inc.
25 West Main Street
Greenfield, IN 46140

Mid-States Engr. Co., Inc.
107 North Pennsylvania Street
Indianapolis, IN 46204

Plumb, Tuckett & Hubbard
6481 Taft Street
Gary, IN 46410

Reid, Quebe, Allison, Wilcox & Assoc.
Inc.

3901 Industrial Boulevard
Indianapolis, IN 46254

Schneider Engineering Corp.
3675 N. Post Road
Indianapolis, IN 46226

Sieco, Inc.
309 Washington Street
Columbus, IN 47201

William S. Tanke
R R 4, Tower Road
Valparaiso, IN 46383

Weihe Engineers, Inc.
10505 N. College Avenue
Indianapolis, IN 46280

LAND-SURVEYOR-GENERATED CONSTRUCTION PLANS

There has been a rumor passing around that the Indiana State Board of Health was not approving plans from land surveyors with on-site sanitary sewers. The ISPLS Board has investigated and there is no basis to the rumor. The State Board of Health is substantially following the law. The extent of approval for off-site lines to the interceptor or trunk line remains a matter of judgement by the Board of Health.

To clarify the situation the following is quoted from the Registration Act regulating and defining the practice of land surveying in Indiana:

(g) The term "practice of land surveying," as used in this act, shall mean the establishment or reestablishment of corners, boundaries, and locations of lots, parcels, tracts or divisions of land, including distances, directions, and acreage, and including, but not limited to, the correct determination and description of the same for any of the following purposes:

(1) To furnish a legal description of any land surveyed to be used in the preparation of deeds of conveyance;

(2) To furnish a legal description of any land surveyed to be used in the platting or subdividing of said land;

(3) To determine the amount of acreage contained in any land surveyed;

(4) To furnish a topographic plat of a lot, parcel, tract or division of land; or

(5) To prepare a legal description of any tract of land, to be used in the preparation of deeds of conveyance except: (i) when the description is the same as the one in the deed of conveyance to the current owner or (ii) when bearings, distances, or measurements are not needed to properly describe the tract being conveyed.

(h) The term "practice of land surveying," as used in this act, shall also include, for and within subdivisions being laid out or having been laid out by the land surveyor, the preparation and furnishing of plats, plans, and profiles for roads, storm drainage, sanitary sewer extensions, and the location of residences or dwellings where such work involves the use and application of standards prescribed by local, state or federal authorities, and shall also include the necessary staking and layout work to construct said roads, storm drainage, sanitary sewer extensions or location of residences or dwellings where the plans and profiles were prepared by or under the direction of a land surveyor as defined in this act. It shall also include preliminary surveys for preparation of plans for engineering and building construction projects and the staking out of the same from plans prepared by a registered professional engineer or by a registered architect. It shall also include all work incidental to cleaning out, reconstructing or maintaining existing open and tile drains. This shall not be construed so as to permit the land surveyor to include the design and construction of sewage disposal stations, lift stations, commercial buildings, pumping stations, bridges or to prepare engineering plans for the construction of engineering projects. The term "practice of land surveying" shall not be construed as to prohibit a registered professional engineer from doing any work defined herein which does not involve the location, description, establishment, or reestablishment of property corners or property lines.

**COSA DELEGATE REPORT
1976 ACSM MID-YEAR CONFERENCE
SEATTLE, WASHINGTON**

By Neil Franklin
1976 COSA delegate from ISPLS

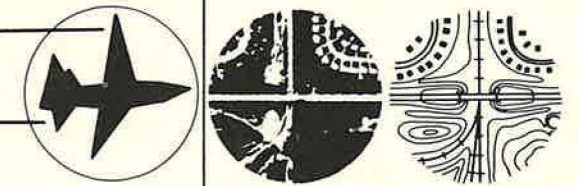
The ACSM Council of Sections and Affiliates met for two half-day sessions in conjunction with the 1976 ACSM Mid-year Conference. Attendance was down slightly, possibly because of the travel distance involved, but still 37 of approximately 70 member organizations were represented. It was pointed out that only seven state societies had submitted written reports of their activities to both 1976 COSA meetings, as required, and all seven of these state societies were represented at the Seattle meeting. Happily, ISPLS was included in that select group.

In addition to sharing state society activities during the past six months, a number of items of general concern to all land surveyors were discussed. Outstanding among these were:

1. **MOONLIGHTING** - An official policy statement on "moonlighting" is being prepared, to be included in the ACSM Manual of Professional Practice. Although there was a strong vocal minority which insisted moonlighting was unethical and should be totally prohibited, the prevailing consensus held that the part-time practice of land surveying should be permitted, provided it was done properly and ethically, without conflict of interest, and with the knowledge and acquiescence of the surveyor's full-time employer. This policy, in its final form, will be presented for adoption at next year's Annual Meeting in Washington.
2. **JOB CLASSIFICATION** - Apparently the Washington bureaucracy has generated several dictionaries, or glossaries, of job classifications for use by various government agencies, and each of these lists "Surveyor" as a technician sub-category under "Civil Engineer". The ACSM Board has recognized the necessity of re-defining the surveyor's job classification, and has appointed a Task Force to pursue this matter at a Washington level.
3. **NATIONAL SURVEYING TEACHERS CONFERENCE** - COSA adopted a resolution supporting this ninth triennial conference. Each state society is urged to budget \$100.00 per year to support this and subsequent conferences and is also urged to send a representative to this and subsequent conferences. Until now, financial support has come, albeit reluctantly, from various engineering societies, and it is time for surveyors to reclaim control of their own profession's curricula. As Fritz Petersohn, delegate from Massachusetts, said, "We have an opportunity to design our own destiny."
4. **ORGANIZATION** - COSA was given the opportunity to critique a draft of proposed revisions to the by-laws of the Land Surveys Division, the largest of the three divisions of the American Congress on Surveying and Mapping. These revisions will streamline the administration of LSD, as well as provide for a regionally elected Board of Directors—one Director from each of several pre-determined geographical areas, elected by the members residing within that area. There is still some feeling that ACSM does a less than adequate job of representing the local land surveyor, and this change will give the local land surveyor a direct and identifiable line of representation, through the LSD Board, to the national organization.
5. **WISCONSIN FILM** - The Wisconsin Society of Land Surveyors has prepared a beautiful 26-minute film which explains and interprets the practice of land surveying. This film can be rented for use with interested groups, and arrangements have been made to show it to the 1977 ISPLS Annual Conference.

Apropos of nothing special, it was a pleasant conference, and the Seattle group should be complimented for their preparations. Lois particularly enjoyed the women's events. Since we were strangers to the whole Pacific coast, after the conference we rented a car and drove down No. 101 to San Francisco—over nine hundred miles, within sight of the ocean almost all the way. That's a trip well worth anyone's time and expense!

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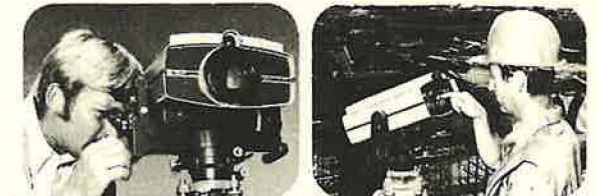
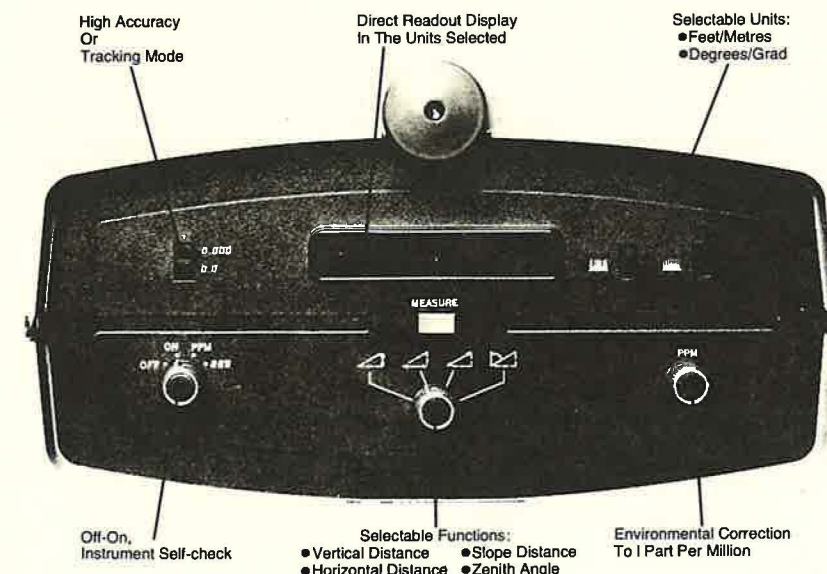
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(*Price includes postage)

MORE ABOUT MANUAL NO. 5 COMPUTER PROGRAMS (HP-65 DOCUMENTATION)

By Charles C. Campbell
Indianapolis, Indiana

During 1975, the ISPLS Inc. was faced with a financial crisis and as one of the directors, I offered my copies of forty programs, that I had given to the Hewlett-Packard Company, to the ISPLS Inc., in order to generate funds to ease the crisis. One thing led to another and the final result is Manual No. 5, which contains 51 programs (50 on surveying). About two years of work went into the manual, much of it during my recovery from the illness that I had in November, 1974. And through the grace of God, I lived, hopefully to help my fellow surveyor and our state society.
The manual is written in the format for direct documentation for the HP-65. However there are many ideas, formulas, and routines, which should benefit the users of any type computational equipment. As I understand, the programs can be easily converted to other HP computation equipment, because of the four register stack, similar instructions, etc. In the preface of the manual I had written, "now we have the HP-65 manufactured by the Hewlett-Packard Company, which probably is still not the ultimate, but close to it." That comment is now antiquated, for there now exists the HP 67 and 97, which are about three times as powerful as the 65. The 65 programs should be easily adaptable to the 67/97 by adding the "print x" instruction, perhaps eliminating some of the "R/S" instructions, and rewriting the two steps which follows the "test flag" and relational test instructions.
Anyone who is contemplating purchasing a hand held "computer", may wish to read the preface and the introduction in the manual, before purchasing.

- The following programs are in the manual:
ANGLES TO AZIMUTH
AZIMUTH TRAVERSE/INVERSE
AZIMUTH-AZIMUTH INTERSECT
AZIMUTH-DISTANCE INTERSECT
DISTANCE-DISTANCE INTERSECT
STA./OFFSET CALC.
BEARING TRAVERSE/CURVES
HORIZONTAL STREET CURVES
LEAST SQUARES TRAVERSE ADJUSTMENT
CURVE FROM C & L
SPECIAL ANGLE COMPUTATION, CASE 1
SPECIAL DISTANCE COMPUTATION, CASE 1
SPECIAL ANGLE COMPUTATION, CASE 2
SPECIAL DISTANCE COMPUTATION, CASE 2
SPECIAL ANGLE COMPUTATION, CASE 3
SPECIAL DISTANCE COMPUTATION, CASE 3
TANGENT ELEVATION
VERTICAL CURVE ELEVATION
YARDAGE
Q FOR DITCH (MANNINGS)
D FOR DITCH (MANNINGS)
BOX CULVERT (CDH METHOD)
AZIMUTH FROM SUN (H. A. METHOD)
AZIMUTH FROM POLARIS
POLAR DISTANCE INTERPRETER
- MEAN TIME/ANGLE
STOPWATCH
PHOTOGRAMMETRY I
PHOTOGRAMMETRY II
PHOTOGRAMMETRY III
CURVED STREET FIT
EQUAL DELTA REVERSED CURVES
CURVE THRU POINT
CURVE FROM 3 POINTS
GROUND/GRID CONV.
GEO./GRID AZIMUTH CONV.
BUILDING RADIAL STAKE-OUT
EDM/STAKE-OUT
EDM/STAKE-OUT TWO
ELEVATION & HORIZ. DIST. FROM ZENITH ANGLE & SLOPE DIST.
ELEVATION FROM ZENITH ANGLE & HORIZ. DISTANCE
EDM RADIAL CURVE STAKE - OUT OS
CURVE STAKE-OUT
CURVE-STAKE FROM PI
TANGENT OFFSETS
CHORD OFFSETS
STADIA REDUCTIONS
GEODIMETER (REG) ATMOSPHERIC CORRECTIONS
GEODIMETER (REG) MO. 700 REDUCTIONS
GEODIMETER (REG) MO. 76 REDUCTIONS

TIME TRIALS (NON-SURVEYING)

The above titles indicate the usage of the programs.
The high-light a few of the programs:
The "Azimuth Traverse/Inverse" program: Allows the unknowns to be computed by traversing or inverting from the same point or from point to point. Also the last azimuth traversed or inverted, may be used in the traverse routine as is or rotated any amount left or right.
The three intersection programs computes the two unknown lengths or azimuths and the coordinates of the intersecting point, which coordinates are stored for use as the starting coordinates with the "Azimuth Traverse/Inverse" program. The above four programs all utilize North azimuths, since they are much more efficient to use for plat computations and field layout.
Horizontal Street Curves: computes the tangent, radius, degree of curve, arc length, and chord length for the centerline, inside R/W line, and outside R/W line, given the street R/W width, delta and tangent or delta and radius of the centerline.
Yardage: This program uses a cross-section method to compute cut and fill volumes. Some programs merely yield the mass-ordinate.
D for ditch (Mannings): This program Neil Franklin, myself, and others worked on for quite some time, to iterate for the depth of a trapezoidal ditch, given the other known parameters. The iterating process was named "The Franklin Iteration".
Azimuth From Sun (hour angle method) and from Polaris are from ISPLS Manual No. 4 on azimuth determination.
Building Radial Stake-out: computes angles and distances to building corners from a central point, to facilitate building stake-out. Another set of computations would then be used to "pin the footing", from the same point.
Given an interval, the stationing is automatically computed in the elevation programs and the five various curve stake-out programs, which eliminates some of that "plus and minus" math.

(EDITOR'S NOTE: Charles C. Campbell has been a most prolific contributor of well-documented and useful surveying programs for computers. Many of these exceptional programs are a part of the HP Catalog of Contributed Programs. ISPLS is indebted to Charles for these professional contributions.

The cover picture is a much reduced version of the beautiful color print (16 x 20 inches) endorsed by the Indiana American Revolution Bicentennial Commission as Indiana's official Bicentennial print. The artist, Edward M. Blackwell, is a well known designer-illustrator with Purdue University's visual aids department.

The print is being distributed by Indiana Educational Environments Inc. at the following address:

Indee Inc.

515 Meridian Street

West Lafayette, Indiana 47906.

The cost in advance is \$2.95 per print, plus \$1.00 for sales tax, postage, and handling; for more than 25 prints costs are \$1.75 per print plus tax, postage, and handling. There are also 250 numbered copies, signed by the artist, matted, and framed, available for \$50 each plus \$9.95 for tax, postage, and handling.

A publicity brochure gives the following explanatory material.

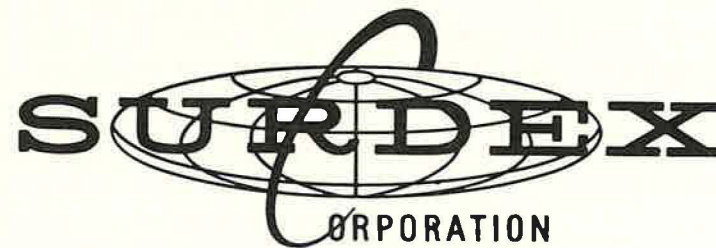
WABASH CANNONBALL — famous Wabash Railroad passenger train, immortalized in song. **BILL BLASS (Fort Wayne)** — acclaimed American fashion designer; twice received the Coty American Fashion Critics' Award. **DAN PATCH** — famous pacer owned by Dan Messner Jr. of Oxford; never lost a race in a nine-year career; established several pacing records. **STEEL INDUSTRY** — started in Indiana by U.S. Steel under the Presidency of Judge Elbert Gary; has grown into the "Calumet Region," third largest steel-producing region in the United States. **INDIAN GROUP** — **LITTLE TURTLE** (Michikinikwa) — Miami Indian chief defeated at the Battle of Fallen Timbers; credited with creating friendly relations between the Miami and the whites. **TECUMSEH** — Chief of the Shawnee; tried to unite Indians against whites; his forces were defeated at the Battle of Tippecanoe (1811). **THE PROPHET** (Tenskwatawa) — half-breed, Shawnee medicine man; brother of Tecumseh; incited Indian forces at the Battle of Tippecanoe. **STATE EMBLEMS** — the tulip tree was adopted as the state tree in 1931. The peony was adopted as the state flower in 1957, replacing the zinnia. The cardinal was adopted as the state bird in 1933. The state seal was selected in competition in 1919, using the design of Joseph Earl Schrack of Indianapolis. The state flag, designed by Paul Hadley of Mooresville, was adopted in 1917. **POLITICAL GROUP** — **EUGENE V. DEBS** (Terre Haute) — labor leader and founder of the American Socialist Party; five times Socialist candidate for President. **THOMAS R. MARSHALL** (Columbia City) — Democratic Governor of Indiana; Vice-President under Woodrow Wilson. **THOMAS A. HENDRICKS** (Shelbyville) — Democratic Governor of Indiana; Vice-President under Grover Cleveland. **WENDELL L. WILKIE** (Elwood) — "the barefoot Wall Street lawyer," Republican Presidential candidate opposing Franklin D. Roosevelt's third term; wrote the best selling, "One World" in 1943. **SCHUYLER COLFAX** (South Bend) — Republican Speaker of the U.S. House during the Civil War; Vice-President under U.S. Grant. **CHARLES W. FAIRBANKS** (Indianapolis) — Republican Senator; Vice-President under Theodore Roosevelt. **BENJAMIN HARRISON** (Indianapolis) — Civil War veteran; 23rd President; grandson of William Henry Harrison. **WILLIAM HENRY HARRISON** (Vincennes) — Governor of Indiana Territory; victor at the Battle of Tippecanoe; ninth President (Whig Party); died in office. **ABRAHAM LINCOLN** (Spencer County) — spent fourteen years in southern Indiana; 16th President (Republican); assassinated. **AMERICAN BEAUTY ROSE** — popular variety of rose originated by Hill greenhouses of Richmond. **AEROSPACE GROUP** — Indiana has played an important role in the development of the American aerospace industry; starting with Octave Chanute and his glider experiments on the Indiana Dunes and the first U.S. Air Mail Flight by the balloon "Jupiter" from Lafayette, through the Wright Brothers' (Henry County) work in heavier-than-air flight; James A. Allison and his contributions to the design of aircraft engines and Amelia Earhart's aborted trans-global flight (Purdue University) to the space program; Indiana contributed five astronauts to the space program (Armstrong, Cernan, Grissom, Chaffee, and Borman), including the first man on and the last man off of the moon (Armstrong and Cernan). **NEWSPAPER GROUP** — **ROY HOWARD** (Indianapolis) — rose through the ranks of working newspapermen; editor of New York *World-Telegram and Sun*; manager of United Press; chairman of the executive board of Scripps-Howard newspaper chain. **ERNIE PYLE** (Dana) — journalist; popular World War II correspondent; worked for Howard's chain; killed at Ie Shima. **MILITARY GROUP** — **WILLIAM HENRY HARRISON** — see Political group. **AM. BROSE BURNSIDE** (Liberty) — Civil War general; Commander of Union Army; originator of "sideburns." **GEORGE ROGERS CLARK** (Clarksville) — frontiersman; Revolutionary War hero; secured the Northwest Territory for the United States. **"MAD" ANTHONY WAYNE** (Fort Wayne) — Revolutionary War general; victor at the Battle of Fallen Timbers. **SAMUEL WOODFILL** (Bellevue) — World War I captain; winner of the Congressional Medal of Honor; selected by General John Pershing as the outstanding American soldier of World War I. **DR. RICHARD J. GATLING** (Indianapolis) — physician and inventor of several pieces of farm machinery

as well as the "Gatling Gun," the forerunner of the modern machine gun. **LEWIS B. HERSHEY** (Angola) — extensive military career; served as head of Selective Service System for almost 30 years. **EMPIRE STATE BUILDING AND THE PENTAGON** — two of many buildings constructed of Indiana limestone; others include Rockefeller Center, U.S. Treasury Building and the State Department Building; about 15 million cubic feet of this limestone is produced annually (80% of all building limestone). **DR. ALFRED C. KINSEY** (Bloomington) — sociologist and biologist; organized Indiana University's Institute for Sex Research to study human sexual behavior; authored the *Kinsey Report*. **JOHN DILLINGER** (Indianapolis) — gangster; "Public Enemy Number One," killed in Chicago in 1934 by G-Men. **RENO BROTHERS** (Jackson County) — staged the world's first train robbery when they took \$15,000 from an express car during the night of October 6, 1866. **ELMO LINCOLN** (Fulton County) **AND JAMES PIERCE** (Owen County) — two of the early radio and movie Tarzans. Pierce married the daughter of Edgar Rice Burroughs, creator of the Tarzan character. **ROBERT INDIANA (New Castle)** — painter, sculptor and serigrapher; known for the widely-used "LOVE" design. **T. C. STEELE** (Owen County) — artist; studied in Munich; one of the originators of the Brown County school of art. **CELEBRITIES GROUP** — **RED SKELTON** (Vincennes) — famous motion picture and TV comedian. **JAMES DEAN** (Marion) — motion picture actor; symbolic idol of alienated 1950's youth; starred in "East of Eden" and "Rebel Without a Cause." **CLIFTON WEBB** (Indianapolis) — motion picture actor; starred in many movies, including "Sitting Pretty," "Cheaper by the Dozen," and the "Mr. Belvedere" series. **HOAGY CARMICHAEL** (Bloomington) — composer and actor; composed "Star Dust," "Ole Buttermilk Sky," "Georgia on My Mind," and "Heart and Soul;" received Academy Award for "In the Cool, Cool, Cool of the Evening." **CAROLE LOMBARD** (Fort Wayne) — motion picture actress and comedienne; married Clark Gable; starred in "I Take This Woman," "My Man Godfrey" and "To Be or Not to Be." **PHIL HARRIS** (Linton) — famous bandleader and actor. **MARJORIE MAIN** (Shelbyville) — motion picture, character actress and comedienne; in over 80 movies; starred in "Ma and Pa Kettle" films, as well as many serious movies. **COLE PORTER** (Peru) — composer of such hits as "Night and Day," "Begin the Beguine," "I've Got You Under My Skin," and many others. **FORREST TUCKER** (Indianapolis) — motion picture and TV actor; star of TV series, "F Troop." **WILL GEER** (Frankfort) — actor and TV star in the role of Grandpa on "The Waltons." **DEAN JAGGER** (Fort Wayne) — motion picture star of "The Robe;" Academy Award winner; TV actor. **STEVE McQUEEN** (Indianapolis) — motion picture and TV actor; starred in "Bullitt" and "The Great Escape." **CIRCUS GROUP** — William Cameron Coup of Mount Pleasant, Indiana, created the first, big American circus. Hagenbeck-Wallace and other circuses made Peru their winter home and produced such immortals as Clyde Beatty, big cat tamer, and Emmett Kelly (Lafayette), greatest of the American clowns. **AUTO-MOBILE GROUP** — Indiana has been a leader in the automobile industry and has a well-developed highway system. Elwood Haynes and the Apperson brothers developed the first true auto in Indiana. Over 200 different autos have been produced in Indiana; among these are the Auburn, Bush, Cole, Cord, Duesenberg — the Doozy — Durant, Marmon, Maxwell, Premier, Stutz and Studebaker. Kenneth McConaughay (Lafayette) was a guiding force in the asphalt industry. **SPORTS GROUP** — **GIL HODGES** (Princeton) — baseball player with the Brooklyn Dodgers; later managed the New York Mets to a World Series title. **DON LARSEN** (Michigan City) — baseball pitcher; while with the New York Yankees, he pitched the first and only perfect game in World Series history against the Brooklyn Dodgers. **KNUTE ROCKNE** (South Bend) — football player and coach; directed fortunes of University of Notre Dame. **GEORGE MCGINNIS** (Indianapolis) — basketball player; lead his high school team to state title; played for Indiana University and later lead the Indiana Pacers to several ABA championships. **OSCAR ROBERTSON** (Indianapolis) — basketball player; lead Indianapolis Attucks to state basketball crown; played for

University of Cincinnati; played professional basketball with the Cincinnati Royals and the Milwaukee Bucks. **JOHN WOODEN** (Martinsville) — basketball player and coach; won All-America honors at Purdue; coached UCLA to an impressive total of 10 NCAA basketball championships; only person in basketball Hall of Fame as both a player and coach. **JAMES "DOC" COUNSILMAN** (Bloomington) — swimming coach; coached Indiana University to several NCAA swimming titles; coached U.S. Olympic swim team. **DICK "THE BRUISER" AFFLIS** (Indianapolis) — professional wrestler; played professional football with the Green Bay Packers; professional wrestler for over 20 years; has held both individual and tag team titles. **BOB GRIESE** (Evansville) — football player; All-America at Purdue; quarterbacked Miami Dolphins to successive Super Bowl titles. **CHRIS SCHENKEL** (Leesburg) — ABC sports announcer. **CHARLES O. FINLEY** (LaPorte) — sports innovator and owner of the World Champion baseball team, the Oakland A's. **TONY HULMAN** (Terre Haute) — President of the Indianapolis Motor Speedway; President of Hulman and Company and Coca-Cola of Indianapolis; benefactor of Rose-Hulman Institute in Terre Haute. **WILBUR SHAW** (Shelbyville) — race car driver; three time winner of the Indianapolis 500. **CARL G. FISHER** — "The Fabulous Hoosier;" conceived the Indianapolis Motor Speedway; founded Miami Beach, Florida; and pioneered cross-country highways. **KENESAW M. LANDIS** (Logansport) — first commissioner of baseball; was responsible for restoring baseball after "Black Sox" scandal. **FORD FRICK** (Weoka) — sportswriter and third commissioner of professional baseball. **AGRICULTURE GROUP** — Being an agricultural state, Indiana is a major producer of corn, popcorn, tobacco, onions, soybeans, wheat and other small grains, mint and livestock. James Oliver of South Bend made a major contribution to American agriculture with his development of the chilled steel plow. Indiana is also a major processor of agricultural products as exemplified by Central Soya of Fort Wayne, the nation's largest soybean processor and leading feed manufacturer. **ISAAC GIMBEL** (Vincennes) — merchant; co-founder and first head of the department store enterprise, Gimbel Brothers Inc. **ALVA ROEBUCK** — watchmaker and merchant; co-founder with Richard Sears of Sears, Roebuck and Company. **BUSINESS GROUP** — **NATIONAL HOMES** — producing its first factory-built, pre-fabricated home in 1940; the Lafayette-headquartered home builder is recognized as the nation's leading builder of mass-produced homes. **MAYFLOWER** — founded by Conrad M. Gentry and associates in Indianapolis in 1927; the Mayflower Transit Company was to grow into one of the world's largest long-distance moving services for household goods. **MEAD JOHNSON** — starting with the production of Dextri-Maltose, a pioneer milk additive for infant formulas; Evansville-based Mead Johnson now markets about 200 products including Pablum and Metrecal. **MILES** — founded in 1884 by Elkhart doctor, Franklin Miles, the company's first major product was Alka-Seltzer. The company also produces more than 200 medicinal and pharmaceutical items, including One-A-Day and Chocks vitamins and Bactine. **VAN CAMP** — Gilbert Van Camp, an Indianapolis grocer, packed his first can of pork and beans in 1861. The company later merged with the Stokely canning operation. Their largest selling item is still Van Camp's Pork and Beans, the largest selling pork and beans in the world. **STERLING** — first started in Evansville by Henry Schneider, the brewery passed through several hands before becoming the Sterling brand. **LaFENDRICH** — founded by the Fendrich family in 1850, the Fendrich brand became synonymous with hand-rolled cigars;

John H. Fendrich created the LaFendrich brand in honor of his father. **WAYNE CANDIES** — starting as the Heit-Miller-Lau Company of Fort Wayne, Wayne Candies Incorporated was formed in 1902. The 58-year-old Wayne Bun remains one of the nation's leading candy bars. **MEAT PACKERS** — because of the strong, agricultural base in Indiana, several large meat packing companies have developed in the state; among these are Eckrich, Marhofer and Stark Wetzel Foods. **TOMATO JUICE** — was first served at the French Lick Springs Hotel in 1925. The juice was first presented as a health beverage. **CLABBER GIRL** — traditional, baking powder product marketed by Hulman and Company of Terre Haute. **LILLY** — founded by Colonel Eli Lilly, the company developed the first large scale production of insulin. Lilly also was a pioneer in making the first Salk polio vaccine available for mass distribution. More than 900 Lilly products are produced in the field of human medicine. **CONN** — starting with a cushion-rim mouthpiece to protect a lip injury, Charles G. Conn expanded his musical interest into the world's largest production of band instruments. **BALL** — produced their first glass container in Muncie on March 1, 1888. Today Ball produces a wide variety of products in the fields of packaging, graphic arts, building materials, aerospace, communications and instrumentation. The state university in Muncie was named for the Ball Brothers. **MADAME WALKER** (Indianapolis) — the first Negro woman millionaire; founded Walker Manufacturing Company with a hair dressing formula in 1910. **JOHN MUIR** — naturalist and conservationist. **AUTHOR GROUP** — **GEORGE ADE** (Brook) — journalist, playwright and humorist; noted for his "Fables in Slang." **JAMES WHITCOMB RILEY** (Greenfield) — "The Hoosier Poet;" wrote such classics as "The Ol' Swimmin' Hole" and "Li'l Orphant Annie." **BOOTH TARKINGTON** (Indianapolis) — novelist; wrote Pulitzer Prize winner, "Alice Adams" and the "Penrod" series. **THEODORE DREISER** (Terre Haute) — novelist; leader of the realistic school of writing; wrote "Sister Carrie" and "An American Tragedy." **LEW WALLACE** (Crawfordsville) — Civil War general; territorial governor of New Mexico; Ambassador to Turkey and author of "Ben Hur." **WILLIAM E. WILSON** (Evansville) — professor and author; wrote "The Angel and the Serpent," "Crescent City," and "Abe Lincoln of Pigeon Creek." **JESSAMYN WEST** (Jennings County) — novelist; wrote "Friendly Persuasion," "Cress Delehanty" and "Massacre at Fall Creek." **KURT VONNEGUT JR.** (Indianapolis) — novelist; author of "Slaughterhouse 5" and "Breakfast of Champions." **MARILYN DURHAM** (Evansville) — novelist; wrote "The Man Who Loved Cat Dancing" and "Dutch Uncle." **JACKSON FIVE** (Gary) — modern rock group with several gold records to their credit.

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INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS TO HOLD
TWENTY-FIFTH ANNUAL CONVENTION IN JANUARY

Planning has been completed for the twenty-fifth Annual Convention of the Indiana Society of Professional Land Surveyors, to be held Thurs-
day through Saturday, January 27-29, 1977, at Stouffer's Inn, Indianapolis, Indiana. Many worthwhile activities have taken place in the quar-
tercentury history of ISPLS, but the annual convention remains as the best received of the society's functions.

Thursday's program will consist of multiple workshops, with registrants being able to attend two. Continuing educational units will be awarded
for attendance. The following subjects will be covered:

- 1. Motivation of Employees
- 2. Planning Your Business and Personal Finances
- 3. Drainage Design in Subdivisions
- 4. Statistical Analysis of Measurements and Computations

Friday's program will consist of shorter presentations on various aspects of surveying, as depicted by the titles listed below:

- 1. Film - "The Land Surveyor and You"
- 2. Surveying Equipment and Practice, Ancient Times Through Renaissance
- 3. History of Early Indiana Surveys
- 4. Techniques of Using Modern Survey Equipment
- 5. The Ideal Survey Vehicle
- 6. Surveying Native Land Claims in Alaska
- 7. Recognition of Exhibitors
- 8. Reports from American Congress on Surveying and Mapping and Council on Sections and Affiliates
- 9. Interstate Land Sales Act

Saturday's program will last only until noon, consisting of the following:

- 1. Film - "George Rogers Clark and The Winning of the Old Northwest"
- 2. Current Developments in Community Planning
- 3. Annual Business Meeting

For those who are inclined to get a little more out of conventions than just technical knowledge, the following arrangements have been made:

Thursday evening - Black Curtain Dinner Theater "Goodbye, Charlie" (Both Pacers and Racers are away)

Friday evening - Annual banquet, speaker, entertainment, and dancing

The exhibit hall will be open during most of the convention. Wives are especially encouraged to attend, and a number of exciting activities have
been planned for them each day. These include programs about stained glass, pottery making, wine and cheese sampling, and downtown
Indianapolis shopping.

Plans call for mailing of final program announcement, registration forms, fee schedules, and hotel reservation cards in early January. In the
meantime, the accompanying registration form may be utilized for pre-planning and pre-enrollment.

Stouffer's Indianapolis Inn is reserving a group of rooms for our registrants. Special room rates for convention attenders is as follows:

Single - \$21.50 per night
Double - \$27.00 per night
Twin - \$29.50 per night

Reservations must be made directly with Stouffers. When writing, mention the ISPLS convention.

Students are invited to attend the workshops, technical sessions, and exhibits at no cost. Registration packet including ticket to Friday evening
dinner and entertainment will be available at a special student rate of \$15.00.

REGISTRATION FORM

INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS, INC.
1977 Convention
January 27, 28, & 29 - Stouffer's Indianapolis Inn

(Please type or print name and employer as you wish them to appear on your badge.)

NAME

HOME ADDRES

CITY STATE ZIP

EMPLOYER'S NAME AND ADDRESS

SPOUSE'S FIRST NAME, IF REGISTERED (for badge)

SURVEYORS' REGISTRATION

If you register before Jan. 10: MEMBER-\$45.00 NON-MEMBER-\$55.00

After Jan. 10 higher fees apply: MEMBER-\$55.00 NON-MEMBER-\$65.00

(SURVEYORS' REGISTRATION INCLUDES two workshops Thursday, technical sessions Friday and Saturday, coffee
breaks, President's Dinner-Dance Friday.)

SPECIAL WORKSHOP-ONLY REGISTRATION (2 workshops Thursday, incl. materials)

If you register before Jan. 10: MEMBER-\$30.00 NON-MEMBER-\$40.00

After Jan. 10 higher fees apply: MEMBER-\$35.00 NON-MEMBER-\$45.00

SPOUSES' REGISTRATION

If you register before Jan. 10: THURS. ONLY-\$15.00 ALL-\$25.00

After Jan. 10 higher fees apply: THURS. ONLY-\$20.00 ALL-\$30.00

(SPOUSES' REGISTRATION INCLUDES Hospitality Room, Ladies' Program Thursday afternoon, Friday shopping
tour and luncheon, President's Dinner-Dance Friday, breakfast and program Saturday.)

OPTIONAL FUNCTIONS

Black Curtain Dinner Theater Thursday, January 27, 6:30 p.m. Tickets \$8.75 each, including dinner and play ("Good-
bye, Charlie"). Sorry, both Pacers and Racers will be playing away from home.

TOTAL FEE RECAP

Surveyors' Registration Fee \$
Member Firm Discount (full-time employee
of Member Firm deduct 20%)
Net Surveyors' Registration Fee
Spouses' Registration Fee
Optional Function Tickets @ \$8.75 each
TOTAL REGISTRATION FEES AND TICKETS \$

Return completed
form with check
made payable to:
ISPLS, 1224 North
Capitol Avenue,
Indianapolis,
Indiana 46202

WHAT IS A SURVEYOR?

(After reading the description of a modern surveyor by Ben Buckner, Arnold Carroon of Newport, Indiana, compiled his version of a description.)

1. A Modern Surveyor must know how to measure, for any purpose and to fit the purpose. He must understand Error, the probability of Error and WHAT to do about it. He Must be Highly Educated
2. A Modern Surveyor must understand photogrammetry, the application of maps, and WHERE to find the maps
3. A Modern Surveyor is a Planner, a Designer, and, a Young-In-Spirit
4. A Modern Surveyor knows the mechanics of drainage and the mathematics of drainage
5. A Modern Surveyor is a Student at Law, passed the lower echelon of the Bar Examination, propounded in basic Court Procedures
6. A Modern Surveyor is something of an Income Tax Accountant
7. A Modern Surveyor is a bit of an Astronomer
 - a bit of an electronics buff
 - a bit of a botonist as a Naturalist
 - a meticulous delver into history
 - a fantastic judge of human nature
8. A Modern Surveyor is physically able to climb hills, slash brush and to absorb nettle weeds
9. A Modern Surveyor is one who admits that He who ceases being a student Never Was One
10. A Modern Surveyor, of the complicated problems of the Universe, mathematics problems be solvable, but, that Problems of People, Solvable Never



**If I'd had HARRISON's
200 years ago, my corners
would still be marked!**

George Washington, along with the other surveyors of his day, scrounged around and used whatever was available to mark corners—a rock, a glass bottle, a wooden post, a cannon ball.

The profession has changed radically over the last 200 years. Today's surveyors use Harrison markers. They are made of cast iron—the metal proven to last for centuries. They are in a patented design to withstand side thrusts and to crack off when accidentally struck. (The base continues to maintain its position.)



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CLARK'S GRANT BECOMES SOME OF FIRST LAND SURVEYED IN INDIANA

Compiled by Kenneth Curtis, editor

(Editor's Note: A tract of one hundred and fifty thousand acres of land was granted to George Rogers Clark and the officers and soldiers who assisted in the reduction of the British posts in the Northwest during the Revolution 1778-79. This land grant on the north side of the Ohio River across from Louisville became some of the first land surveyed in what is now Indiana. This area conspicuous because its subdivision does not conform with the surrounding federal rectangular surveys, lies in present-day Clark, Floyd, and Scott counties, Indiana. The Virginia assembly granted the land to Clark's regiment and a board to survey the tract was created in October, 1783. One of the best accounts of the background surrounding this grant is from William H. English's book "Conquest of the Northwest 1778-83 and Life of General George Rogers Clark" published in 1895. The following excerpts have been taken from that source.)

VIRGINIA'S RESOLUTION AND ACT

It will be remembered that at the time the Illinois campaign was inaugurated, George Wythe, George Mason and Thomas Jefferson wrote a joint letter to George Rogers Clark, congratulating him upon his appointment to conduct so important an enterprise, and most heartily wishing him success. The letter then gave him this assurance: "We have no doubt that some further rewards in lands in the country will be given to the volunteers who shall engage in this service in addition to the usual pay, if they are so fortunate as to succeed. We think it just and reasonable that each volunteer, entering as a common soldier in this expedition, should be allowed three hundred acres of land and the officers in the usual proportion, out of the lands which may be conquered in the country now in possession of the Indians, so as not to interfere with the claims of any friendly Indians, or any people willing to become subjects of this commonwealth; and for this we think you may safely confide in the justice and generosity of the Virginia assembly." This historic letter was dated January 3, 1778, and these gentlemen, no doubt, exercised all their influence to carry out the assurances then given.

On the 2d of January, 1781, the general assembly of Virginia adopted a resolution providing that, "as Colonel George Rogers Clark planned and executed the secret expedition by which the British posts were reduced, and was promised if the enterprise succeeded a liberal gratuity in lands in that country for the officers and soldiers who first marched thither with him, that a quantity of land not exceeding one hundred and fifty thousand acres be allowed and granted to the said officers and soldiers, and the other officers and soldiers that have been since incorporated into the said regiment, to be laid off in one tract, the length of which not to exceed double the breadth, in such place on the northwest side of the Ohio as the majority of the officers shall choose, and to be afterwards divided among the said officers and soldiers in due proportion according to the laws of Virginia."

In 1783 another act was passed by Virginia, "for locating and surveying the one hundred and fifty thousand acres of land granted by a resolution of assembly to Colonel George Rogers Clark, and the officers and soldiers who assisted in the reduction of the British posts in the Illinois:

"Be it enacted by the General Assembly, That William Fleming, John Edwards, John Campbell, Walker Daniel, gentlemen, and George Rogers Clark, John Montgomery, Abraham Chaplin, John Bailey, Robert Todd, and William Clark, officers in the Illinois regiment, shall be and they are hereby constituted a board of commissioners, and that they, or the major part of the them, shall settle and determine the claims to land under the said resolution. That the respective claimants shall give in their claims to the said commissioners on or before the first day of April, 1784; and, if approved and allowed, shall pay down to the said commissioners one dollar for every hundred acres of such claim, to enable them to survey and apportion the said lands. The said commissioners shall appoint a principal surveyor who shall have power to appoint his deputies, to be approved by the said commissioners, and to contract with him for his fees. That from and after the said first day of April, 1784, the said commissioners, or the major part of them, shall proceed with the surveyor to lay off the said

one hundred and fifty thousand acres of land on the northwest side of the Ohio river, the length of which shall not exceed double the breadth; and, after laying out one thousand acres at the most convenient place therein for a town, shall proceed to lay out and survey the residue, and divide the same by fair and equal lot among the claimants; but no lot or survey shall exceed five hundred acres. That the said commissioners, in their apportionments of the said land, shall govern themselves by the allowances made by law to the officers and soldiers in the Continental army. That the said commissioners shall, as soon as may be, after the said one hundred and forty-nine thousand acres shall be surveyed, cause a plat thereof, certified on oath, to be returned to the register's office, and thereupon a patent shall issue to the said commissioners or the survivors of them, who shall hold the same in trust for the respective claimants; and they, or the major part of them, shall thereafter, upon application, execute good and sufficient deeds for conveying the several portions of land to the said officers and soldiers."

The land was selected on the north side of the Ohio river, extending from below the falls, a little below Silver creek, up the river to the upper end of Eighteen Mile Island. It is situated in Clark, Floyd and Scott counties, Indiana, but mainly in the first named county. It was, in early times, generally called "Illinois Grant," but now, more frequently, "Clark's Grant," or, simply, "The Grant." The location of the land was vested by the law "in a majority of the officers," but the tract selected was always a favorite locality with General Clark, and his choice was adopted by common consent.

WILLIAM CLARK, SURVEYOR OF THE GRANT

William Clark was appointed principal surveyor of the grant, and he proceeded with a corps of four assistant surveyors, Edmund Rogers, David Steel, Peter Catlett and Burwell Jackson, to lay it off into tracts, intended, generally to contain five hundred acres each, but some of the surveys were very carelessly made. The errors, however, were almost invariably on the side of the soldier, as the tracts often over-ran in quantity, and but seldom if ever fell below it.

Historians have been bothered a good deal to identify this William Clark. Some have supposed he was the William Clark, brother of General George Rogers Clark, who afterwards became very prominent in connection with Merriweather Lewis, in making the first exploration to the Pacific, under the auspices of President Jefferson; others have supposed he was the William Clark who was one of the first United States judges of Indiana Territory. He was neither. He was the William Clark heretofore referred to as the son of Benjamin Clark, and was the brother of Marston Green Clark, and cousin of George Rogers Clark. He was decidedly a man of affairs and of fine ability. He probably had more to do in formulating the boundaries and allotting the lands in Clark's Grant than any other one person. The official plat was his work, and, besides being principal surveyor, he was one of the commissioners, and sometimes clerk of the board. He was, in fact, the general utility man of the concern, and acquired a considerable estate in lands.

His will has never been published as far as the author has been able to learn, and is given here in full, as it throws considerable light upon the members of his branch of the Clark family. He died in November, or early in December, 1791.

THE FOLLOWING IS THE WILL OF WILLIAM CLARK, THE SURVEYOR.

"In the name of God, amen. I, William Clark, of Jefferson county, and District of Kentucky, late of Clarksville, being of perfect memory and knowing the uncertainty of this life, do make and declare this to be my last will and testament in the manner following. First desiring that my body may be decently interred at the discretion of my executors hereafter named. And as for my temporal estate after all my just debts are paid, I give, bequeath and dispose of in the following manner:

"It is my will and desire that the bond payable to William Croghan may be discharged by a certificate now in my possession, the residue of said certificate to be applied as far as it will go to the discharge of a bond given to Richard Morris, and that the balance of said bond be discharged by my executors in the most speedy manner they may devise:

"It is my will and desire, and I do hereby give to my loving brother Benjamin Wilson Clark and my loving sister Lucy Pool a tract containing nine hundred and thirty acres of land, to them and their heirs and assigns, lying in the lands given by the state of Virginia to the officers and soldiers of the Virginia state line, it being a part of my claim for military services performed the last war, to be equally divided in quantity and quality. And if my brother Benjamin Wilson and sister Lucy can not agree on a division my executors are to have a division made for them.

"It is my will and desire, and I do hereby give to my loving brother Benjamin Wilson Clark one tract containing four hundred acres in the Illinois Grant, it being part of number thirty-one, to him, his heirs and assigns.

"It is my will and desire, and I do hereby give to my loving brother Marston Green Clark all my wearing apparel, a cow and calf, a sorrel mare, my desk, after my executors shall have finished the business of my estate; also my lots and houses in the town of Clarksville I lend him for the term of three years from the date of my decease, and if either of my brothers or sister comes to this country to live, within the space of three years after my decease, then he or she so coming shall have the lots and houses aforesaid, but if neither of them comes in that time then the lots, etc., are to remain the property of Marston Green Clark, to him, his heirs and assigns. Also I give to said Marston Green Clark one negro man, Lewis, for seven years, at the expiration of which time it is my wish said negro Lewis shall be liberated. It is my will and desire after my decease that my executors present my friend and relation Mrs. Elizabeth Anderson with my watch, as a memorial of my esteem and regard.

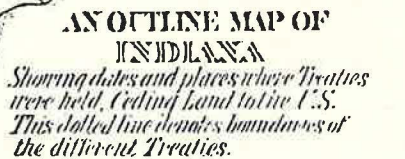
"Lastly, it is my will and desire, and I do hereby appoint my trusty friends, Richard Clough Anderson, William Croghan and Richard Terrell, executors of this, my last will and testament, hereby revoking all other wills. Signed this eleventh day of November, one thousand seven hundred and ninety-one."

This will was proven December 6, 1791, in Jefferson county, Kentucky, by the oaths of John Clark, George R. Clark and James O'Fallon, witnesses thereto, and ordered to be recorded.

The Virginia law vested in the same commissioners one thousand acres of land to be platted into half acre lots, with convenient streets, for a town, to be called Clarksville. This was laid off just above where Silver creek empties into the Ohio at the falls, as will hereafter be more particularly shown, with other proceedings in relation to said town. After deducting the town site, one hundred and forty-nine thousand acres remained to be divided between "the officers and soliders who assisted in the reduction of the British posts in the Illinois," and, after it was surveyed, a patent was issued for the land, December 14, 1786, a fac-simile of which, reduced one-half in size, accompanies this article. The original of this important document is on parchment, with holes eaten in it by mice, or insects, as shown in the fac-simile.



solution; that those officers who were commissioned under said act and



resigned before the expiration of the twelve months are not entitled; last that those who continued during the year and then retired, not having a command, are entitled."

At a meeting of the commissioners, October 10, 1787, the scope of the order was enlarged so as to include "the officers and soldiers who were left at the falls by order of Colonel Clark, when the detachment were going against the Illinois, be allowed quota of land in the grant."

In view of the way the troops were raised, the irregularity of the terms of service, and there being different campaigns, with not the same soldiers in each, it was a difficult and delicate matter to determine, exactly, who "assisted in the reduction of the British posts in the Illinois," or what officers and soldiers were entitled to the share in the land under the law.

The commissioners, however, after long and careful investigation decided who were entitled, and the quantity of land that should be allotted to each; but, in the meantime, many of the land claims had been sold and transferred by the persons designated, and deeds for the land, in such cases, did not issue in their names, but in the names of the persons then owning the claims.

In consequence of this, and the mixing in of the names of persons who only served under Clark in his subsequent campaigns against the Indians, a correct list of the officers and soldiers of the Illinois Regiment who "assisted in the reduction of the British posts," and were allotted land under the law, has never before been published. At least the author, after the most diligent search, has never been able to find any such list, although he has found several which were clearly misleading and erroneous.

The following roll was made with great care and labor, tracing the title of every tract of land back to the person who served for it. It is confidently believed that it is correct, and that it is the only full and complete list of those who were allotted land in the Illinois Grant, for services under General Clark, ever published. It is quite certain no one is on the list who did not serve, and it is not likely that many, if any, entitled to land, failed to receive it, either in person or by his heirs or assigns. While omissions are possible, they are not at all probable. The board of commissioners were prominent and honorable men, and it was continued in existence, by subsequent legislation, for at least sixty-five years, so that all having proper claims had abundance of time in which to apply.

It will be seen by reference to the roll that opposite the name of each person is given the quantity of land allotted to him, with its descriptive numbers, so that the reader, by referring to the fac-simile of the original plat, can see the exact location of the land; or, by giving the number of any tract, it can, in like manner, be learned who served for it. For example, if it is desired to learn what land was allotted to the celebrated Simon Kenton, a reference to the list and map will show that it was "letter E, tract 198." Or if the reader wishes to know who served for number one, the tract on which the city of Jeffersonville is situated, a similar reference will show it was Lieutenant Isaac Bowman. And so on as to any tract or person.

It will be impossible for the general reader to comprehend the great labor involved in making this list. It was equivalent to making three hundred partial abstracts of title,—aggravated by the fact that the certificate of claim was often assigned before the issuance of the patent, and that the patent frequently issued in the name of the assignee, and not of the soldier. The work is entirely original, and it is hoped its value will compensate for the labor required in its preparation.

ROLL OF OFFICERS AND SOLDIERS WHO WERE ALLOTTED LAND IN CLARK'S GRANT (INDIANA) FOR SERVICES UNDER GEORGE ROGERS CLARK, " IN THE REDUCTION OF THE BRITISH POSTS IN THE ILLINOIS." WITH THE QUANTITY, AND DESCRIPTIVE NUMBERS, OF THE LAND RECEIVED BY EACH.

*Each number contains 500 acres unless otherwise indicated. Where a letter precedes a number it indicates that tract is subdivided and the subdivisions lettered.

OFFICERS.

Clark, George Rogers, Brigadier-General—Nos. 27, 56, 62, 84, 165, 168, 185, 208, 212, 223, 227, 229, 242, 285, 288, 297; 4 acres in 74, and 45 acres in 141. Total, 8,049 acres.

Montgomery, John, Lieutenant-Colonel—Nos. 35, 40, 51, 143, 167, 202, 239, 270, 283 and B. 141, 351 acres. Total, 4,851 acres.
Bowman, Joseph, Major—Nos. 5, 49, 97, 125, 140, 186, 193, 237, and B. 32, 312 acres. Total, 4,312 acres.
Lynn, William, Major—Nos. 12, 93, 105, 132, 181, 217, 218, 291, and B. 216, 312 acres. Total, 4,312 acres.
Quick, Thomas, Major—Nos. 21, 70, 163, 204, 215, 233, 265, 284, and B. 276, 312 acres. Total, 4,312 acres.

CAPTAINS.

NOTE.—All captains were allotted 3,234 acres each.

Bailey, John—Nos. 16, 22, 24, 81, 225, 226 and A. 194, 234 acres.
Brashear, Richard—Nos. 68, 111, 112, 114, 134, 236, and B. 194, 234 acres.
George, Robert—Nos. 17, 137, 146, 159, 172, 275, A. 149, 234 acres.
Harrod, William—Nos. 91, 99, 164, 234, 261, 264, A. 148.
Helm, Leonard—Nos. 66, 147, 201, 266, 269, 279, 149.
Kellar, Abraham—Nos. 71, 120, 156, 173, 238, 295, B. 148.
McCarty, Richard—Nos. 63, 80, 90, 228, 251, 259, A. 190.
Rodgers, John—Nos. 11, 72, 207, 235, 282, 296, A. 190.
Ruddell, Isaac—Nos. 14, 34, 77, 110, 153, 179, and B. 190.
Shelby, James—Nos. 42, 43, 88, 89, 95, 249, and B. 248.
Taylor, Isaac—Nos. 109, 129, 144, 151, 253, 293, 101.
Todd, Robert—Nos. 3, 36, 48, 55, 122, 203, and A. 246.
Williams, John—Nos. 9, 75, 115, 152, 166, 240, and 101.
Worthington, Edward—Nos. 33, 67, 69, 131, 176, 199, and B. 246.

LIEUTENANTS.

NOTE.—All lieutenants were allotted 2,156 acres each.

Bowman, Isaac—Nos. 1, 158, 213, 289, and A. 32.
Calvit, Joseph—Nos. 41, 50, 61, 161, and A. 216.
Carney, Martin—Nos. 38, 192, 250, 263, and C. 154.
Chapline, Abraham—Nos. 145, 180, 222, 267, and A. 276.
Clark, Richard—Nos. 15, 18, 191, 274, and part 160.
Clark, William—Nos. 96, 103, 272, 287, and part 160.
Dalton, Valentine Thomas—Nos. 76, 104, 206, 247, C. 155.
Davis, James—Nos. 39, 136, 187, 257, and B. 154.
Floyd, Henry—Nos. 65, 107, 230, 280, and A. 154.
Gerault, John—Nos. 82, 117, 175, 189, and A. 133.
Harrison, Richard—Nos. 102, 135, 139, 183, and B. 133.
Merriweather, James—Nos. 26, 92, 150, 214, and A. 106.
Montgomery, James—Nos. 6, 83, 127, 252, and C. 133.
Perault, Michael—Nos. 23, 78, 256, 277, and C. 106.
Robertson, James—Nos. 25, 200, 260, 294, and B. 106.
Slaughter, Lawrence—Nos. 8, 58, 157, 221, and A. 271.
Swan, John—Nos. 37, 98, 100, 209, and B. 156.
Todd, Levi—Nos. 29, 46, 87, 290, and C. 271.
Williams, Jarrott—Nos. 197, 241, 258, 268, and part 160.
Wilson, Thomas—Nos. 10, 45, 47, 298, and A. 169.

ENSIGN.

Vanmeter, Jacob—Nos. 7, 64, 182, 232 and 156 acres in B. 155. Total, 2,156 acres.

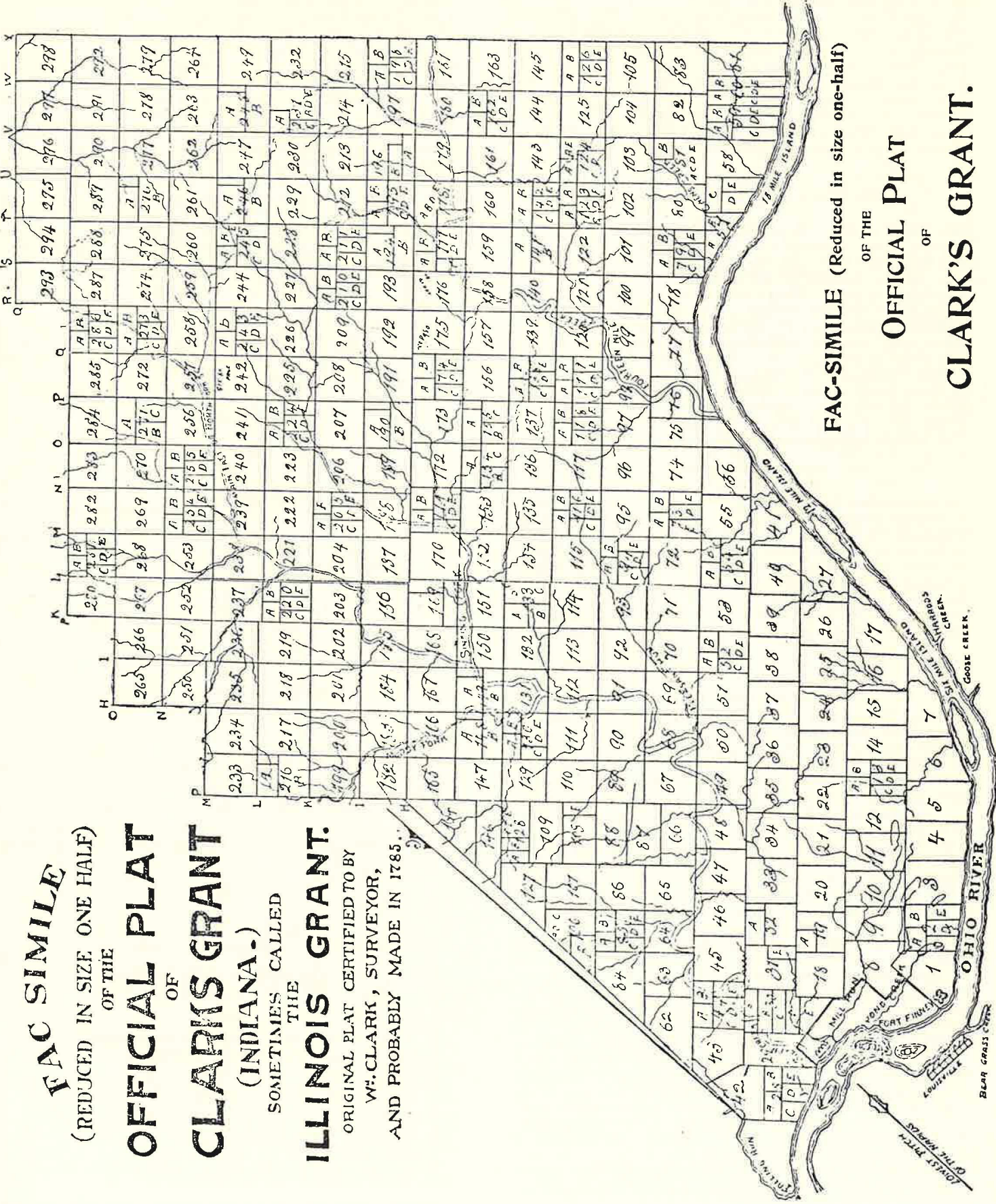
CORNET.

Thurston, John—Nos. 53, 244, 278, 292, and 156 acres in A. 155. Total, 2,156 acres.

SERGEANTS.

NOTE.—All sergeants were allotted 216 acres each.

Brand, John—16 acres in 169 and 200 acres in D. and E. 130.
Brown, James—16 acres in 169 and 200 in D. and E. 273.
Crump, William—16 acres in 169 and 200 acres in A. 184.
Dewit, Henry—16 acres in 196 and 200 acres in 121.
Elms, William—16 acres in 169 and 200 acres in 108.
Irby, James (or Irley)—16 acres in 169, 200 in A. and B. 138.
Kellar, Isaac—16 acres in 169 and 200 in C. and D. 245.
Key, Thomas—16 acres in 194 and 200 in B. and E. 245.
Merriweather, William—16 acres in 169 and 200 in 4.
Miles, Michael—16 acres in 169 and 200 in A. and B. 85.
Moore, John—16 acres in 169 and 200 in A. and B. 126.



FAC SIMILE
(REDUCED IN SIZE ONE HALF)
OF THE
OFFICIAL PLAT
OF
CLARK'S GRANT
(INDIANA.)
SOMETIMES CALLED
THE
ILLINOIS GRANT.
ORIGINAL PLAT CERTIFIED TO BY
W. CLARK, SURVEYOR,
AND PROBABLY MADE IN 1785.

Morgan, Charles—16 acres in 196 and 200 acres in 178.
Oreer, John—16 acres in 160, 100 in C. 211 and 100 in 31.
Parker, Edward—16 acres in 169 and 200 acres in part 4.
Patterson, Robert—16 acres in 169 and 200 in D. and E. 171.
Pittman, Buckner—16 acres in 169 and 200 in D. and E. 171.
Prichard, William—16 acres in 169 and 200 in C. and D. 124.
Rubey, William—16 acres in 169 and 200 in C. and D. 118.
Strode, Sam—16 acres in 169 and 200 acres in 19.
Treat, Beverly—16 acres in 169 and 200 in A. and B. 142.
Vaughan, John—16 acres in 196 and 200 acres in 178.
Walker, John—16 acres in 169 and 200 in A. and B. 130.
Williams, John—16 acres in 169 and 200 acres in B. and E. 124.

PRIVATES.

NOTE.—All privates were allotted 108 acres each.

Allen, David—8 acres in 196 and 100 acres in 188.
Anderson, Joseph—8 acres in 210 and 100 acres in C. 178.
Ash, John—8 acres in 210 and 100 acres in 19.
Asher, William—8 acres in 210 and 100 acres in C. 59.
Bailey, David—8 acres in 210 and 100 acres in B. 195.
Barnet, Robert—8 acres in 210 and 100 acres in C. 162.
Batten, Thomas—8 acres in 210 and 100 acres in A. 273.
Baxter, James—8 acres in 210 and 100 acres in C. 273.
Bell, William—8 acres in part 210 and 100 acres in 184.
Buckley, William—8 acres in 210 and 100 acres in D. 162.
Bell, Sam—8 acres in 210 and 100 acres in A. 162.
Bentley, James—8 acres in 196 and 100 acres in 184.
Bentley, John—8 acres in 196 and 100 in 184.

(Two-hundred twenty-three additional privates are listed)

RECAPITULATION:

1 Brigadier-General	8,049 acres.
1 Lieutenant-Colonel	4,851 acres.
3 Majors (4,312 acres each)	12,936 acres.
14 Captains (3,234 acres each)	45,276 acres.
20 Lieutenants (2,156 acres each)	43,120 acres.
23 Sergeants (216 acres each)	4,968 acres.
1 Ensign	2,156 acres.
1 Cornet	2,156 acres.
236 Privates (108 acres each)	25,488 acres.
300 Men	149,000 acres.

GEORGE ROGERS CLARK

General George Rogers Clark acted as chairman of the board at various times, and seems to have been an attendant of the sessions, with but few exceptions, from the beginning in 1784, down to March 14, 1810, when he signed the minutes for the last time. This was after he had been stricken with paralysis and was scarcely able to write his name. Although he did not die for eight years afterwards, he lingered in a comparatively helpless condition for some time, and finally became entirely so. On Friday morning, February 13, 1818, General Clark died at the house of his sister, Mrs. Lucy Croghan, at Locust Grove, near Louisville, which had been his home since his terrible affliction. (This house and land has been historically preserved and is open to the public.) The newspapers of the day paid glowing tributes to his merit and gave voice to the general grief of the public at his loss. The Western Courier of Louisville, in its first issue after his death, said: "We are called upon to record the death of another Revolutionary hero!

"General George Rogers Clark, with whose name should ever be associated the worth of philanthropy, the virtue of patriotism, the adroitness and humanity of a general, is no more! He expired on Friday last at his late residence at Locust Grove, in his sixty-sixth year.

"Were we able to represent the hero as he really was, could we make known to his countrymen the dangers, the difficulties he underwent, as a sacrifice for the blessings we now enjoy, what a monument of unerring gratitude would raise to his memory! Could they in any degree be familiar with the scenes of heroism and generalship which characterized him on his military campaigns in the west, the finger of justice would point to him as second only in skill and value of achievement to our immortal Washington.

"Honored at an early period in our history with the command of an army, destined to operate against the British and savage allies,

then the sole occupants of these (now) western states, undismayed by the dangers and difficulties that frowned upon him, as he and his little band gallantly sallied forth, he is to be seen at one period humbling the pride of Britain, by subduing her disciplined armies, at another routing the fiercer savages from their haunts, preparing the fertile regions of the west for the residence of a population who were proud of him as a countryman, and were ready to improve upon a purchase with which his gallantry had blessed them.

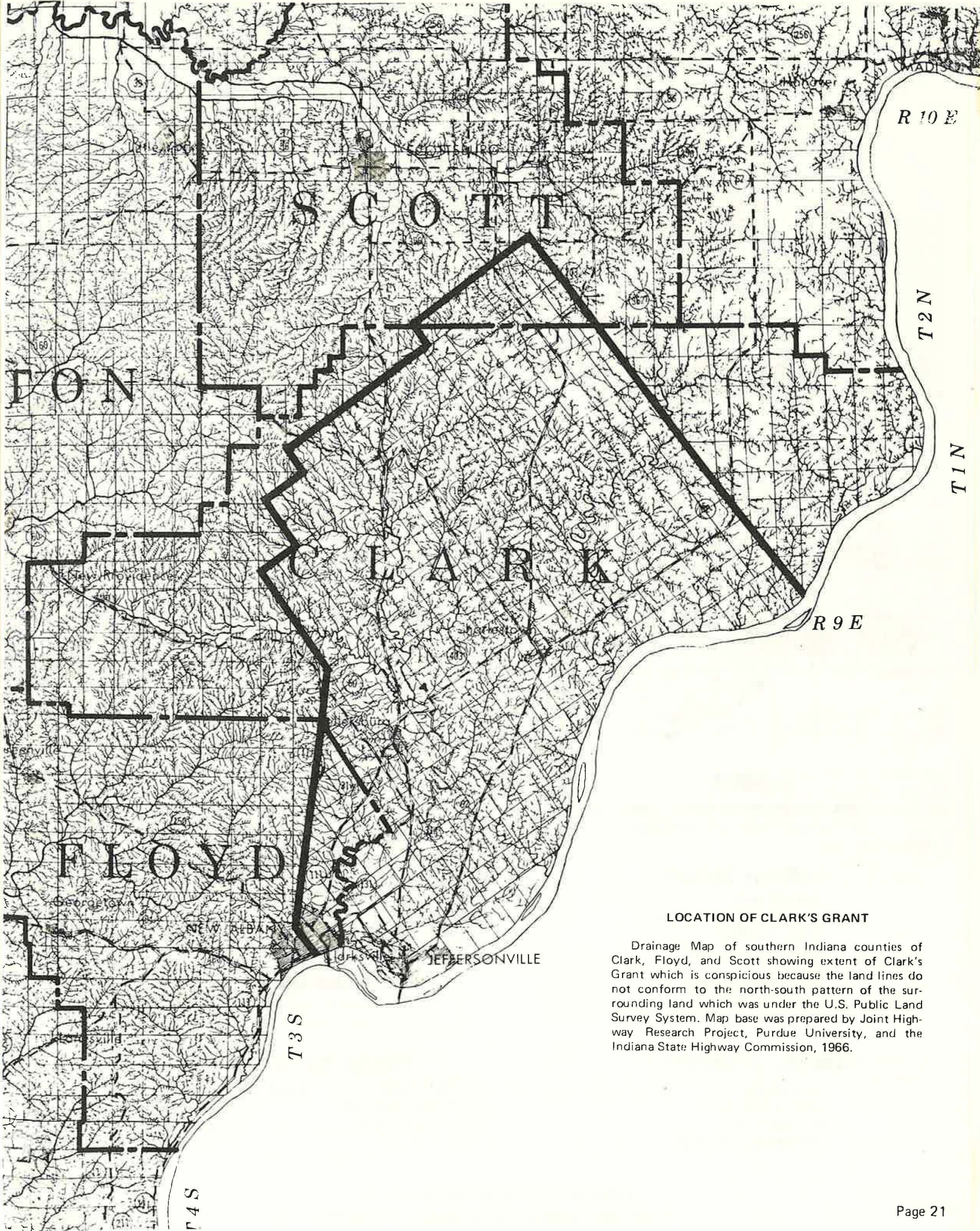
"The legislature of his native state testified by several acts their high admiration for him. He was presented by them, on two different occasions, with an elegant sword, and on the last occasion were pleased to add: "The legislature of Virginia have ever entertained the highest respect for the unsullied integrity, the valor, the military enterprise and skill of General George Rogers Clark, to whom and to his gallant regiment (aided by the justice of the cause and the favor of heaven) the state of Virginia was indebted for the extension of her boundaries from the Atlantic to the Mississippi.' But enough; let the historian perform his part, and we will have the greater cause, in consideration of his character, to boast of our being Americans."

EDITOR'S NOTE:

Those land surveyors who work in Clark, Floyd, and Scott counties in southern Indiana will be involved with surveying in Clark's Grant which has a layout essentially perpendicular to the Ohio River at Louisville and tracts of five hundred acres. Problems of surveying with-in this tract will be the subject of an article in the next issue of the HOOSIER SURVEYOR.

GEORGE ROGERS CLARK
BICENTENNIAL EXHIBIT

Your attention is directed to the excellent George Rogers Clark Bicentennial Exhibit at the Indiana State Museum, 202 North Alabama Street in Indianapolis. The free exhibit will be available for viewing from February 25, 1976 through February 25, 1979. The museum is open daily 9-5, Sunday 2-5, and closed on major holidays. All Hoosiers should visit this outstanding exhibit!

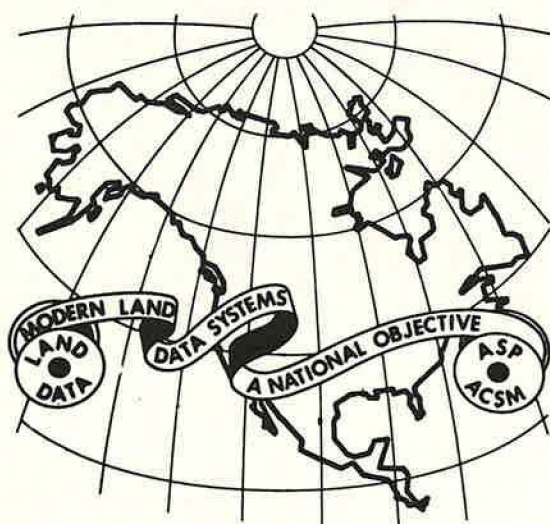


LOCATION OF CLARK'S GRANT

Drainage Map of southern Indiana counties of Clark, Floyd, and Scott showing extent of Clark's Grant which is conspicuous because the land lines do not conform to the north-south pattern of the surrounding land which was under the U.S. Public Land Survey System. Map base was prepared by Joint Highway Research Project, Purdue University, and the Indiana State Highway Commission, 1966.

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A Message From The President of the American Congress on Surveying and Mapping

'Modern Land Data Systems—A National Objective'

AS President of ACSM, I believe it is appropriate that
I bring to your attention, at the earliest possible
time, information concerning the new program for the
1977 Annual Spring Convention to be held in Washing-
ton, D.C., February 22 through March 5.

In cooperation with ASP, the theme of the convention is
"Modern Land Data Systems—A National Objective." In
order that we may focus the entire convention's direction
toward modern land data systems, the program for both
societies is being altered. We will have a continuous, con-
current session from noon on Wednesday to the conclusion
of the convention on Friday evening.

Our staff is taking new directions toward advertising the convention to those arenas
affected by modern land data systems. We expect representation from the legal pro-
fession, title insurance companies, county executives, planners, public works administra-
tors, recorders of deeds, and a host of others that will be involved when this country
moves from the present antiquated systems into modern land data records.

In all of the pilot projects underway or planned, dealing with modernization of our
land data records, it is quite evident that the land surveyors have major roles to play
in the modernization. However, as President, ACSM, I am concerned that our mem-
bership is not assuming the leadership role in this new endeavor. True, it involves
areas in which you have not had a great deal of experience or exposure, but I am deeply
concerned that if we do not take the leadership role, we will find ourselves subservient
to those professions or groups who know less about the land or its prior history. In
order to keep abreast of the latest developments in this new arena, I urge each of you to
make plans to attend our 1977 Annual Spring Convention.

To all state organizations, sections, and affiliates, I urge you to consider sending ample
representatives to this meeting so that you may be apprised of the subject with which
this important convention will deal.

ACSM is proud that it has taken a leadership role in reformatting the convention and
focusing attention upon what we believe will be one of the most important changes
affecting this great Nation in the immediate future and one in which its membership
can assume its just leadership role.



LEONARD S. BAKER
President
September, 1976

DATES TO REMEMBER

Thurs., Fri., & Sat., January 27-28-29, 1977

Indiana Land Surveyors (ISPLS) Annual Convention at Stouffers'
Indianapolis Inn; Workshops on Thursday; Annual meeting on
Friday and Saturday; Equipment exhibits; Ladies program.

Thurs., Fri., & Sat., February 3-4-5, 1977

Tenth Annual Land Surveyors Conference at Ramada Inn, Louisville
Kentucky

Thurs., Fri., & Sat., February 17-18-19, 1977

Twentieth Annual Conference of Illinois Registered Land Surveyors
Association, at Arlington Heights, Illinois

February 27 — March 5, 1977

ACSM-ASP Annual Convention at Washington Hilton Hotel,
Washington, D.C.

June 20-24, 1977

Ninth National Surveying Teachers' Conference at University of
New Brunswick, Fredericton, New Brunswick, Canada. Practition-
ers are also invited.



MEMBERSHIP APPLICATION

I am familiar with the By-Laws of ISPLS Inc. I am in agreement with the objectives of the organization, and hereby make application for membership as a Member _____, Junior _____, Associate _____, Student _____, (check one.)

Annual dues payable on Feb. 1, of each year are for: Member or Associate \$50.00, Junior \$25.00 and Student \$5.00.

Name _____ Position _____

Home Address _____ Employed by _____

City _____ Zip _____ Business Address _____

Telephone (include area code) _____ City _____ Zip _____

Registration Status: (Give Reg. No. and Branch)
(CHECK ONE) Business Phone (include area code) _____

S.I.T. _____ ACTIVELY PURSUING REG. (J) _____

R.L.S. _____ ONLY AFFILIATED WITH PROF. (A) _____

R.P.E. _____

Member of American Congress on Surveying and Mapping _____ Yes _____ No _____

Member of a local chapter of ISPLS Inc. ? _____ Yes _____ Which Chapter? _____ No _____

Recommended By: * _____

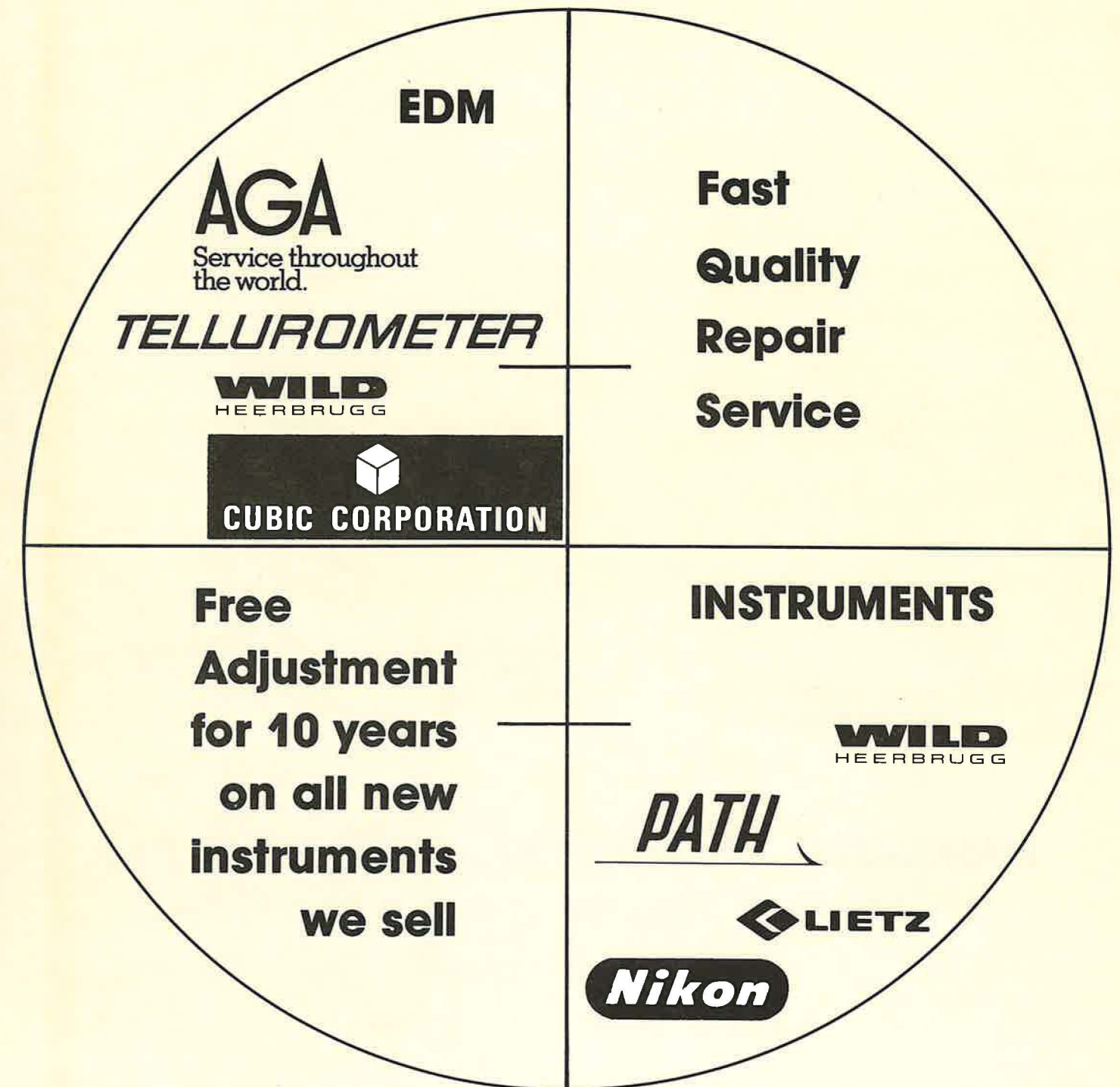
*(Must be signed by ISPLS Member)

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