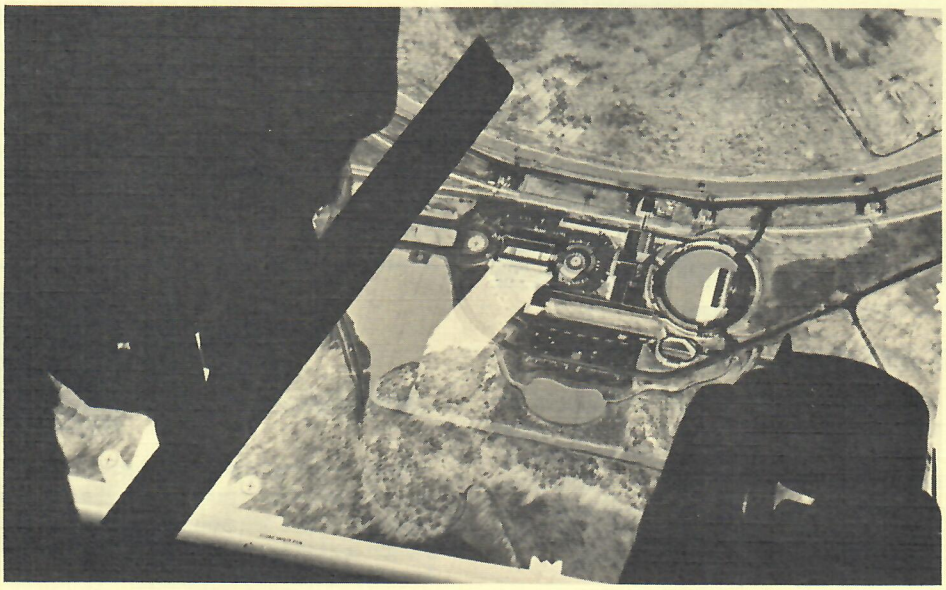
THE SIDWELL COMPANY®

NO. 113

map news



Aerial view of Fermilab headquarters and part of the Main Ring

WORLD RENOWNED LABORATORY MAPPED

Illinois may be the place where the buffalo roamed, but Sidwell personnel never thought they might find themselves fending off curious advances from a herd of forty-two buffalo.

The encounter took place recently as Sidwell field crews established ground control points for use in mapping the Fermi National Accelerator Laboratory in Batavia, Illinois.

World's largest machine to study atom

The lab is home to scientists from around the world who come here to conduct experiments in particle physics using the world's largest proton synchrotron. Simply put, this machine is used to study the nucleus of the atom.

The buffalo are another story. It seems the lab's director was given a pair of buffalo. Having nowhere to keep them, he found the laboratory's thousand acres of prairie an ideal home. Apparently the herd thinks so, too. They have steadily grown in number and are now considered the lab's unofficial mascots.

Mapping covered over 1300 acres

The mapping for the accelerator laboratory covered over 1,300 acres using the Topo Plan mapping system. This system consists of a topographic map containing limited drawn planimetric detail and a matching precision aerial enlargement at the same scale.

The map, drawn at a scale of 1″ = 50′ with a one-foot contour interval, will be used to prepare a master plan for studying drainage problems. In addition, the composite map sheets showing both topographic and photo detail will be used as a detailed record of "as built" conditions throughout the laboratory site.

Main Ring four miles around

The maps will also provide the accurate elevations necessary to install new refrigeration piping for the main accelerator, or "Main Ring," as it's called. From the air, the four-mile circumference Main Ring is easy to spot. It's actually a buried circular tunnel ten feet in diameter and covered with a mound of earth.

Inside the tunnel are thousands of powerful magnets surrounding a stainless steel vacuum chamber. The magnets send protons around the ring 50,000 times each second. This produces the 200-500 billion electron volt energy necessary to interact with the nuclei of other atoms and provides the primary tool for the laboratory's research.

COLORADO PHOTOGRAPHY TAKEN

A proposed 345KV transmission line running between Rifle, Colorado, and Farmington, New Mexico, was recently photographed by Sidwell flight crews.

The preliminary power line route covers approximately 300 miles; however, more than 800 line miles of precision reconnaissance photography were flown at a scale of 1″ = 2,000′.

The photography will be used by Teng and Associates to study terrain conditions prior to choosing the final route.

Plans call for the transmission line route to be reflown at a later date in preparation for doing final design mapping.

SUPER WIDE-ANGLE CAMERA REDUCES COSTS

One of the most important pieces of equipment in a mapping company's inventory is the aerial camera. The camera —particularly the lens—has a tremendous influence on the quality and accuracy of the photography used for mapping projects.

Camera buffs know that 35mm cameras can be fitted with a choice of lenses for different purposes. The same is true for aerial cameras.

Until recently, most aerial survey cameras came equipped with a 6″ (wide-angle) focal length lens. This focal length matched the capabilities of the stereoplotting equipment and became the "workhorse" of the industry.

With the development of a new generation of stereoplotters, able to handle a variety of focal lengths, came the introduction of the 3½″, or super wide-angle, lens.

300% more mapping area

This may seem like a small accomplishment; but when you consider that each photograph contains over 300% more mapping area than a photograph taken at the same altitude with a 6″ lens, the savings become apparent.

Fewer photos are needed

Much of the photography taken for Sidwell's mapping projects is obtained with our 3½″ focal length camera. Since each photograph covers more ground, fewer photos are needed to cover a project. This also means less ground control is required, and fewer stereo models need to be set up in the plotting instruments. All of these features combine to help Sidwell hold the line on mapping costs.

The lens of a super wide-angle aerial camera

Digital planimeters are used to accurately measure soil types

NEW SOIL COMPUTATION SERVICE AIDS RURAL ASSESSMENTS

Officials in Illinois and other midwest counties will be better equipped to make rural assessments as a result of a new soil computation service offered by Sidwell.

Assessment on ability to produce crops

State legislation, such as the recently enacted Illinois Farmland Assessment Law, allows agricultural land to be assessed on the basis of soil productivity. Now prime farmland can be assessed on its ability to produce crops and not on its value for residential development.

Each soil type is measured

Sidwell's service relies on a combination of modern soil survey maps and up-to-date aerial based tax maps. The soil maps are first accurately enlarged to fit the rural tax maps. Then, using digital planimeters and computer processing, each individual soil type is measured. Acreage figures for each soil type are adjusted, edited and then printed in computer tabular form by parcel number.

Saves time spent making acreage calculations

This service provides soil information in ready-to-use form, increases accuracy and saves the time normally spent making thousands of tedious acreage calculations.

For a free copy of our Soil Computation Handbook explaining this service, write Department MN, c/o The Sidwell Company.

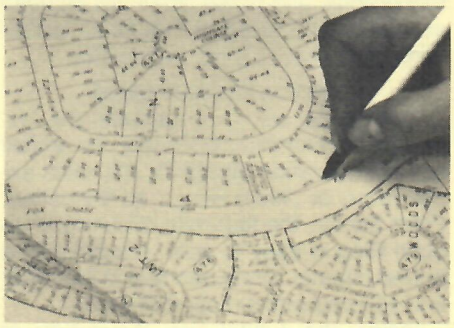
UPDATED ATLASES PUBLISHED

The twelfth edition of the Cook County Tax Map Atlas is now available for people who need accurate property information.

The ten volumes which cover the county contain updated copies of the official Cook County Tax Maps at a scale of 1″ = 200′ and include property boundaries, dimensions and the parcel numbers used on tax bills.

Commercial atlases also available

In addition to tax map atlases, Sidwell has commercial atlases available. These atlases generally contain a half-tone aerial photograph at a scale of 1″ = 400′ and maps at a scale of 1″ = 200′ showing only subdivided areas. The atlases are updated annually with new subdivisions and cover Lake, LaSalle, Peoria and Vermilion Counties, Illinois; the City of



Flint, Michigan; Polk County, Iowa; Racine County, Wisconsin; St. Joseph County, Indiana; and Summit County, Ohio.

For further information on any of these atlases, contact our Customer Service Department at (312) 231-8200.

CONVENTIONS HELD

Assessment officials and engineers had an opportunity to visit with Sidwell representatives at various state and regional conferences held recently. Included were the Michigan United County Officers Convention, Illinois Land Surveyors Conference, Illinois Property Assessment Workshop, North Central Regional Association of Assessing Officers Conference and the Illinois County Officials Convention.

If we did not get a chance to talk to you and you have questions concerning aerial photography and mapping, we hope you'll drop us a line.

JERRY JOHNSON ADDRESSES MISSOURI OFFICIALS

Sidwell Sales Manager, Jerry Johnson, was a featured speaker at the annual meeting of the Missouri Assessors Association and the convention of the Missouri Association of Counties.

Both presentations used color slides and sample maps to demonstrate the time saving features and advantages of a modern, up-to-date tax map and permanent parcel numbering system.

NEW APPRAISAL HANDBOOK

A new handbook is now available for assessment officials interested in learning more about Sidwell's computer assisted appraisal services.

The booklet describes the traditional approaches to valuation and how Sidwell's computer assisted MRA approach can provide an accurate and cost-saving method of making residential valuations.

Copies of the handbook are available free of charge by writing to Department MN, c/o The Sidwell Company.

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FOR FURTHER INFORMATION ON ANY SIDWELL MAPPING SERVICES . . .

Write to The Sidwell Company, 28W240 North Avenue, West Chicago, IL 60185 or phone (312) 231-0206