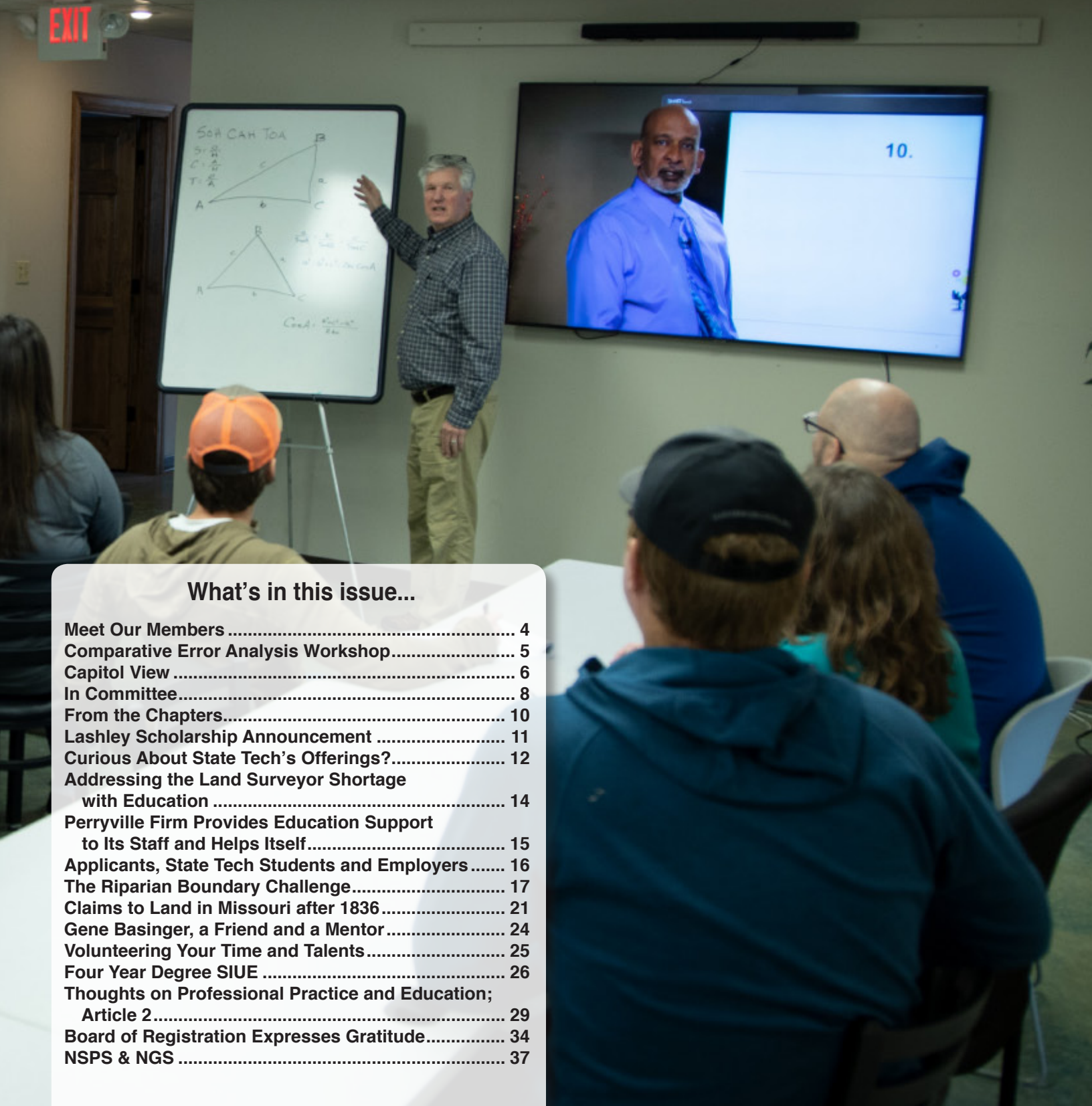


MISSOURI SURVEYOR

A Quarterly Publication of the
Missouri Society of Professional Surveyors

Jefferson City, Missouri

March 2022



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CALENDAR OF EVENTS

2022

April 28, 2022

Board Meeting
Lodge of Four Seasons,
Lake Ozark, MO

April 29-30, 2022

44th Annual Spring Workshop
Lodge of Four Seasons,
Lake Ozark, MO

July 16, 2022

Board Meeting
MSPS Office, Jefferson City, MO

August 15-17, 2022

Review Course
Jefferson City, MO

October 6-8, 2022

65th Annual Meeting and Convention
Sheraton Westport Hotel, St. Louis, MO

December 3, 2022

Board Meeting
MSPS Office, Jefferson City, MO

Additional Dates for

Spring Workshop

May 3-May 7, 2023

May 1-May 5, 2024

Cover: Employees of Zahner & Associates in Perryville gather for one of their surveying courses offered by State Tech of Linn. Mike Zahner is at the whiteboard, while Joe Paiva delivers instruction by video.

Donald R. Martin, Editor



Notes from the Editor's Desk

Donald R. Martin



Welcome to the March 2022 edition of *Missouri Surveyor*. There is a lot I want to call your attention to in this edition! Let's get started:

The Education Edition

This issue features seven pages of content focused on news and opportunities associated to surveying education regionally. Even the cover photo reflects it. Read about course offerings at State Tech in Linn, Missouri, and the creation of a baccalaureate program in surveying coming to the St. Louis area at Southern Illinois University, Edwardsville.

The Cover Photo

Thank you, Mike Zahner and your team there in Perryville. These folks put a great deal of effort into helping this publication with the cover and images for one of our featured articles. Good job!

Refocus on our Association and Members

Readers will notice in the early pages of this edition, the content is about, from or dealing with MSPS specifically. I want to be sure and get all of "our" news in this newsletter. So, we have chapter reports, committee news, member profiles and such. But here is the kicker - to keep this up, your contributions are needed. If your committee or chapter is doing something, let us know!

Member Contributions

One of the strengths of this newsletter is the high level of member contributions for content. Fully half of what may be read and seen in these pages comes from MSPS members. The contributions are appreciated! And they need to continue! Don't let your stories and news fall by the wayside, share it in these pages. A fine example in this edition comes from Don Bormann as he pays tribute to a wonderful surveyor and MSPS member in, *Gene Basinger, a Friend and a Mentor*.

Leaders Wanted

I may be pushing it here, but I want to mention a concern. I am a member of the Nominations Committee, chaired by our Immediate Past-President Earl Graham. Each year, this committee is charged with recommending a roster of nominees for critical roles as members of the MSPS Board of Directors. Now, considering who has served as officers and directors in our society, this committee has done a commendable job. But I worry that my own suggestions and nominations may have overlooked some very interested and very talented MSPS members. Just a thought, but if any voting member has an interest in being considered for nomination to the Board of Directors, let us know. Especially those of you toiling away in our committees and working in the chapters. Help us know who you are and what you may care to offer. It starts with awareness.

As we jump-start the spring, it continues to be a pleasure and honor to help bring you this newsletter. Enjoy this edition! For now, I best break-it-down and bunch-it-up so I can start getting ready for the next edition...I'll be back with ya' then. 🇺🇸

Donald

THE MISSOURI SURVEYOR

Published quarterly by the
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December Issue — November 1

EDITOR

Donald R. Martin
105 S. Capistrano
Jefferson city, MO 65109
Phone (573) 619-8702
E-mail: editor@missourisurveyor.org

PUBLISHER

Sandra Boeckman
722 E. Capitol Avenue
Jefferson City, MO 65101
(573) 635-9446 FAX (573) 635-7823
E-mail: msps@missourisurveyor.org

The Missouri Surveyor is published quarterly by the Missouri Society of Professional Surveyors, to inform land surveyors and related professions, government officials, educational institutions, contractors, suppliers and associated businesses and industries about land surveying affairs. Articles or opinions appearing in this publication do not necessarily reflect the viewpoints of MSPS but are published as a service to its members, the general public and for the betterment of the surveying profession. No responsibility is assumed for errors, misquotes or deletions as to its contents. Articles may be reprinted with due credit given.

President's Message

Brad McCloud, PLS



This winter has flown by. I hope you were able to work on some training during the inclement weather days, if not, maybe you can take advantage of the rainy days of spring. There are a lot of opportunities for training you can access right from your desk. Most vendors have online academies or links to training videos, NSPS, CAD user groups or YouTube. This is a great way to produce a better plat and to promote better survey plats.

I will be working with the Annual Meeting Committee to host a survey plat competition at the Annual Meeting. It would be great to see the winners enter the NSPS MAP/PLAT contest and see Missouri Surveyors leading the way. Please visit the NSPS website to see past plat winners.

This year's Spring Workshop is April 29th and 30th at the Lodge of the Four Seasons. Topics will include Value Based Business (presented by Scott Holman), Boundary Accuracy Closure (presented by Bob Shotts), UAV Drones (presented by Mak Schnesk), LSIS New Way to Look up Information (presented by Jacqueline Walters, Highway Plans MoDOT/Railroad/City Maps/etc. (presented by Ray Riggs), Title Company (presented by Mike Freeman, Connecting Office to Field and What to do with you Data (presented by James McDonald). Looking forward to the presentations and seeing you there.

Committee participation is key to our success. I would like to encourage those that have not participated in a committee, committee chair or leadership role to do so. There are 27 positions between committee chairs and leadership at the society level and 35 at the chapter leadership level not to mention all the committee members. This is a great way to meet other surveyors and advance our goals and mission.

Moving on to legislation, here are the bills surveying and surveyors to keep an eye on this session.

SB1001 - Changes the name of land surveyor-in-training to land surveyor intern.
Sponsor: Mike Bernskoetter

HB1495 – Changes the laws regarding sales of land so that a sale of 10 or more acres requires a survey: Sponsor: Mark Ellebracht

HB1590 – Changes requirements that 5% of all new state contracts be awarded to businesses that have been in operation for less than five years.
Sponsor: Travis Fitzwater

HB1619 – Limits drone use to capture data over private property without consent.
Sponsor: Duan VanSchoiack

HB1720 – Modifies various provisions in Land Surveys sections 60.301, 60.315, and 60.345 RSMo: Sponsor: Bradley Pollitt

HB2191 – Changes the requirements to become a land surveyor.
Sponsor: Don Mayhew

HB2364 – Changes the current Missouri Coordinates System to the most recent system established by the National Spatial Reference System.
Sponsor: Don Mayhew

Brad

Meet Our Members!

PLS Members

Tom Barnard

West Plains, Missouri

Position:

Owner/Operator
Southern Missouri Surveying

Focus of survey practice:

Boundary surveys for both rural and municipal parcels as well as large-scale retracements of the cadaster; business sector for the last five years has been private landowners and developers.

Most memorable project:

A large parcel boundary survey for a rural landowner covering four sections, spanning two townships; there were multiple conflicting corners derived from a mixture of old and modern surveys in the area. It is memorable because it repeatedly called on my professional judgement. It was among my first projects where the “gray areas” of this profession were revealed to me. I learned then that answer really is “it depends” more often than not.

Likes about surveying:

The variety! Most of the work I perform is cadastral, but every single project is different. Each usually has a variable that adds its own level of complexity. I also enjoy the history - the GLO and having to literally following in the footsteps of the surveyors before. I find it interesting to put the measurements of today’s modern equipment beside the measurements of the past then evaluate how well they compare.

Why a member of MSPS:

My main reason for being a member is the networking. Fellow members matching my passion for the profession have and share a wealth of information.

Finding surveying as a career:

As a teen I was interested in surveying instruments. I was then introduced to surveying when I began working for the highway department, using GPS to map roadways throughout 13 counties. That continued with me doing boundary and design surveys in MoDOT’s South Central District. I was licensed 2017 and then ventured into the private sector. I enjoy being part of a profession that literally get to leave our mark on the earth. 🇺🇸



Scott Faenger

Rolla, Missouri

Position:

Cadastral Section Chief,
State Land Survey Program
MSPS Board of Directors

Focus of survey practice:

Serving Missouri citizens as a steward of the USPLSS. Performing cadastral surveys to restore and perpetuate section corners of the public land survey system.

Most memorable project:

December 2005 - measuring the high-water mark after the Taum Sauk Reservoir Failure. It was extremely cold the first week of this project and the ground was frozen, but by the end of the second week it was starting to get a little sloppy in the mud. I slipped in the mud and instinctively put my hand out to catch myself, sticking it into a locust tree.... fun times! It was a unique project showing the sheer destructive power of water. It was amazing to see up close.

Likes about surveying:

I love being outdoors and I like the diversity of each job. I particularly enjoy following in the footsteps of the GLO surveyors that came before. I thrive on the challenge of finding original evidence. Also, my job gives me the opportunity to visit all parts of Missouri and enjoy meeting people everywhere I go.

Why a member of MSPS:

Initially attending conferences for the education, I found that I enjoyed meeting people in the survey world. I wanted to be more involved with those who were in the same profession, and being a member provides me with an opportunity for professional growth and development. As a new Board of Directors member, I look forward to learning and doing my part to promote the profession.

Finding surveying as a career:

I fell into this career by accident, finding work with survey companies in Texas and then Arkansas. Returned home to Missouri, I landed a job with the State Parks Survey Program. In 2005, I moved to the State Land Survey Program. 🇺🇸



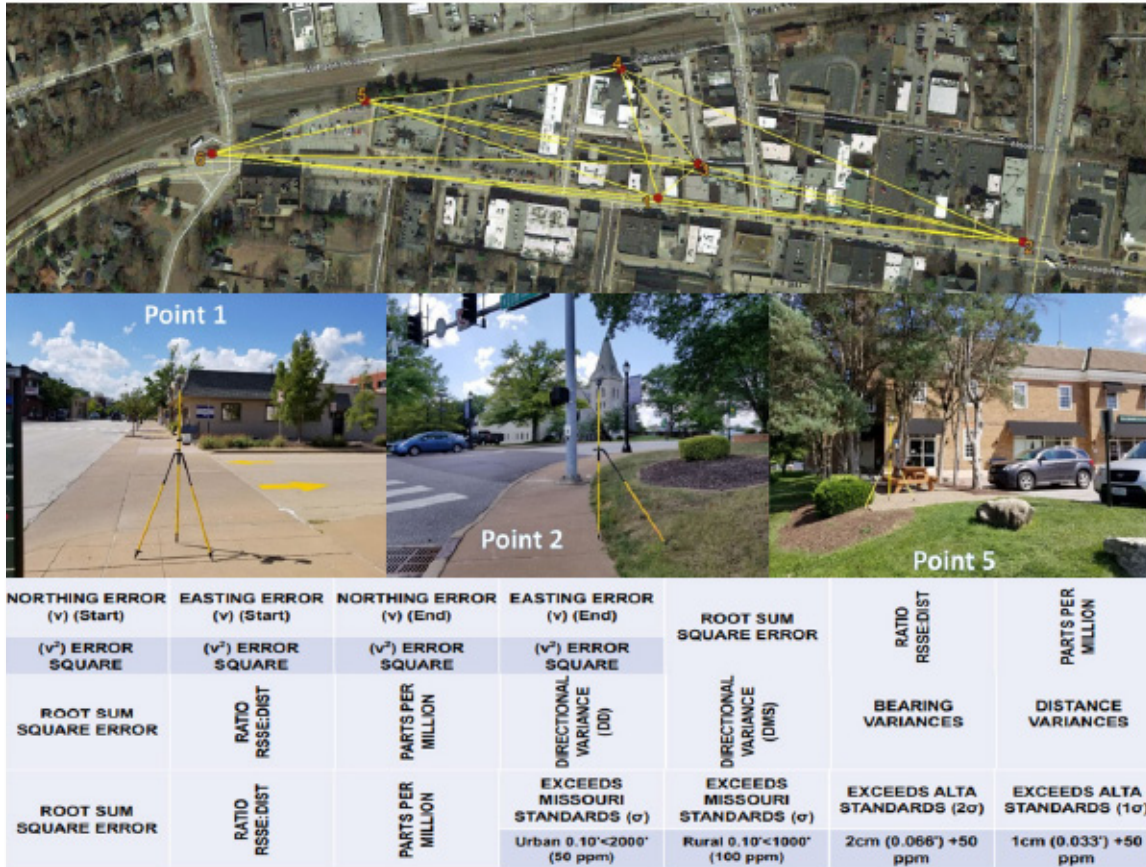
START GETTING READY!

for the

Comparative Error Analysis Workshop

at the

2022 MSPS Annual Meeting & Convention



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- **Collection Procedures, Data Extraction & Analysis:** Will be refined and discussed during the sessions!
- **Find More Information:** In the June Edition of the Missouri Surveyor!

Thursday, October 6, 2022
65th MSPS Annual Meeting and Convention
Sheraton Westport Lakeside Chalet, St. Louis, MO

Capitol View

A Look at Surveying Legislative Matters

January 5th marked the beginning of the 2022 General Session of the Missouri legislature; it is the 101st General Assembly of those bodies. It may well be a busy session for surveyor and surveying matters. Entered into the political arena are the following:

Revising the Qualifications to Be a surveyor

Described in the December edition of Missouri Surveyor as, "...an attempt to balance the challenges of bringing new surveyors into the profession while assuring high standards," legislation has been introduced to revise the qualifications to be a Missouri surveyor. Found in HB 2191 and SB 1001. Seeking changes to Chapter 327 of the Revised Statutes of Missouri (RSMo), it proposes these changes become effective in 2024.

The legislative proposals encompass the following changes: RSMo 327.314 – The three paths of qualification remain. They are: baccalaureate degree graduates of approved curriculum with 12 credit hours of surveying coursework; individuals having passed 60 credit hours of college credit with 20 credit hours of surveying coursework; individuals having passed 12 credit hours of college credit with 20 credit hours of surveying coursework. Each of these paths specifies that 2 hours of their surveying coursework is specifically in the legal aspects of land surveying. Retaining the three paths, the proposed legislation does increase the number of hours of surveying credits and the hours of legal aspects courses in this manner:

- a) baccalaureate degree in an approved curriculum + 15 credit hours of approved surveying courses
- b) 60 hours of college credit + 15 credit hours of approved surveying courses
- c) qualifying experience in land surveying + 15 credit hours of approved surveying courses

All would increase the legal aspects of boundary surveying credits from 2 hours to 6 credit hours.

The proposed legislation would also redefine the amount of "satisfactory professional field and office experience in land surveying." It would eliminate the current 4 years of experience after enrollment as an LSIT and replace it with:

- a) baccalaureate degree in an approved curriculum – 4 years of satisfactory experience
- b) 60 hours of college credit – 5 years of satisfactory experience
- c) 15 credit hours of approved surveying courses – 6 years of satisfactory experience

In all three paths, the experience specifically coming after LSIT enrollment is removed. In all three circumstances,

the required years of experience can occur either before or after LSIT enrollment.

Redefining the Missouri State Coordinate System

The upcoming changes driven by the National Geodetic Survey's modernization of the National Spatial Reference System are the reasons for the changes sought in HB 2364 and SB 1026. Embodied in changes to Chapter 60 of the statutes, the details are:

RSMo 60.411 – Inclusive language making allowance for the Missouri state plane coordinate system to have multiple projection zone layers. It also specifies the National Spatial Reference System as the supporting system for mapping projections of the coordinate system.

RSMo 60.431 – Designation of the International Foot as the customary standard for the Missouri state plane coordinate system. This is a condition of the implementation of the National Spatial Reference System in 2025. This will also repeal all of RSMo's 60.410, 60.421, 60.451 and 60.491 which define the current three zone system known as the Missouri State Plane Coordinate System of 1983.

Corners Reestablishment Rules

Almost hidden in legislation described in its summary title as, "Modifies various provisions governing agricultural economic opportunities," an effort to eliminate the ambiguities in reestablishment rules for corners on township exterior lines:

RSMo 60.315 – Prescribes single proportionate measurement on the line connecting the next nearest existent standard or closing corners.

RSMo 60.345 – Defines rules guiding the placement of offsets if necessary on quarter-section corners south of the township line and east of the range line. 🇺🇸



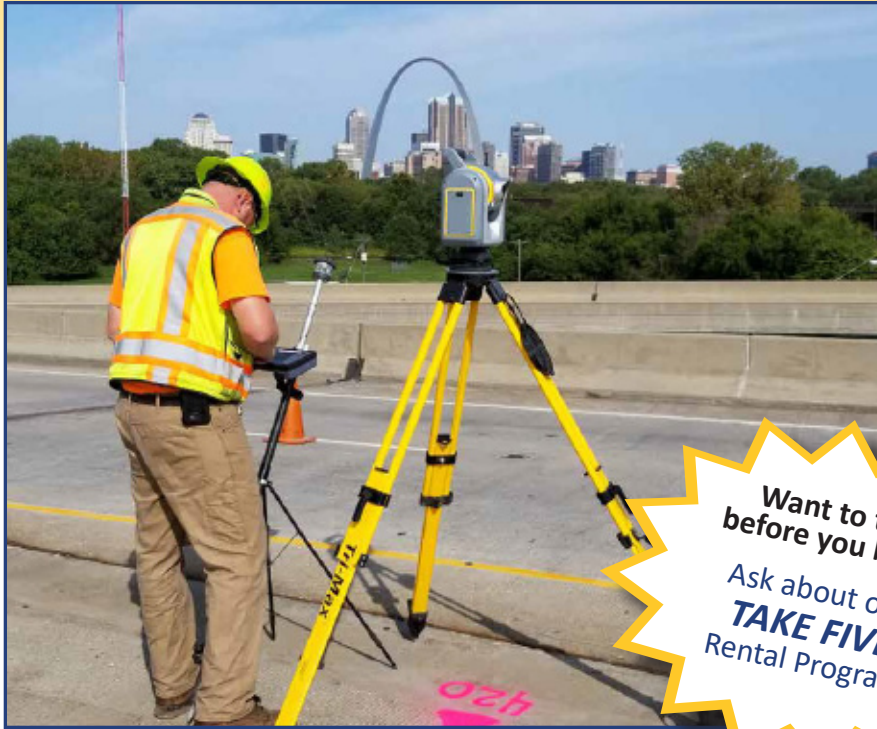


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Jason Taylor, Mobile LiDAR
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Chad Willey, Survey Sales
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In Committee

What's going on in the MSPS Committee

Education Committee: Committee chair Dan Govero reports the Education Committee is open to suggested topics and presenters for upcoming meetings from all MSPS members. "I would welcome requests for future topics for the workshops," says Mr. Govero. This is an opportunity for MSPS members to engage with a committee and contribute to our association.

Legislative Committee: MSPS lobbyist Lynne Schlosser continues to keep members apprised of legislation impacting the practice and business of surveying with Weekly Reports sent out each Friday. The 2022 Regular Session is the 101st General Assembly of the Missouri legislature. In this session, the following are surveying specific matters:

HB 2191 – "Modifies provisions relating to land surveyors": changes the requirements to become a surveyor; increases the currently required 12 hours of college credit in surveying specific course to 15; increases the current 2 hours of college credit in legal aspects of surveying to 6 credit hours; specifies the number of years under supervision of a land surveyor that prospective surveyors must serve; 4 years for those with qualifying baccalaureate degree; 5 years for those with qualifying 60 credit hours; 6 years for those with qualifying 15 hours. Sponsored by Representative Mayhew of District 121.

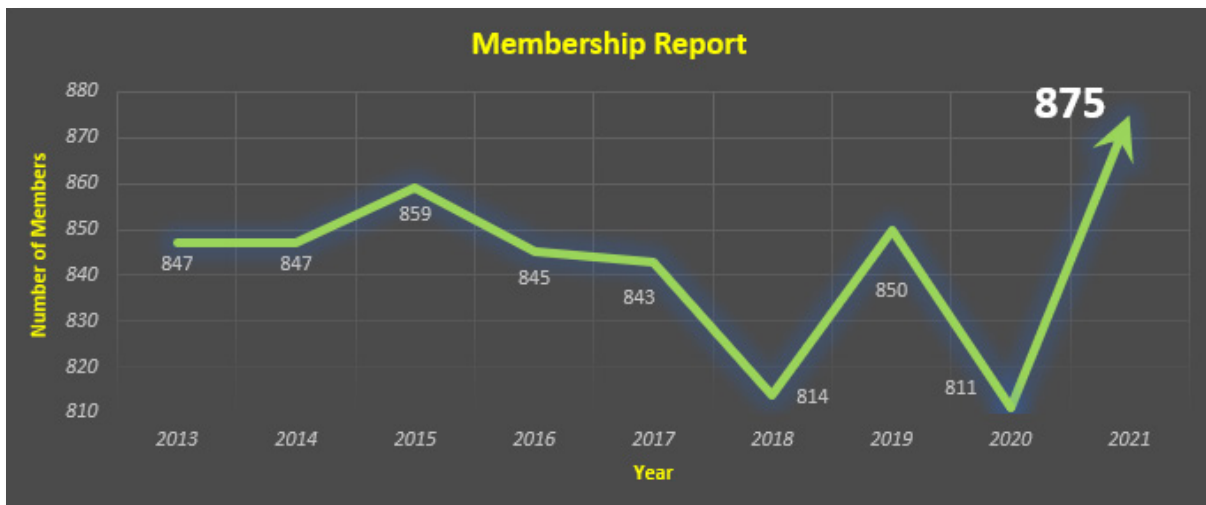
HB 2364 – "Changes the law regarding land surveys": specifies that the system of state plane coordinates be based on the National Spatial Reference System; removes year specification for the title of the "Missouri State Plane Coordinate System; makes allowance for multiple projection zone layers (to accommodate the establishment of Low Distortion Projection zones); removes the defining clause for the current three-zone system. Sponsored by Representative Mayhew of District 121.

HB 1720 – "Modifies various provisions governing agricultural economic opportunities": adds "center of section" to the list of determining corners in RSMo 60.301; specifies proportioning method for reestablishment of lost corners on township exterior lines in RSMo 60.315; adds procedure for offsetting proportioned positions in RSMo 60.345. Sponsored by Representative of District 52.

SB 1001 – "Modifies provisions regarding licensing of land surveyors": same as HB 2191.

SB 1026 – "Modifies provisions relating to the Missouri state plane coordinate system": same as HB 2364.

Membership



Membership is at a 9-year high! For 2021 we have a total of 875 members: 602 PLS members; 146 Associate members; 49 Corporate members; and 78 more members throughout our ranks of Sustaining, Student, Retired and Life members.

The New Year marked the time for membership renewals. Encourage coworkers, associates and classmates to join up! 🇺🇸

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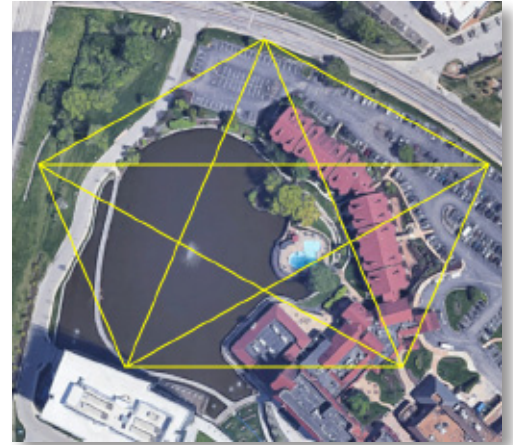
From the Chapters

News and Events from the MSPS local chapters

St. Louis Chapter

The **St. Louis Chapter** is in full planning mode for the *MSPS Annual Meeting and Convention* in October of 2022. To be held at the Sheraton Westport Lakeside Chalet in Maryland Heights near the intersection of I-270 and Page Avenue, the hosting venue is part of the Westport Plaza business, shopping and entertainment district.

The Chapter reminds those attending the conference to participate in the *Comparative Error Analysis Workshop*. As part of the session, GPS units will be used to collect data on a “test course” located on the grounds of the Chalet and Plaza. GPS surveying methods will be compared to determine the most suitable methods for attaining the required data quality to meet the standards for boundary surveys. The session will also include data collection by drone and demonstrations of data processing.



SW Chapter

The December 2021 meeting of the **SW Chapter** marked the annual installation of officers and directors. Held in Joplin, the Chapter hosted an honored guest, MSPS President-Elect Ray Riggs. It was Mr. Riggs duty to swear in the slate for 2022. They are:

President: Jim Herre
President Elect: Brad Ferguson
Vice President: Zach Winters
Secretary/Treasurer: Monnie Sears
Director, 1st year: Brian Atnip
Director, 2nd year: Darin Carpenter
Director, 3rd year: Andy South



MSPS President-Elect Ray Riggs (far left) with SW Chapter officers and directors (l to r); Andy South, Jim Herre, Monnie Sears, Darin Carpenter, Zach Winters.

On January 7th, the SW held their first meeting of 2022 in Joplin. The focus of this meeting was event planning for the coming year. Those present discussed: planning a spring bar-b-que, organizing outreach programs for local schools, publicizing National Surveyors Week in local media, and topics for their Fall Workshop.

The SW Chapter also used the occasion to express their support for the surveying coursework offered by State Tech in Linn, Missouri. The chapter’s Board unanimously approved making a \$500 donation to the program. This marked a renewal of their generosity and support with the SW having made similar donations to State Tech in the past. 🇺🇸

Announcement

O. Dan Lashley Memorial Scholarship

is available for the Fall 2022 semester!

MSPS Student Members & Associate Members are encouraged to enroll.

Applicants must be enrolled for the fall semester in a college surveying class.

Orvis Daniel (Dan) Lashley, a Professional Land Surveyor whose career spanned more than four decades, spent 32 years as a project surveyor and section chief at the Department of Natural Resources' Land Survey Program, Division of Geology and Land Survey in Rolla, MO.

Dan had a love for surveying, educating young people about the surveying profession, and encouraging them to consider a career as a Professional Land Surveyor. Dan was very enthusiastic about establishing this scholarship in 2008 to celebrate his retirement. It was subsequently continued as a memorial scholarship in his memory. Dan wanted this scholarship to encourage non-traditional students to pursue a career in surveying. This scholarship will be awarded on an annual basis of \$500.

The scholarship fund is maintained by the Executive Director of the Missouri Society of Professional Surveyors (MSPS). The scholarship will be awarded annually and if the Selection Committee so deems, more than one recipient may be selected per year.

The scholarship application deadline is July 31, 2022. The application is available for download on the MSPS web site at: www.missourisurveyor.org.



***See Page 31 for Selection Criteria &
Page 32 for the Application Form***

Curious About State Tech's Offerings?

by Mike Oetterer

State Tech offers four surveying courses of three credit-hours each. All of these courses are deemed to be “approved surveying course work as defined by board regulation”,* and therefore give students qualifying educational credit applicable towards licensure as a Missouri land surveyor upon successful completion. The courses are:



1. **CVT 240 Surveying I** – fall semester; online with four Saturday lab components. Prerequisite CVT 140 (*Applied Mathematics with Trigonometry*; State Tech curriculum) or an approved equivalent (trigonometry) course.
2. **CVT 241 Surveying II** – spring semester; online with four Saturday lab components. Prerequisite CVT 240 or other approved *Surveying I* class.
3. **CVT 242 Land Records: Researching and Rules of Construction** – fall semester; online. Prerequisite CVT 241.
4. **CVT 243 Legal Aspects of Boundary Surveying** – spring semester; online. Prerequisite CVT 241.

The courses are listed in the order they are normally taken. Most students take one class each semester. However, a student could take more than one class per semester by signing a prerequisite waiver form. In this waiver the student acknowledges that they take on all the responsibility for any knowledge required in the pre-requisite course that would be required for the course they are seeking to take.

It should be noted that students can frequently encounter difficulties with time management when they have a full-time job, especially when travel is a requirement of that job. State Tech advises caution on taking on a greater academic load than they could manage.

Most students take the State Tech courses listed above as qualifying credit towards surveyor licensure as these are approved by the Missouri licensing Board. The Board does approve courses taken at other institutions, however the Board does review content and other aspects, so expecting an automatic acceptance by the Board of any surveying course is not advisable. Also, an approved Legal Aspects course is a must and students taking this elsewhere, particularly outside of Missouri may discover that the Board requires them to take additional coursework.

The lab components for Surveying I and II are conducted on-site at our campus in Linn, Missouri campus. These labs are each six hours long, running from 9:00 am to 3:00 pm. Attendance is mandatory.

Labs may be performed off-campus if the student finds a licensed surveyor that will act as their proctor and mentor. An agreement form between the student, the licensed surveyor, instructor, and survey coordinator will need to be signed and approved. The proctor will be stating that they have all necessary equipment needed for the labs to be completed in their entirety and that they will work with the student to ensure the fundamental processes learned on campus are also learned in the off-campus remote lab situation.

* Revised Statutes of Missouri, Chapter 327.312. The term “board” refers to the Missouri Board For Architects, Professional Engineers, Professional Land Surveyors and Professional Landscape Architects. 🇺🇸



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Addressing the Land Surveyor Shortage with Education

by Joseph Paiva, Mike Otterer

Business is booming for many surveying businesses. The scramble for qualified help to work as technicians and assistants, office computing and drafting staff, instrument people, party chiefs, is constant. It's hard to think about the long-term during these times. But for the profession of surveyors, it is a must.

Qualified help at whatever level is hard to get. Surveyors are the ones who can do most about this. But this means planning for future (not everyone's favorite topic RIGHT NOW). As a professional, think about what your business' needs are. But try to think beyond that. What does the profession as a whole need? We often reduce the needs to the boundaries-related work we do because of our licensure. But professional surveyors are also called to fill needs in other legitimate surveying areas such as engineering, topographic, construction, layout, control, geodetic and on and on.

Wouldn't it be great if we could all commit to doing something for a future where all those areas are also able to meet the demand for surveying services? Surveyors are not used to thinking about public demand for surveying services, but the truth is that boundaries plus all the other surveying sub-disciplines affect the daily lives of the public. They don't think about surveyors being the pinch point for delays in getting what they want. But we understand that.

So help the profession in the future. Engage yourselves in mentoring, and especially fostering education among your incoming and existing workforce. Whether technician-path or professional-path, field force or office force, they all need it. (See the related article *Perryville Firm Provides Education Support to Its Staff and Helps Itself*.) Look carefully at what the certified survey technician (CST - <https://cstnsp.com/>) offers to help your staff become credentialed. Refresh yourself on the licensing board's rules and regulations on the process to become a licensed surveyor. Check out what State Technical College of Missouri offers to help your staff begin that professional path (<https://www.statetechmo.edu/?s=surveying>).

As instructors at State Tech, it was just three years ago when we reported that we had 30 enrollments per semester in two courses. But now we are bumping up against enrollment limits that have rapidly climbed, this semester to over 70! The level of interest is high. But we suspect, that there are many potential students, regardless of whether they want to take Surveying I and II to be better field techs or they want to become licensed professionals who are not yet aware of

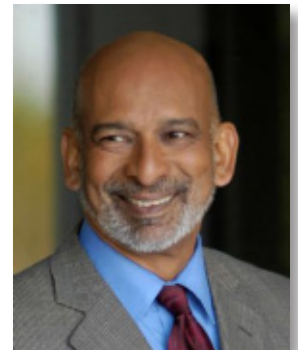
the program. Or, even if they are aware, are not being encouraged by their supervisors and managers to begin that program of study.

What's the situation at your firm? Do you provide support by encouraging staff to get better educated? Do you provide financial tuition and books support? Do you provide in-house mentoring and training opportunities? Do you keep a well-stocked library of surveying references that your staff can access for their school work as well as to do a better job filling their current roles at your company? Do you know what a good library might be? Write to us if you'd like some tips. Books aren't cheap but there is a good lists of titles, and no end of second hand books if budget is an issue. While on the subject don't forget those valuable reference books including *Definitions of Surveying and Related Terms published by NSPS and Black's Law Dictionary*.

Post information prominently at your business about educational opportunities for your staff, wherever they might be. Do you support their attendance at conferences and workshops? Do you check out the online opportunities for training and continuing education? Have you made a call to someone at State Tech to get more details for your employees? Have you contacted the CST program to become a mentor and exam proctor?

There are many scholarships that your employees may be able to take advantage of. Some are offered by MSPS, others are offered by NSPS. Many times the applicants numbers are so low that almost everyone who applies gets a scholarship award. Are you searching these out and mentoring your staff by helping them write their scholarship requests?

Do yourself, your profession and the public a big favor. Promote the process of being better qualified to your incoming and existing staff; mentor them; give them financial support to attain mutually satisfactory educational objectives; be the "hesitancy-remover" among your staff who have that special "can do" attitude; reward them with some of these incentives instead of only looking at the size of their pay packet. The profession and the public will thank you! 🇺🇸



Joseph Paiva

Perryville Firm Provides Education Support to Its Staff and Helps Itself

by Joseph V.R. Paiva

Zahner and Associates is one of the Missouri firms that officials at State Tech have noted has lots of their employees enrolled in State Tech's land surveying courses for college credit. What's lots? How about six this term? Three are in Land Surveying II and five are in Legal Aspects of Boundary Surveying. Two are enrolled in both classes.

"If you want good help, get them educated."

Why would a firm's employees be this interested in education, and presumably, attempting in this process to become licensed, professional land surveyors? So, we called Mike Zahner, its President, to find out. "Well, why not pursue education?" he said. "It is one of the best ways to grow your knowledge and to gain credentials that will move you ahead professionally," he added. "We expect new and seasoned employees to make a habit of continuous, lifelong learning and encourage all our staff to pursue educational opportunities." But it's not just talking the talk, Mike's firm walks the walk too.

They fund 100% of their employees' education at State Tech, including 100% of their book costs. "We do it because it helps us competitively; we can point to an educated workforce that is either working toward licensure or certification, or has already achieved it." Mike went on to say that his company encourages achievement of credentials wherever it is appropriate to get it from. So, monetary as well as moral support towards LSIT, LS and certified survey technician (CST) are all things the company supports for everyone.

And funding the costs of achieving these credentials isn't enough at Zahner. Mike himself frequently uses lunch hours (well...maybe 45 min) on Wednesdays to conduct learning sessions for those pursuing CST or LSIT. In the evenings, for those in the field, he does the same thing. The employees are even paid to attend these learning sessions (plus providing pizza to sustain their energy).

Zahner says that they are "very fortunate to have employees that are interested in learning and growing in the surveying profession." With the amount of online classes, anyone with the desire to learn has many choices. They can plan around most work and family schedules.

Mike himself works with students in Surveying I and II who need help with their labs. This means that he believes in mentoring, doing it himself and setting himself up as a role model to the whole company. He explained that helping his younger staff is the favorite part of his job. With this attitude how can mentoring not be a process that goes on at all other company levels too?



Zahner & Assoc. employees enrolled in State Tech surveying courses for the Spring 2022 semester – Top (Left to Right): Waylon Spakman, Ethan Layton, Charles Prior; Bottom (Left to Right): Andrew Roth, Eann Bergman, Ryan Geile

Zahner's example is one many other Missouri firms may wish to emulate. Both, for their own well-being, but just as importantly to enrich and enlarge the professional land surveyor community in this state. 🇲🇴

Applicants, State Tech Students and Employer: Fall 2022 Survey Classes Begin August 23 at State Tech!

by Mike Oetterer

State Technical College of Missouri is offering two survey courses for Fall 2022 (approved by Missouri Licensing Board for required land survey applicant college credit). They are *CVT 240, Surveying I* and *CVT 242, Land Records: Researching and Rules of Construction*, each for three credits. Both of these courses are 16-weeks and online. *CVT 240 Survey I* has lab components that will be performed on four Saturdays during the semester on campus in Linn. For those located too far from campus or with other conflicts, the labs can also be completed off-campus if the student finds (in advance) a collaborating licensed surveyor who can act as their proctor and also provide the necessary survey equipment needed to complete the labs. This option requires pre-work by student and proctor before classes start. They will need to submit signed agreements that will be approved by the College.



Mike Oetterer

State Tech will also be offering a GIS/GNSS course in the Fall 2022 semester. This 3-credit course carries 1.5 hours of approved course credit by the licensing board if used to meet the educational requirements for licensure. *CVT 245 Introduction to Geographic Information Systems (GIS) and Global Navigation Satellite Systems (GNSS)* is also a 16-week course and fully online.

The cycle for the survey courses starts each fall, so now is the time to apply. You can in the summer of 2022 and classes will start August 23, so starting the application process mid-August may be too late. Class enrollments are steadily increasing; don't be disappointed as classes can fill up. Employers and students, please help each other out by posting dates and website links on your company bulletin boards and making announcements at company and professional meetings. Thanks!

Course Details

CVT 240 Survey I (3 credit hours) Covers basic surveying principles, mathematics, and operations emphasizing basic computations and operation of equipment including the surveyor's tape, level, and total station. This course has a laboratory component where the student learns basic instrument use and elementary surveying operations through a variety of field exercises. Textbook: *Surveying* (6th Edition) by McCormac, Sarasua, Davis (John Wiley & Sons, 2015).

CVT 242 Land Records: Researching and Rules of Construction (3 credit hours): Teaches knowledge fundamentals knowledge to perform land records research with deeds and related records, survey records, and other land records preparatory to conducting property boundary surveys. The student will examine evidence of ownership, historical information, property descriptions, and legal requirements for reviewing and recording documents. Applicable portions of the Missouri (and other states) Minimum Standards for Property Boundary Surveys as well as the standards for the American Land Title Association (ALTA)/National Society of Professional Surveyors (NSPS) will be discussed. Various aspects of professional practice and ethics are also included. Textbook: *Interpreting Land Records* (2nd Edition) by Donald S. Wilson (John Wiley & Sons, 2015).

CVT 245 Introduction to Geographic Information Systems (GIS) & Global Navigation Satellite Systems (GNSS) (3 credit hours; only 1.5 credits hours of which will be recognized as qualifying towards licensure as a land surveyor) Teaches fundamental concepts in the use of GIS and GNSS to prepare students for work in the geospatial industries and professions. Students learn spatial referencing concepts, GIS, and GNSS and also introduced to GIS/GNSS receivers and GIS/GNSS software systems that are used to collect, correct, map, and analyze geospatial data.

To Apply for Enrollment

For more information about the survey courses at State Tech and how to enroll, go to <https://www.statetechmo.edu/>. Then click on "Start Your Career;" then select "Workforce Training and Continued Education." Now click on "Land Surveyor License Credit Courses." In the upper right-hand corner, you will see "Apply Now." Start this process immediately even if you are not sure what you want to do exactly, as this sets in motion a process that streamlines your admission to the College.

Questions about the Surveying Courses

If you have any questions or need help applying, please contact Mike Oetterer, the State Tech Survey Program Coordinator. His contact information is mike.oetterer@statetechmo.edu. His office phone is 573-897-5354. You will find this information as well as much more on the State Tech Surveying page, which can be found directly at <https://www.statetechmo.edu/surveying/>. 🇺🇸

The Riparian Boundary Challenge

Question: Where's the boundary? Answer: It can depend on many factors, some unknown and unknowable to the surveyor.

by Dr. Richard L. Elgin, PS, PE, October 12, 2021, American Surveyor

The Riparian Boundary—Not Your Usual Boundary

In the United States, rivers, streams and lakes provide a natural boundary for millions of parcels along thousands of miles of boundary line. As boundaries, rivers are a natural monument, holding the highest priority in the order of conflicting title elements. Visible, their identity certain, they have been used by man as boundaries for millennia. However convenient, and as natural, visible, substantial and inviting as they are for governments, treaties, and owners, they have one huge, troublesome characteristic: They move! There are many other issues related to using waterbodies as boundaries, but their ambulatory nature is what makes riparian boundaries different from all others. This boundary movement, influenced by the whims and vicissitudes of Mother Nature and the designs and construction of man, brings uncertainty. With movement, the extent of title and tract acreage changes; even small differences in fluvial processes can result in large differences in ownership. Landowners face uncertainty in something they desire to be firm and absolute: The location of the boundaries of their real property. Generally, owners do not like their boundaries to change, their acreages decreasing or increasing, their lands perhaps vanishing altogether. These boundaries can change by forces of nature that are not within the riparian's control. Or one's riparian boundary may be changed by others without the riparian owner's knowledge or permission, such as by artificially-induced river movements. Riparian boundaries frequently bring conjecture to the landowner, consternation to the surveyor, confusion to attorneys, confoundment to the courts and they have conflated commentators.

Additionally troublesome is that riparian boundaries can be four-dimensional: In a plane, their North/East horizontal position can be affected by vertical movement of the waterbody. And time can affect the riparian/littoral boundary location. (If the river moved slowly or quickly can have an effect.) Four dimensions, very unlike its usual two-dimensional boundary brethren.

And most boundary disputes between adjoining are personal and are based on emotions. The cost of litigating a boundary almost always far exceeds the value of the land in dispute. Not so in some riparian boundary disputes. At stake can be thousands of acres of land or issues worth tens of millions of dollars. The most epic boundary litigation matter in United States history was a riparian boundary dispute: The famous "Red River Litigation" between Oklahoma and Texas. That litigation spent the 1920s in and out of the U.S. Supreme Court and even at this date there remains an ongoing kerfuffle concerning the boundary. Another example is the current "Is it a river or is it a lake" question in Lake Catahoula in Louisiana (with huge ownership and other consequences).



(continued on next page)

The Riparian Boundary Challenge *(continued)*

Lex Aquae

With its foundation in English Common Law, courts and legislatures (both state and federal) have proclaimed “lex aquae,” the law of the water. Riparian (river) and littoral (lake or seashore) boundaries are part of that law. Riparian boundary law is complex, largely buried in court decisions that set precedents, and, like the shifting sands in a river, it has and will continue to evolve. But it establishes the rules and principles to be followed by the Professional Surveyor when determining the location of a riparian boundary.

Boundary control legal principles are fairly uniform nationwide, hence there are books by Skelton, Clark, Brown, Robillard, Wilson and others that do a good job of stating and explaining them. Some legal principles are broadly applicable nationwide. The general riparian rules for erosion, accretion and avulsion are examples and they are adequately covered by the authors listed above. Under the Equal Footing Doctrine, the federal government left most riparian issues to the states (while reserving federal interests). Because states can (and have) developed their own law and rules relative to water law and riparian boundaries, there are differences. Some riparian boundary issues are very state-specific. One doesn't have to dig too deeply into riparian boundary subjects to find rules that are very different state-to-state: If a state owns the bed of a river that is navigable for title (not all states do), what is the title boundary between the state and the upland owner? If you said Ordinary High Water Line, you'd be correct for less than half the states. So, books by the authors listed above don't delve too deeply into riparian boundaries...as they shouldn't.



Some Examples

To illustrate how state-specific some riparian/littoral boundary issues can be, here are some questions or hypothetical situations. For your jurisdiction, state the applicable legal principle, along with any qualifying statements or explanations necessary. No answers are supplied with this quiz because there is not one answer that will be correct for all 50 states and federal lands. One or two will be close to the same nationwide, but even they will need a qualifying note or two.

If you've not accomplished many surveys of riparian tracts, you may not have thought of or encountered some of these circumstances. All of these issues have been before the courts. It is likely these issues are settled for your state. (Perhaps not to the specificity desired by the Professional Surveyor, but the general principle can be stated.)

1. For a non-navigable stream, what line is the boundary between opposite landowners? Define, exactly, that line and how it is located.
2. Who owns the bed of a waterbody that is navigable for title? Is it the State in trust for the public? Is it the upland landowner but subject to an easement in the public for commerce and recreation? Or is it in some other entity?
3. Suppose the bed of a river is navigable for title and is owned by the State. Where is the boundary between the State and the upland owner? Define, exactly, that line and how it is located.
4. Who owns an island that forms in a navigable river?

5. On a navigable river that has barge and commercial traffic, for the states on opposite sides of the river, where is the state boundary? Define, exactly, that line, and how is it located.
6. Suppose a non-navigable lake that was meandered by the GLO slowly goes dry. The littoral owners hire you to survey their lakebed ownership. First, do these upland littoral owners have any rights in the now dry lakebed? Describe how you proceed.
7. Suppose that post-avulsion on a navigable river, there's a cutoff lake, formed from the abandoned channel. The cutoff lake partially fills in. Who owns the bed of this cutoff lake?
8. Owner A conveys to B "all lands north of the river," then Owner A conveys to C, "all lands south of the north bank of the river." Based on those facts what is C's northerly title line?
9. For your state, are the legal principles different for a river as compared to a lake? If so, define or distinguish the difference between a river and a lake.
10. The GLO meander line is practically never the upland owner's boundary. As the successor to the patentee, the patent being a lot made fractional by a waterbody, the waterbody is the boundary, not the meander line. Can there be an exception, the meander line being the boundary?
11. Suppose in the deed of a riparian tract, its acreage is given. A current survey shows that the acreage mentioned does not include the accretions to the tract that have been added since the deed was written (but has been used in subsequent conveyances for many years). Are the accretions conveyed by the later deeds?
12. Does your jurisdiction embrace or reject re-emergence? That is, suppose that by erosion an advancing river completely erodes and washes away a parcel. The river then retreats, accretions forming where the parcel formerly was located. Who gets title to the "re-emerged" parcel? Does the original owner's title "re-emerge," or, does title accrete and inure to the benefit of the owner of the last mainland the river touched (who could have been previously non-riparian)?
13. On a stream that is non-navigable for title (the upland owner(s) holding title to the bed) does the public have the right to float-fish or canoe through the property? Camp on its banks?
14. Suppose artificial improvements to the banks or in the channel of a river create changes downstream by erosion and accretion. Do the usual legal principles of riparian boundaries still apply?
15. When does the apportionment of an accretion stop, the apportionment becoming fixed? That is, as an accretion grows and changes shape its apportioned lines move as well. When do those lines become fixed?
16. Is there a difference between navigability for title and regulatory navigability? Is there a nexus between the two? Who decides if a river is navigable for title? Who decides regulatory navigability?
17. Is, or can there be a difference between federal navigability and state navigability? Can a river be navigable for title under the state test, but non-navigable under the federal test? Can the state test and federal test be different?
18. Is the river adjoining the tract you are surveying navigable or non-navigable for title? How do you know? Will it make a difference in the survey? Yes! For your state, who determines if a river is navigable for title? [By the way, is there a difference between navigability for title and regulatory navigability? The answer is yes. I know of no state where they are identical. But, in riparian boundaries, statements such as this are dangerous. It seems there is always an exception.]

Note that these questions/situations are focused on inland, nontidal rivers and lakes. Just as many questions could be posed for tidal boundaries.

The Challenge

Each state needs its own manual that addresses its riparian and littoral boundary location principles. Coastal states should include its tidal boundaries. To accomplish this, all riparian/littoral decisions related to boundaries need to be discovered, indexed by topic, read, abstracted, then summarized. With these summaries and aided by learned articles on the subjects, publications and statutes, the legal principles can be stated. The product will be a book on riparian/littoral boundaries specific to the jurisdiction. This has been done for only one state, Arkansas. See "Riparian Boundaries for Arkansas" by the author of this article. Pages: 288. Tables: 30. Figures: 12. Within that book, the answers for each question given above can be found.

To start your state's manual, for the questions/circumstances in the examples given above, do the case law and statute law research necessary to state the legal principle or provide guidance on the matter, specific for your jurisdiction. Cite the

(continued on next page)

The Riparian Boundary Challenge *(continued)*

applicable decisions and summarize them. Once this is accomplished for each state and the federal lands, someone with high professional knowledge of and experience with riparian/littoral boundaries and who is an excellent writer with lots of energy and unlimited time and resources can edit the resulting tome about inland, nontidal riparian and littoral boundaries and coastal tidal boundaries. It would be a herculean task. That's why no one has done this to date.

This "challenge" is made somewhat in jest, but posing the questions/situations is not. They illustrate how complex riparian boundaries can be, and how state-specific they can be.

About the author: Dr. Dr. Richard L. Elgin, PS, PE

Dr. Richard Elgin, PS, PE is a surveying practitioner, educator, researcher, collector and author. He codeveloped the "ASTRO" software products and coauthored the Lietz/Sokkia ephemeris. He wrote The U.S. Public Land Survey System for Missouri and Riparian Boundaries for Arkansas and Shoulda Played the Flute (a memoir of his year flying helicopters in Vietnam) and Riparian Boundaries for Missouri (in press). He owns a large collection of early American surveying equipment, rides a Moots bicycle and drives an Alfa Romeo 1600 GT Junior. Dick's articles have appeared in "American Surveyor" for many years. He may be reached at: elgin1682@gmail.com

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Missouri Society of Professional Surveyors

SPRING WORKSHOP

April 29 - 30, 2022

LODGE OF FOUR SEASONS

315 Four Seasons Drive
Lake Ozark, MO 65049

*Attendee
Registration*

SPEAKERS

Matt Davis . Mike Freeman, PLS . Scott Holman . James McDonald, PLS
Ray Riggs, PLS . Mark Schnesk . Bob Shotts, PLS . Jacqueline Walters

Planning Committee

Dan Govero . Sandra Boeckman

Friday, April 29, 2022

- 7:00 am REGISTRATION OPENS
- 7:00 – 8:00 am BREAKFAST BUFFET (included with registration)
- 8:00 – 10:00 am **VALUE Based Business**
Scott Holman will lead an interactive workshop focused on helping business owners grow the VALUE of their business. VALUE Based Business explores the critical drivers that enhance business growth and delivers simple strategies that can be implemented by focusing on one word - VALUE. This workshop will include delivered content, action-based learning, and facilitated conversation. You will gain a deeper understanding of the drivers that impact business growth and valuation and be given some simple tactics to implement and enhance their business performance. You will develop a clear understanding of the mission of your business and the critical importance of collaboration and leadership for growth. You will also be given effective ways to move forward so that you can carry your development beyond the seminar.
Speaker: Scott Holman, Business Coach, Stop Clowning Around
- 10:00 – 10:30 am BREAK with EXHIBITORS
- 10:30 – 12 noon **VALUE Based Business continued**
Speaker: Scott Holman, Business Coach, Stop Clowning Around
- 12:00 – 1:00 pm LUNCH with EXHIBITORS (included with registration)
- 1:00 – 3:00 pm **Ensuring the Accuracy of Measurements**
Boundary Accuracy Closure, Least Squares, Compass Rule, No Adjustment and more will be covered.
Speaker: Bob Shotts, PLS
- 3:00 – 3:30 pm BREAK with EXHIBITORS
- 3:30 – 5:30 pm **A Surveyors (updated) Guide to Small Unmanned Aircraft Systems**
So many organizations are getting involved with using drones for surveying and mapping operations, but you may still be on the fence about whether one would work for you. You may already have a sUAV system that has worked ok for you in the past but is getting a bit dated and want to know what is new. In this session we will discuss current topics on using small unmanned aircraft systems, commonly referred to as drones, for surveyors. Included will be discussions on the different types of aircraft and the sensor options available including photogrammetry, LiDAR and inspection cameras and how each system can be used for survey applications. We will also focus on remote pilot and aircraft licensing and registration, insurance, operations and maintenance best practices, regulations and insurance. We hope you join us for this informative session.
Speakers: Mark Schnesk, Senior Applications Engineer, Seiler Design Solutions; Matt Davis, Sales Executive, Seiler Design Solutions
- 5:30 pm RECEPTION WITH EXHIBITORS
(complimentary beer, wine and hors' d'oeuvres—included with registration)

Saturday, April 30, 2022

- 7:00 am REGISTRATION OPENS
- 7:00 – 8:00 am BREAKFAST BUFFET (included with registration)
- 8:00 – 9:00 am **Utilizing the Land Survey Index**
In this session we will be discussing the Land Survey Program's online databases, the Land Survey Index (LSI) and Corner Master Index (CMI), and how to utilize them to benefit you. You will learn tips on how to efficiently find plats, surveys, subdivisions, GLO Field Notes, and how to search for a 750 document number in the LSI when it referenced in the CMI. Also, the new help files will be discussed; along with how the Land Survey Program indexes surveys, to help you better understand effective ways to search our databases.
Speaker: Jacque Walters, Land Survey Specialist II/Repository Section Chief, Missouri Department of Agriculture-Land Survey Program
- 9:00 – 10:00 am **Researching and Using Transportation Records**
MODOT, Railroad, County and City Records. What is available, where do I find it and how do I use it?
Speaker: Ray Riggs, PLS, Riggs Brothers Surveying
- 10:00 – 10:30 am BREAK with EXHIBITORS
- 10:30 – 12 noon **How Lenders and Title Insurance Have Changed the Way You Do Business**
We'll look at how land transfers have evolved and how insurance companies have replaced attorneys in determining the marketability of real property and how title insurance has adversely impacted the land surveyor. We'll review the different types of deeds and other items that may impact property transfers and marketability.
Speaker: Mike Freeman, PLS, Freeman Land Survey
- 12:00 – 1:00 pm LUNCH (included with registration)
- 1:00 – 3:00 pm **Advanced Integrated Site Mapping Using Drones**
Advanced Integrated Site Mapping Using Drones will give a brief introduction to various airframes, payloads, and capabilities of each system. During this session an overview of real world projects will be discussed to explain expected real world accuracy and potential use of these systems during various missions. The overall intent of this discussion forum is to explain general workflow, use cases, expected real world accuracy, and engage in an open forum to discuss drone use setup for sites from field to finish and back to construction. Touching on all aspects of the project life cycle and the utilization of drones to leverage the skills of the survey profession.
Speaker: James McDonald, Goodwin Brothers Construction
- 3:00 – 3:15 pm BREAK
- 3:15 – 5:15 pm **Advanced Integrated Site Mapping Using Drones continued**
Speaker: James McDonald, Goodwin Brothers Construction

Registration

Name _____ RLS# _____

Firm _____

Address _____

City, State _____ Zip _____

Phone _____ Email _____

REGISTRATION INFORMATION

The registration fee is \$275 for MSPS Members or \$425 for Non-Members. A rate of \$175 is available for non-licensed technicians (MSPS Associate Members), registration fee plus 2022 Associate Membership is \$210. The **deadline for registration is April 6, 2022**. After this date, a 10% processing fee will be added to all registrations. The registration fee includes instructional materials, refreshment breaks, lunch on both days, cocktail reception with exhibitors and two breakfasts for registered attendees only. Complete the registration form and mail form and payment to MSPS, 722 E. Capitol Avenue, Jefferson City, MO 65101.

LOCATION & LODGING

The Lodge of Four Seasons, 315 Four Seasons Drive, Lake Ozark is the location for the 2022 Spring Workshop. A block of rooms has been reserved at a rate of \$128.00 for single or double occupancy. The **deadline for hotel reservations is April 6, 2022**. Make your reservation by calling the hotel at 888-265-5500.

GOLF TOURNAMENT

The MSPS PAC Fundraiser Golf Tournament will be held on Thursday, April 28, 2022 at 1:00 pm at The Cove Golf Course and is \$85 per person. Two mulligans per person are included and prizes are given for first, second and third placed teams, along with prizes for long drive, closest to the pin and longest putt!

CONTINUING EDUCATION

This course has been approved for 15 PDUs (7.5 each day) with the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Landscape Architects.

CANCELLATION POLICY

MSPS reserves the right to cancel the program and return all fees in the event of insufficient registrations. A participant may cancel a registration up to two weeks before the course date and receive a refund. A \$25 processing fee will be applied to all refunds. **NO REFUNDS will be made AFTER April 6, 2022.**

REGISTRATION FEES

(No Half Day Options)

MSPS Member - \$275

- Friday Only (\$140)
- Saturday Only (\$140)

Non-Member - \$425

- Friday Only (\$215)
- Saturday Only (\$215)

Technician - \$175

(Associate Member Rate Only)

- Golf - \$85** per person

PAYMENT OPTIONS

- Credit Card (Visa, MasterCard, Discover, American Express)
- Check
- Invoice my Firm

Credit Card # _____ Exp. Date _____

CVV Code _____ Amount Enclosed \$ _____

MSPS, 722 E. Capitol Avenue, Jefferson City, MO 65101

573-635-9446 ~ Fax: 573-635-7823 ~ msps@missourisurveyor.org ~ www.missourisurveyor.org

Return registration form and payment to MSPS before April 6, 2022

Claims to Land in Missouri after 1836

by Steven E. Weible, PLS, January 2022

The second board of commissioners had informed the Commissioner of the General Land Office in its final report, dated September 30, 1835, that it was unable to complete the investigation of all the claims that it was authorized to examine. There were about seven hundred (700) claims in the State of Missouri that still needed a decision. The board had earnestly recommended that the investigations should continue until the business was finally completed. If Congress should pass an act for that purpose, the board estimated that the work could be completed in another two years (ASP:PL Vol. 8, pg 22).

Dr. Lewis F. Linn, U. S. Senator for Missouri, serving on the Committee on Private Land Claims, recommended to the U. S. Senate on January 4, 1837 that new legislation be passed to complete the unfinished business of the second board of commissioners. It was highly desirable to permanently settle the land titles in the State of Missouri associated with these claims (ASP:PL, Vol. 8, pg 923).

In each succeeding year the U. S. Senate passed a bill to continue the work left unfinished by the second board of commissioners. The U. S. House of Representatives, however, failed to address the matter. Senator Linn reported to the Senate on behalf of the Committee on Private Land Claims on April 20, 1842 again urging the passage of the bill (Senate Doc. No. 258, 27th Congress, 2nd Session, 1842, Serial No. 398).

Another bill had been introduced, however, that would revive the expired Act of May 26, 1824, chapter 173, An Act enabling the claimants to lands within the limits of the state of Missouri and territory of Arkansas to institute proceedings to try the validity of their claims (U. S. Statutes at Large, Vol. 4, pg 52). This bill would also extend the provisions of the revived act to additional states that were dealing with similar issues with private land claims (House Doc. No. 905, 27th Congress, 2nd Session, 1842, Serial No. 410). The U. S. House of Representatives supported this bill and it passed as the Act of June 17, 1844, chapter 95, An Act to provide for the adjustment of land claims within the States of Missouri, Arkansas, and Louisiana, and in those parts of the States of Mississippi and Alabama south of the thirty-first degree of north latitude, and between the Mississippi and Perdido rivers (U. S. Statutes at Large, Vol. 5, pg 676). The provisions set out in the 1824 act, as they pertained to the State of Missouri, were to be continued in force for a term of five years and no longer and were extended to the States of Louisiana and Arkansas and parts of the States of Mississippi and Alabama.

In February 1847, the General Assembly of Missouri complained to Congress that there were still many private land claims in an unsettled state and that the uncertainty surrounding them hindered settlement and development. Many of these claims, through negligence, ignorance or unfortunate circumstances, had failed to be presented to the recorder of land titles when required and had, thus, been excluded from consideration by previous acts of Congress. They further complained that the Act of May 26, 1824, chapter 173, allowing claimants to seek confirmation from the courts was so expensive and difficult that very few claimants were able to pursue that course of action. The General Assembly requested that Congress pass a law for the final adjustment of all of these claims, stating, "It is better to settle them at once, even if some unjust ones are confirmed in the mass, than to spend years of legislation and litigation to separate the good from the bad. The time and money thus wasted, and the injury to the country by retarding its improvement, would be far greater than the value of any illegal claim that might be thus included" (Laws of Missouri, 14th General Assembly, first session, 1846-1847, pg 358).

The Act of June 22, 1860, chapter 188, An Act for the final Adjustment of Private Land Claims in the States of Florida, Louisiana, and Missouri, and for other Purposes (U. S. Statutes at Large, Vol. 12, pg 85) authorized claimants and their legal representatives to apply for the confirmation of their title to any lands claimed in Florida, Louisiana or Missouri by virtue of a grant, concession, order of survey, permission to settle or other written evidence originating from any foreign government prior to the transfer of the territory to the United States. In Missouri, claimants were to file a notice in writing with the recorder of land titles at St. Louis, along with the supporting evidence of their claim. They were to include a brief abstract of the title, copies of the plats of survey, if any, and a sworn statement by the claimant indicating the legal divisions and subdivisions of the public land surveys that corresponded with the location of the claim. Any claim that had already been twice rejected on its merits by any previous board of commissioners was barred from consideration.

The recorder of land titles was to record the notices and evidence, hear witnesses, seek out existing public records, thoroughly examine the claim and provide an opinion as to whether it should be confirmed or rejected. He was then to make a report to the Commissioner of the General Land Office, separating the claims into three distinct classes.

(continued on next page)

Claims to Land in Missouri after 1836 *(continued)*

Class number one was for all claims recommended for confirmation that had been possessed and cultivated by the claimants or their predecessors in title for a period of at least twenty (20) years before the date on which notice was filed with the recorder of land titles. The claim had to be based on some grant, concession, order of survey, permission to settle or other written evidence of title that originated from the foreign government claiming sovereignty at a date before the territory was transferred to the United States.

Class number two was for all claims recommended for confirmation that were based on written evidence of title as in Class number one, but which had not been actually possessed and cultivated for a period of at least twenty years prior to the filing of the claim.

Class number three was for all claims that were not recommended for confirmation. Justification for rejection may include defect of proof, suspicion of fraud, uncertainty of location, vagueness of description or any other sufficient cause. No claim was to be included in class one or class two that had been rejected as being fraudulent by any prior board of commissioners.

If the Commissioner of the General Land Office approved the report of classes one and two, then the report was sent to Congress for further action. If the report of class three was approved by the Commissioner, the rejection of the claims was to be final and conclusive and the land was to be considered as public land of the United States (section 4). The Commissioner was also to report to Congress all claims in any of the three classes of which he disapproved (section 5). The Commissioner was to report to each regular session of Congress all activity done under this act (section 10).

Section six of the act provided that if the claim was confirmed and it had already been sold, in whole or in part, by the United States prior to the confirmation or if the surveyor general determined that the land claimed could not be surveyed and located, then the claimant was authorized to select from the public lands subject to private sale a quantity equal to what had been sold by the United States. The land selected was to conform to the legal divisions and subdivisions of the surveys of the public lands.

If a tract of land was claimed as a complete grant, but had not been possessed and cultivated by the original claimant or his successors in title for twenty years as required, then those making the present claim had the option to forego the proceedings of this act and to enter a petition in the district court of the United States (section 11).

This act was to remain in force for five years (section 12). Any proceeding that extended beyond the five years was permitted to be prosecuted to a final decision.

For claims or grants of land derived from any foreign government that had not yet been located by survey, the Act of June 2, 1862, chapter 90, An Act for the Survey of Grants or Claims of Land (U. S. Statutes at Large, Vol. 12, pg 410) authorized claimants to make application to the proper officer of the United States government for a survey to be performed at the expense of the claimant. The survey gave no more validity to the claim than to define its true location.

The provisions of the 1860 Act were extended for an additional three years by the Act of March 2, 1867, chapter 184, An Act to extend the Provisions of an Act entitled, "An Act for the final Adjustment of private Land Claims in the States of Florida, Louisiana, and Missouri, and for other purposes" (U. S. Statutes at Large, Vol. 14, pg 544).

The provisions of the 1860 Act were further extended for another three years by the Act of June 10, 1872, chapter 421, An Act to extend the Provisions of an Act entitled "An Act for the final Adjustment of private Land-claims in the States of Florida, Louisiana, and Missouri, and for other Purposes" (U. S. Statutes at Large, Vol. 17, pg 378). Section two of this act also provided for the confirmation of claims to land as specified in Section one of the 1860 Act in all cases where it could be shown that the claimants and their successors in title had continuously maintained possession of the land claimed since the date of the transfer to the United States.

Eventually it became necessary to pass the Act of June 6, 1874, chapter 223, An act obviating the necessity of issuing patents for certain private land-claims in the State of Missouri, and for other purposes (U. S. Statutes at Large, Vol. 18, part 3, pg 62). The first section of this act released all of the right, title and interest of the United States in and to all of the lands in the State of Missouri that had previously been confirmed by any act of Congress or by any officer or officers, or any board or boards of commissioners acting under the authority of any act of Congress. The lands were released in fee simple to the owners of equitable title as completely as could have been done by patents issued according to law.

Section two of the act noted that the act did not affect the validity of any conflicting or adverse claim to the same land. The act also did not pertain to any lands previously relinquished to the United States.

Section three of the act provided for the discontinuance of the office of recorder of land titles, when the public interest no longer required it. All of the records of the recorder of land titles were to be transferred to the State of Missouri with the United States reserving the right of free access to the records. After the discontinuance of the office, the former duties of the recorder of land titles would pass to the Commissioner of the General Land Office.

The office of recorder of land titles in the State of Missouri was formally abolished by the Act of July 31, 1876, chapter 246, An act making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, eighteen hundred and seventy-seven, and for other purposes (U. S. Statutes at Large, Vol. 19, pg 102 (see pg 121)). The office ceased to exist after September 30, 1876.

Since it appeared that some act of the General Assembly of Missouri was necessary to affect the transfer of records from the United States to the State of Missouri, the General Assembly passed "An Act to provide for the removal of the archives in the office of the United States Recorder of Land Titles of Missouri," which was approved April 28,

1877 (Laws of Missouri, 29th General Assembly, Regular Session, 1877, pg 318). The Register of Lands was to receive the records and keep them in his office.

The office of Register of Lands was abolished by an act of the General Assembly of Missouri, approved February 25, 1891 (Laws of Missouri, 36th General Assembly, Regular Session, 1891, pg 181). Upon expiration of the last term of office in 1892, the responsibilities and records of the Register of Lands were transferred to the Missouri Secretary of State.

Thus concludes this saga of private land claims in Missouri. It was not quick and it was not simple. 🇺🇸

SOURCES

- American State Papers, Public Lands (ASP:PL)
- Laws of Missouri, State Documents Collections, Missouri State Archives, Jefferson City, MO
- U. S. Congressional Serial Set
- U. S. Statutes at Large



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Phone: 573-635-9446 • Fax: 573-635-7823
Email: msp@missourisurveyor.org
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Gene Basinger, a Friend and a Mentor

by Donald Bormann

I started surveying in April of 1978 and met Curtis “Gene” Basinger that summer. Gene got his surveying license in February, 1978 and shortly thereafter started his own company. With ten years of experience, he had a desire to do it on his own. I met Gene when my employer hired him for some surveying. In 1980, Gene held study sessions for the fall surveyor’s exam. Ron Lueck, Eddie Whitworth, Paul Miller, and I attended those sessions. All of us passed the test, at least partially because of Gene. These sessions were not just about the test, they were about being good surveyors. Gene’s philosophy was simple: if we were going to become licensed surveyors, he wanted to help us be better surveyors. Over the next several years, I got to know Gene through the Central Chapter of MARLS. We were among the founding members.



Donald Bormann

Several years later while working for a construction company as a “field” engineer/project manager, I started surveying part-time. Gene rented his equipment to me on weekends. After my first job, I bought a T-16 theodolite and various other equipment but still rented his Beetle distance meter until I had completed several more jobs. Gene was generous in letting me use his equipment.

Gene learned surveying under Mort Ratliff. I followed both of their surveys and learned a great deal from them. I consider both to have been mentors to me just from following their surveys, but Gene was the person I called when I had a question on a particular survey. Gene was always willing to provide guidance. While I may not have always followed his advice, he always led me to an answer. Gene believed in recording surveys because he wanted other surveyors to know what he had done.

I wrote my own surveying software when everyone did calculations with an HP41C. Since Gene had helped me, I put my software on Gene’s computer to see if he found it useful. He told me that my program took the drudgery out of doing calculations. I was pleased that he found it useful.

Over the years we became good friends. I followed his surveys, and he followed mine. At various times, Gene has done fieldwork for me, and I have done fieldwork for him. Often it was because of our proximity to the job location, but other times we just needed some help. When Gene got

GPS equipment, I hired Gene to do control work. After he got rid of his GPS equipment, I got my own. Gene then hired me to do control work for him. We have referred clients to each other. Anything in one of our files was available to the other.



Curtis “Gene” Basinger

In 2008, I went to work for Shafer, Kline & Warren in Columbia.

When Gene needed to find office space, I convinced the company to rent one of their spare offices to him. In 2010, I was back on my own. One day I called to see if he would help with some fieldwork. He did so on hot day. At one point he told me to hurry up because the mosquitoes were eating him alive. When I finished the survey, Gene refused to accept payment for his help. In fact, he told me that he felt like he owed me. After being a mentor and a friend for all these years, I could not believe that he owed me anything; it was the other way around. When I asked how he owed me, he said it was because I gave him my surveying program. It was not given to him with any expectations. I thought it might be of some small value to him and a just compensation for being a mentor and a friend. But that was Gene.

Gene and I have attended the fall MARLS/MSPS conferences since the early 1980’s and always found time to talk and go out to eat. We were both involved with the legislative committee. Gene said his reason for being on the committee was to make sure that any proposed legislation was really what was needed for our profession. When we had Capitol Days, we would attend and make our rounds to the various legislators together. Gene preferred to let me do the talking but always supported my positions. Together we spent a lot of time at Jefferson City lobbying legislators on various bills. Not every bill we lobbied for passed, but every bill we lobbied against failed. I would like to think we played at least a small part in both of those.

Gene and I have eaten more than a few meals together and had more than a few drinks together. We have met in each other’s offices. We talked on the phone almost weekly. Sometimes we complained about each other’s surveys, but mostly about problems with a survey we were working on. Gene liked to hunt and fish, a fact that I am well aware of because sometimes he answered my calls while doing so.

(continued on page 36)

Volunteering Time and Talent:

A Member's Example, a Member's Invitation

From a discussion between MSPS Secretary-Treasurer Chuck Quinby and the Editor

The Missouri Society of Professional Surveyors; your society; your association. How do you know it? You may know it for the events it holds. You may know it for the learning opportunities hosted at MSPS meetings. You may know it for representing your profession's interests in politics and law. You may know it for the logo on your caps and hoodies. You may even know it by this newsletter. But most importantly, you should know it for its people, the members. This society is nothing without its members.

Among members are those particularly devoted to the smooth operation of the association and its continuity. They are the "active" members, those who always show-up, those willing to serve, those called upon to lead. Some you may not know by their name, but you recognize them. You know their face, and you observe their dedication and consistent participation. One such member is MSPS Secretary-Treasurer Chuck Quinby of St. Louis. You see this guy at all of the meetings.

Mr. Quinby chairs the Public Relations/Sales Committee. That's him camped out in the exhibit hall, manning the sales booth. Meeting after meeting, he is setting up and selling our promotional items, our "brand." And as he tells it, he is glad to do it. "It is my way of giving back. It is helping an organization and its people who have helped me." Although he is a model of how members may be active and serve, his story is not offered to demonstrate what he does and has done. "I want my experience in MSPS to be available to all members. It is, if they get involved!" But still, his journey and his example are worthy of sharing.

Soldier to Surveyor

Chuck is originally from Warren, Ohio, a descendant of the early settlers of that community. One in particular was his 4th great grandfather, a veteran of America's Revolutionary War who received his land warrant for his military service and crossed the Appalachian Mountains to stake his claim in the Western Reserve – modern day Ohio. It is this early American adventurer and surveyor who inspired a young Army recruit to select "surveying" as his own military occupation in the later part of the 1970's. That was our Chuck Quinby.

Fifteen years in uniform included duty as an Instructor for the Surveyor's Basic Course at Ft. Sill, Oklahoma alongside fellow Non-commissioned officer (NCO) Chris

Wickern. He also earned his baccalaureate degree along the way. Upon exiting the military his intention was to become a licensed Land Surveyor. Learning first-hand about the ups and downs of business cycles for the surveying industry, Quinby had been laid off from a job as a Party Chief when a job offer in Missouri arose from ABNA Engineering in the early 2000's. St. Louis became "home," and it was there Quinby became an LSIT.

Moving over to Engineering Design Source, Incorporated (EDSI), he earned his license as a Missouri LS in 2007.

Learning from the Best

Chuck's venture to becoming a Land Surveyor wasn't as simple as merely listing off the years and employer names makes it appear. It was a challenge met with a lot of effort spent towards education and experience. Along with friend and fellow surveyor Brian Wells, Quinby worked his way towards accomplishing his goals in surveying. That came to include membership in MSPS. "When I attended my first MSPS event, I was amazed and inspired! I recognized this was my chance to learn from the best! I had Dick Elgin, Joe Paiva and Norman Brown as teachers in my workshops; I saw Troy Hayes, John Teale and Mike Flowers showing how to serve and lead. It was what I needed for my career!"

Seeing his MSPS membership as a source for education and career development, Quinby committed himself to serve in return for the opportunity to learn. "Seeing what those MSPS role-models were doing, I decided to pitch in and help out. I decided then I would someday be President of the society. But not as an accomplishment. As a goal I could achieve through being active as a member. I would earn that goal through my service to the society. It wasn't "about me", it was about serving the association."



Chuck Quinby

(continued on page 36)

Land Surveying Four-Year Degree Coming to SIUE

by Donald Martin

Southern Illinois University at Edwardsville (SIUE) has a successful Land Surveying program which has served as a pipeline of PLS development for metro St. Louis as well as all of Illinois. Known as the Land Surveying Specialization program, it is embedded within the Construction Management bachelor's degree program. With a legacy of strong levels of enrollment and a profession-wide need for replacement surveyors developed to backfill depleted ranks of professional surveyors, SIUE is poised to expand the "specialization" program into a full, four-year degree program of a Bachelors of Science in Land Surveying and Geomatics. Still in the process of attaining required approvals within the university's governance, SIUE has tentatively scheduled the degree program to commence in the upcoming fall semester of 2022.



Program Leadership

The new degree directly descends from SIUE's current program of surveying studies. A principal component of the Land Surveying Specialization program's success has been the effective leadership of professional land surveyor David Sherrill. Mr. Sherrill has been with the current program for sixteen years. During his tenure as the program's coordinator, it has grown to be a robust part of SIUE's thriving School of Engineering.

The 1,400 students of the engineering school represent 10% of SIUE's full student body. Within this school is the Department of Construction, home to the Construction Management program which includes the Land Surveying Specialization option for students. Sherrill reports that fully 60 – 80 students take the SIUE Surveying Fundamentals course each year! These numbers include many of the 1,400 engineering and construction students taking surveying courses as electives alongside surveying-focused students working to attain their requirements for future licensure. He estimates 30 – 40 of the students from each year's cohort continue on and obtain either the Land Surveying Specialization as part of their degree or the 24 semester hours in license-qualifying courses.

Mr. Sherrill will bring his successful stewardship of the specialization program to the new BS of Land Surveying and Geomatics, continuing on with SIUE to coordinate the surveying program. Beyond his academic endeavors, he is the proprietor of his own surveying firm and understands well the important role SIUE will play in developing new PLS's. "Surveyors and their firms need new surveyors to replace those retiring." Thus, the four-year degree program will retain as its core the 24 semester hours of land surveying related coursework required by the Illinois Land Surveyor Act (specifically, 225 ILCS 330/12).

Along with David Sherrill's experience and steady hand, another critical part of the program's leadership is sponsorship at the top. The Chair of the Construction Department, Dr. John Cabbage, PE is on-board with his full support of the program's establishment. It is he who is now charged with guiding the burgeoning degree through the final phases of approvals and authorizations. Dr. Cabbage also wants to enhance the role of the surveying profession in guiding the new program. To do so, he intends to add additional "surveyor seats" to the membership roster of his department's Advisory Board.

A Needed Program

Multiple factors have contributed to an understanding that a full degree program is needed and warranted. These start with the need to find prospective surveyors. "Research reveals most surveyors are on the cusp of retirement. We need a next generation of surveyors to replace them," says Sherrill. As a past Chair of the Land Surveyors Exam Board with the State of Illinois Department of Professional Regulation, he is acutely aware of the low numbers of those entering the profession. The four-year degree program offers the opportunity of entry into the surveying profession for college minded young people. It will also be an expanded source of course offerings for those in the surveying industry who seek to improve their career horizons through licensure.

There is also the growth of the geospatial business sector throughout the region and nation. Anchored by the expansion of the federal governments National Geospatial-Intelligence Agency campus in St. Louis, the vicinity served by SIUE is becoming a





Surveying students of SIUE during field labs. Photo courtesy of Southern Illinois University Edwardsville Marketing and Communications.

geospatial tech hub. With expansion of the NGA geospatial by almost 700 jobs and recent relocations of GIS service providers to the region, SIUE wants to be a leader among academic institutions welcoming, engaging and serving the geospatial communities.

Need for the program is also driven by simple demographics. SIUE is located in the second most populace part of Illinois. But considering where the student body comes from, it is more than a “local” institution. This is one of but a few “technical universities” serving Illinois and this is seen in an engineering and construction student body from across the state including metropolitan Chicago as well as the St. Louis combined metro-area. Also, the uniqueness of surveying programs is such that SIUE serves a surveying region encompassing Illinois, Missouri, Indiana and Kentucky. Add to these considerations the simple rarity of four-year degree programs in surveying. Once in place, the BS, Land Surveying and Geomatics from SIUE will become a destination program for students from around the country and the globe seeking to further their academic ambitions beyond the traditional minimal credit hours.



SIUE Land Surveying Club. Photo courtesy of Southern Illinois University Edwardsville Marketing and Communications.

Parts in Place

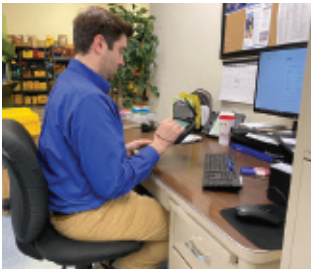
The new degree program certainly benefits from the existence of the existing specialization program, but there are several other conditions favorable to the development and growth of the degree program. In *place* already are the informal networks of benefactors, supporters and contributors which are crucial to any program’s success. Regional suppliers of surveying equipment and technologies have always kept SIUE’s surveying classes up-to-date and that is set to continue into the degree program. So well grounded with vendor support, David Sherrill describes it as, “The new program will start off as though it was an

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Thoughts on Professional Practice and Education

Article 2: FS Exam as a Student Graduation Requirement

by Knud E. Hermansen, P.L.S., P.E., Ph.D., Esq.

This is the second article focusing on professional practice and education. While I suspect there is support for the thoughts I am going to reveal among the profession, many academic administrators and faculty will disagree with what I am about to say. Agreement of all is never possible. Even the best of advice is often dismissed. (Not that my advice is always the best.) There is an old Jewish saying "If God lived on earth, people would break His windows."

By way of introduction and upon which my thoughts will be measured, I introduce myself briefly. I taught surveying for more than 30 years and still do contract teaching for surveying and engineering programs. I was a surveyor and engineer for over twenty years in the military before retiring. I have been licensed in several states as a surveyor, engineer, and attorney - almost fifty years as a surveyor. I still have an active license for each profession in at least one state.

The focus for this article will be to advocate requiring the fundamentals of surveying exam in order for a student to graduate from a surveying or geomatics program. Note and I emphasize that I am not advocating the student pass the exam in order to graduate, merely be required to take the exam.

I suspect those reading this article are familiar with the three exams required for licensure. Briefly, the first exam is the fundamentals of surveying (FS) exam. The second exam is the professional surveyor's (PS) exam. The third exam is the state specific exam. The FS exam tests the examinee on topics that a quality surveying program should cover in its curriculum. Most states, if not all states, allow senior college students to take the FS exam. Therefore, there is no barrier to prevent a surveying program from requiring students take the exam as a pre-requisite for graduation.

I provide three arguments for a surveying program to require students take the FS exam.

First, I believe a primary purpose for any surveying program is to provide graduates to feed the needs of employers and the profession. Whether the graduate seeks employment in the private or public sector, licensing is generally required to achieve more pay and higher positions. Licensing is required to own or manage surveying firms offering services to the public. What better way to begin the transition from academics to a

professional stature than require the first professional exam while still involved in academic learning.

Second, the breadth and depth of surveying knowledge will never be more retentive than at or near graduation. After graduation, the graduate tends to increase their depth of knowledge in limited topic areas of surveying while forgetting knowledge in other topic areas. By way of example, the new employee that spends the next four years after graduation doing drone mapping is likely to have forgotten a great deal of knowledge they once possessed on boundary law, measurement adjustment, and so on. Therefore, the best chance for passing the FS exam that tests on a broad range of surveying topics is immediately prior to or shortly after graduation.

I have heard students claim they will be better able to study for the FS exam later after they are employed and without the academic burdens of course attendance, homework, and course exams. I caution otherwise. My experience shows that the new graduate is often immersed in long hours at work and is soon distracted with marriage, home ownership, child raising, and family commitments. All too often the graduate who has not taken and passed the FS exam while in college, fails to pass the exam later or cannot commit the time to prepare and take the FS exam later.

For a third reason, I believe a graduate that has passed the FS exam, and placed this achievement on their resume at graduation, has many more opportunities for employment and advancement upon graduation than a graduate who has not taken the FS exam. An employer will seek out graduates and pay a higher wage to those that have already passed the FS exam. These students have proven a mastery of topics deemed necessary for professional practice and advancement.

While other compelling arguments can be made, I believe these three arguments are sufficient for those reading this article to understand the basis for my opinion. So why don't all survey programs incorporate the requirement that students take the FS exam as a pre-requisite for graduation?

I will give two reasons that seem to be prevalent reasons told to me. The first reason is that some programs rely on

(continued on next page)

Thoughts on Professional Practice and Education *(continued)*

large number of foreign nationals to increase enrollment numbers and finance university coffers that rely on tuition money. Foreign nationals have no interest or need to pass any professional exam that is not recognized or necessary in their counties of residence. Such is their disdain for this requirement that when forced to take the exam, they select answers without contemplation. These programs fear the foreign student will switch their studies to another program that does not require the FS exam for graduation.

The second reason, perhaps partnering with the first reason, is that program administrators do not want the FS scores to be used to judge the extent of their graduate's knowledge and ultimately the quality of the surveying program. It is no secret among the profession that many surveying programs are on tenuous grounds due to low enrollment or faculty deficiencies. Often students that should not be in college, let alone a surveying program,

are admitted and moved along much as many public schools move students along to graduation. Perhaps this happenstance is the eventual outcome of a society that gives a trophy to all participants, not just the winners. I will say no more as rational arguments sometimes get lost or ambushed when placed in this arena.

Having given my opinion, I now offer advice. My advice is for professional societies to press their local surveying programs to initiate this requirement if the requirement is not already a mandate. If the program seeks the support of the profession than the profession should seek the commitment of the program toward the profession by demanding students take the FS exam.

† Other books and articles by Knud can be found at <https://umaine.edu/svt/faculty/hermansen-articles/> 

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Application on next page

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Contact Number: _____ Email: _____

High School GPA: _____

Are you a student or associate member of the Missouri Society of Professional Surveyors (MSPS)?

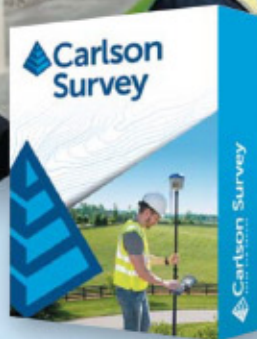
Yes No

Please attach separate sheets (typed or printed) to this application answering with complete sentences in paragraph form:

- 1) Name of the college, course name and number of the surveying class(es) you are enrolled in for the Fall 2022 semester.
- 2) Describe your reasons for enrolling in your current surveying class.
- 3) Describe any future education you wish to acquire after completing your current class.
- 4) Describe your previous education and experiences.
- 5) Describe your career choice and how this scholarship will benefit you.
- 6) Describe your current employment, community service, and special interests.
- 7) Any additional information that you wish to include.

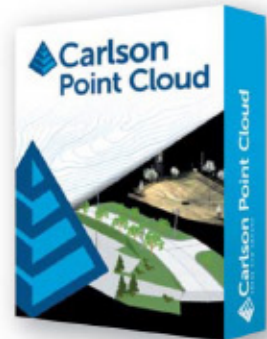
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Board of Registration Expresses Gratitude

The Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Professional Landscape Architects (MoAPEPLSPLA) expressed its gratitude to Missouri's four design profession associations for their efforts in the successful passage of legislation in 2021. A formal resolution was presented to each association this past fall at a meeting of the *Design Alliance*, a consortium of Missouri's societies for design professionals working together on regulatory issues and political affairs.



L to r; Executive Director for the Board Judy Kempker, MoAPEPLSPLA Board Chair Robert Hartnett, PLS Kevin Skibiski of the Engineering Division of the Board, PLS Jim Anderson of MSPS (former Board Chair), PLS Bob Shotts of the Landscape Architecture Division of the Board, and PLS Mark Nolte of the Land Surveying Division of the Board.

The successful legislation referred to in the resolutions was House Bill 273 and House Bill 476. HB 273 modified provisions related to professional registration in Chapter 327 of Missouri's Revised Statutes. Specifically addressed in this bill were issues of who may render architectural services, which services embody the practice of architecture, exemption of certain building and structure types from requiring architectural services, redefined the requirements for persons applying for an architect's license, prohibits unauthorized use of the title "professional Engineer," and expanded the education requirements for landscape architects.

HB 476 replaces the current definition of architecture ("...work which requires architectural education, training, and experience.") by setting forth the practice of architecture as rendering services connected to the design and construction buildings, structures and improvements with the purpose of "human occupancy or habitation." This bill exempted architecture from being required in connection with buildings used exclusively for agriculture. It also amended the requirement of those applying for an architect's license being required to hold a "certified Intern Development Program record" to also accepting applications from those holding a "certified Architectural Experience Program record."

HB 476 also exempted particular services connected with privately-owned dwellings, multi-family houses of no more than two families, buildings containing fewer than 10 people in less than 2,00 square feet, and multi-family dwellings for up to four families as long as the work does not affect safety features of the building. The bill also reworded the provisions of RSMo 327.241 which previously required a four-year engineering internship to have specifically occurred after graduation from a school of engineering. The new language makes allowance for graduation and four-years of internship regardless of when the four-years took place.

Finally, HB 273 removed the age requirement previously specified (21) which coupled with a degree served as the qualifications to apply for licensure as a landscape architect. The law will now only specify the education requirement, satisfactory experience and examination passing as the qualifications. 🇲🇴

State of Missouri



The Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Professional Landscape Architects

RESOLUTION

A RESOLUTION OF THANKS TO THE

MISSOURI CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS MISSOURI SOCIETY OF PROFESSIONAL ENGINEERS MISSOURI SOCIETY OF PROFESSIONAL SURVEYORS MISSOURI ASSOCIATION OF LANDSCAPE ARCHITECTS

WHEREAS, the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Professional Landscape Architects (Board) protects the health, safety, and welfare of the citizens of Missouri through the enforcement of the provisions of Chapter 327 of the Missouri Revised Statutes; and

WHEREAS, the Board regulates the practice of architecture, engineering, land surveying, and landscape architecture; and

WHEREAS, the Board relies on the four Professional Societies to manage and seek approval of legislative priorities for the Board; and

WHEREAS, the four Professional Societies were responsible for the passage of HB 273 and HB 476, a major upgrade to the provisions of Chapter 327 of the Missouri Revised Statutes, during the 2021 Legislative Session; and

WHEREAS, this approved legislation will allow the Board to improve its overall effectiveness and better serve the citizens and licensees in Missouri.

NOW, THEREFORE, BE IT RESOLVED that we, the members of the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Professional Landscape Architects join in expressing our deep and sincere gratitude for the superb service provided by the four Professional Societies for their continued support in the protection of the health, safety, and welfare of the citizens of Missouri.

BE IT FURTHER RESOLVED that the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Professional Landscape Architects be instructed to prepare a properly inscribed copy of this resolution for the four Professional Societies as a measure of its esteem for them. Offered by the Board on this 30th day of November, 2021.

Handwritten signature of Robert N. Hartnett in black ink.

Robert N. Hartnett, PLA, FASLA, Board Chair

Gene Basinger, a Friend and a Mentor *(continued)*

Gene was not just a mentor to me. When Gene started his own company, Ron Lueck went to work for him. When he sold his company in 1989, he was given office space at Marshall Engineering where Ron became their chief surveyor. About the time Bill Marshall died, Gene was looking for office space again; so, Gene and Ron got an office suite together. Gene talked Christina Luebbert, a professional engineer, into setting up her own practice. Christina had worked for Marshall Engineering and at Shafer, Kline & Warren when he was there. She was the one who talked me into going to work for Shafer, Kline & Warren. Gene provided her with office space in his

office. In fact, she and Gene sat a few feet apart for the past eleven years before Gene's passing. Christina had her own engineering jobs but did the engineering for Gene's projects and drew most of his surveys.

Gene was a truly excellent surveyor. His legacy is written in the surveys he recorded but also as a mentor and friend. I miss talking to Gene; a true friend and a mentor. 🇺🇸

Volunteering Time and Talent *(continued)*

Committee Chair to Chapter President

"Start with the committees!" Not a mere recollection of how he began serving, that is the advice Quinby offers to fellow MSPS members. From the beginning he saw the society's mission required committee work. "I wanted to help where help was needed most. I saw Rich Howard at every meeting, hauling in all the promotional items for the Sales Committee. He was the busiest guy there. I helped out – I joined his committee." That was the Public Relations/Sales Committee, the one Chuck chairs today. "Everybody buys something at the meetings, so I got to meet everyone! I got to rub elbows with the masters, the fellow members I would learn from and emulate."

When back in St. Louis, Quinby also became an active member at the local level. He would attend meetings of the MSPS St. Louis Chapter and go on to serve four times as President of the Chapter. But he is quick to assure that the best part of that experience was the closer-to-home dose of what he got at MSPS meetings. It was more learning from peers such as Stan Emerick, Kurt Richeson and Jared Minnick through networking and fellowship.

An Invitation to Others

"I wanted to share "my story" not so much so people will know me. I have done so to show how personal goals can be achieved by getting involved. My hope is that my experience will be seen as an invitation to others to join committees, to be active, and get the same benefits as I did," asserts Chuck Quinby. His story is a good example.

During our discussion he even invoked the old metaphor of "pick up the torch." He means it.

Chuck also recognizes the value of active membership in the association as a key part of helping the future of surveying. Openly admitting to getting older and possibly more stubborn (that is how Chuck characterized things!), he is concerned there is too much hanging on to old ideas within himself and within the profession. "Our newer surveyors have so much to offer, and so much to teach us all. But they need mentors. The best place to find mentors is right here in MSPS!"

So, his invitation is also a challenge. A challenge that all members will feel welcome to join in, and return that welcome through service. It is also a challenge to veteran members to mentor, to assure there is a future for the profession they enjoy and care about. Good ideas, and a good story...about our Secretary-Treasurer, and future President, Chuck Quinby. 🇺🇸





NEWS & VIEWS

National Society of Professional Surveyors

Timothy W. Burch Appointed New Executive Director of NSPS

NSPS, December 31, 2021

The Board of Directors of NSPS is pleased to announce the appointment of Timothy W. Burch, PLS, as its new Executive Director. Mr. Burch is the current President-Elect of NSPS and is a Professional Land Surveyor licensed in the States of Illinois and Wisconsin. Tim has been served NSPS as Secretary of the Board of Governors as well as the Board of Directors, a member of the Certified Survey Technician Board, Joint Government Affairs, and ALTA/NSPS Land Title Survey committees. A content contributor for NSPS social media, he is the creator and producer of the NSPS podcast “Surveyor Says!” and contributor to the NSPS newsletter “News and Views.”

Tim has been in the land surveying profession for more than 30 years. He has provided testimony on behalf of the profession at both the State and Federal levels as well as having established a partnership with “Get Kids into Surveying.” Tim is currently the Chair of the FIG Working Group 1.1 (Professional Ethics) and is Chair-Elect for their Professional Standards Commission. He is also a contributing editor for the GPS World Magazine “Survey Scene” column.



Mr. Burch will succeed Mr. Curt Sumner, who has been the Executive Director for the past 23 years, on January 3, 2022. 🇺🇸



National Geodetic Survey

Positioning America for the Future

NGS FY2021 Year in Review Accomplishments

NGS January 20, 2022

As part of the National Ocean Service Year in Review, NGS published 5 Significant Accomplishments for FY2021:

1. **US, Canada, Mexico Collaborate on Height Model:** In June 2021, the Experimental Geoid Model 2020 (xGEOID20) was released, reaching another milestone as we prepare for the future geopotential datum.
2. **NGS Releases New Guidance, Holds Summit on Modernized NSRS:** The Blueprint for the Modernized National Spatial Reference System (NSRS) Parts 1, 2, and 3 was revised in 2021, and more than 1,000 people attended the virtual Geospatial Summit in May 2021.
3. **NGS Develops Robotic System for Astronomical Measurements:** These efforts will aid geoid studies and bridge the gap between classical and modern geodetic techniques.
4. **NGS Increases Coastal Mapping, Gravity Data Collection in Alaska:** Completing work in this challenging location pushed the GRAV-D data collection to 90% complete, and NGS also increased its coastal mapping collection efforts in Alaska.
5. **NGS Implements New Coastal Mapping Camera:** Images from the new system are twice as sharp and cover twice the area as images from the previous camera. Monitor the Continually Updated Shoreline Product (CUSP) to see high quality images in the future! 🇺🇸

Land Surveying Four-Year Degree Coming to SIUE *(continued)*

established entity!” Further support comes from the ranks of survey alumni and their firms. And IPLSA plays a part too, as members spread the word and the organization has made direct donations and provided scholarships.

Also in place is a draft curriculum ready to fill student schedules for a full four-years of study. The faculty has developed a healthy offering of courses reaching more than 45 semester hours specific to the study of surveying and its closely related sciences. This adds more than 20 additional surveying semester hours to the existing program. A sampling of the surveying-specific curriculum will include:

Surveying Fundamentals
Legal Aspects of Surveying
Boundary Surveying
Aerial Image Interpretation

Advanced Survey Systems
Remote Sensing & Digital Imaging
Geographic Information Systems
Surveying Drone Applications

The new program will also institute a revised approach to the mathematics requirements. Currently the students have to complete math up to Calculus II. The new degree program will require Precalculus, Trigonometry and Calculus I, offering students the mathematics grounding more specific to the needs of actual surveying practices tied to understanding and applying coordinate geometry.



Ready to go is a faculty that has been teaching surveying courses through the current specialization program. Seasoned and capable of leading students on their own surveying journeys, Sherrill is joined in teaching assignments by:

Surveying students of SIUE during field labs. Photo courtesy of Southern Illinois University Edwardsville Marketing and Communications.

Mark Grinter, PLS; *Emeritus* Associate Professor

Jeff Pauk, PLS, Lecturer; Advanced Survey Systems.

Dr. Anne Werner, PE, Associate Professor; Land Development.

Dr. Chenxi Yuan, Assistant Professor; Drone Applications, Mapping, and Geospatial information Management.

Sherrill himself will teach the fundamental surveying courses and those addressing legal principles and boundaries.

New Program, New Opportunities

Having a four-year degree program for surveying will not only be “new” for SIUE, it will be new to the surveying community. It brings the opportunities of such a program to a portion of America’s heartland not currently served by the availability of such a degree. This is a foundational change for regions of surveying engaged businesses and surveying interested students.

As the surveying profession moves forward, this program will be a significant part of the industry. Yes, SIUE is ready to commence a four-year degree program in surveying. Doing so will make it a leader in welcoming, engaging and serving the land surveying and geospatial communities. 🇺🇸

In Memory of Dennis Lee Schmidt

Dennis Schmidt, 67 of Peculiar, Missouri entered into eternal rest on January, 16 2022. Dennis is survived by his wife Gail of the home, daughter Meagan Embry (Brandon), grandchildren Breckin and Macie of Belton, Missouri; and Daughter Stephanie VanHollebeke (Anthony) grandchild Ava of Las Vegas Nevada. Additional survivors include a brother, Charles Schmidt; sister-in-law and brother-in-law Keith and Gloria Barlow of Eads Colorado; many nieces and nephews. Dennis was born September 26, 1954 in Axtell, Kansas to Benedict W. and Katherine (Kay) Loob Schmidt. Dennis was preceded in death by his parents and brother Daniel Schmidt.



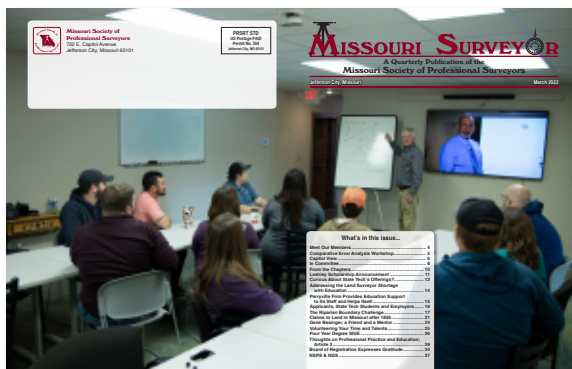
Dennis and Gail were married 43 years on June 3. They enjoyed many trips together along with time at their lake lot on the Lake of the Ozarks. Dennis owned his own surveying business, Countryside Survey of Raymore for 15 years. He previously worked for Logan & Associates civil engineering firm in Liberty. Dennis was a licensed land surveyor in both Missouri (LS# 2374) and Kansas. He was a member of the Missouri Society of Professional Surveyors. He was also a member of St. Sabina Catholic Parish.

Dennis was a skilled carpenter and built many furniture pieces for family members that will be forever cherished. Dennis was a beloved husband, father and grandfather. His grandchildren were his world. His love for laughter and life will be cherished memories. He always was looking for a good prank to play on family and friends. Family gatherings were his happy place. Family and friends could always count on Dennis, he would drop everything to be there for anyone.

A visitation was held at St. Sabina Catholic church in Belton on January 28 2022 and a funeral Mass was followed. 🇺🇸

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“How” you may ask? By sharing photos, stories and news with Missouri Surveyor! It is really that simple. Just as this edition’s cover features Missouri surveyors you and your work may be featured as well. All content is welcome! For the cover, high quality images in landscape format at an aspect-ratio comparable to 17”x11” work best; stories and articles merely need to be in Microsoft Word.



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