



Journal of the Vermont Society of Land Surveyors  
Volume 53, Number 2 | Summer 2022

# The Cornerpost

## USE & ABUSE OF THE 3-ROD RULE

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# The Cornerpost

Volume 53, No. 2 • Summer 2022

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### GRAPHIC DESIGNER

Kelly Collar  
VSLs Administrator

### SUBMITTING MATERIALS

Send any materials to:  
Email: [kelly@vsls.org](mailto:kelly@vsls.org)  
Vermont Society of Land Surveyors  
P.O. Box 248  
Montpelier, VT 05601

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## SEND IN YOUR NEWS

Have you ever contributed to *The Cornerpost*? Its success depends on all of our members. Please consider making a contribution to an upcoming issue. Send your articles, news and photos to [kelly@vsls.org](mailto:kelly@vsls.org). Everything is welcome that may be of interest to your fellow surveying professionals.

## ON THE COVER



This issue's cover is a scene familiar to anyone who has surveyed in Vermont. The photo comes from Barnard and Gervais survey technician Seamus Collar, who snapped it while looking for boundary evidence in Waterville. The mountain in the background is called Fletcher Mountain, though Seamus says, "Our client told us that if you asked someone in their 80s what it was, they would say it's called Round Mountain."

If you see anything interesting in your travels, please take a picture and send it to [kelly@vsls.org](mailto:kelly@vsls.org).



# PRESIDENT'S CORNER

VSLs PRESIDENT  
RANDY OTIS, L.S.



**“I see a CFS program as a possible way to lay out a clear career path and provide training resources for younger surveyors.”**

Read more about the new Certified Floodplain Surveyor program on page 10.

**S**UMMER IS IN FULL SWING, with the business of land surveying as busy as ever. My weeks are filled meeting with clients, working on boundary layouts and attending public hearings.

My role these days doesn't get me out of the office as much as I would like, but even from my desk the image is clear that the need for professional surveying services is, if anything, growing. Along with that growth is the need to encourage young people to get into the profession, as well as the need for us to make this a desirable career choice.

With an eye on bringing more young people into the profession, I met with the VSLs Education Foundation board this week. As a reminder to all, the foundation offers a scholarship to Vermont residents who are pursuing a degree in land surveying. The foundation talked about increasing the value of the scholarship, up to \$3,000 per year, and expanding the criteria to include students in ABET-accredited certificate programs, and those moving from out-of-state to work for Vermont firms. We will share more of this information at the next membership meeting. I encourage all members to get the word out about the scholarships and encourage students to take the time to apply.

As part of my efforts to create a desirable career for new surveyors to go into, I have been attending meetings about creating a Certified Floodplain Surveyor (CFS) program. Part of creating a desirable career path for younger people is having a clear path for reaching a higher position. In my own career as a surveyor, this wasn't always clear to me. Unlike electricians, surveyors haven't always had clearly-defined certifications recognized

in Vermont. Without industry-recognized certifications came a lack of training in the private sector. I see a CFS program as a possible way to lay out a clear career path and provide training resources for younger surveyors. I wish I had known about a program like this when I first started doing LOMA, LOMR, and elevation certificates.

As busy as the business of surveying has been for me this summer, I find myself in a new chapter of my life. One where I'm assessing my work-life balance and having to turn clients away that I would otherwise have said "yes" to a few years ago. While I'm sure many of you share my challenge of having to turn away work that I wish I had the staff, or the time, for, it is a reminder not to sell ourselves short. It's up to us as the existing surveyors to make sure that we are charging enough, so that we can pay enough for our profession to be just as desirable or more than driving a truck or welding pipe. I love surveying because of all the different places it has taken me and the imprint those places left on my life.

Aside from encouraging you all to reach out, I look forward to seeing you in person at the Fall Conference. It will be held at the Delta Hotel by Marriott in South Burlington on September 15th and 16th. Please register at [vsis.org](http://vsis.org) as soon as possible to get the early-bird rate.

I hope you enjoy the rest of your summer. Remember there is life outside of work, and taking time to be with others is always worth the effort. 🌍

*Randy Otis*

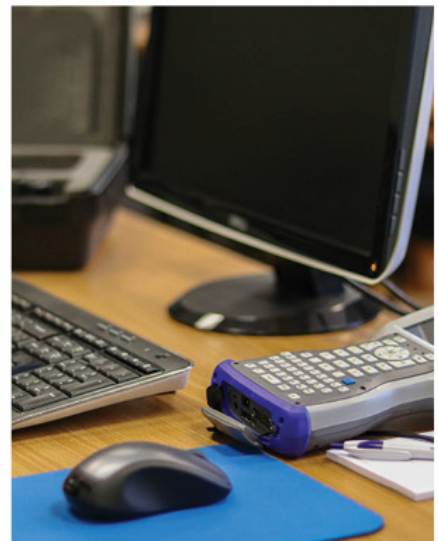
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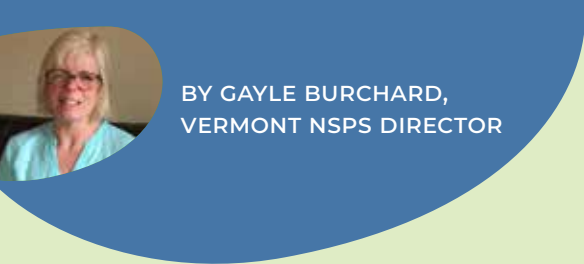
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BY GAYLE BURCHARD,  
VERMONT NSPS DIRECTOR

# Spring NSPS Meeting: Update & Opportunities



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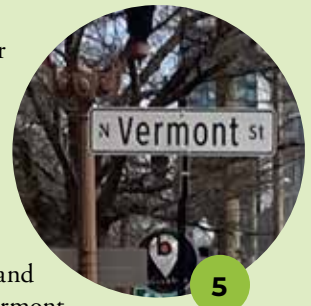
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Scenes from the meeting:

- 1) NSPS 2022 Officers (from left): Mark Sargent, past president; Bob Akins, president elect; Amanda Allred, president; Robert Miller, treasurer; Craig Amey, secretary.
- 2) Student Competition at the Washington Monument.
- 3) Student teams met during the Spring Meeting as part of the NSPS Young Surveyors network.
- 4) Vermont's own Holt Gilmour Survey sponsored beverages at the meeting, along with Vermont director Gayle Burchard.
- 5) A street sign in Arlington, Va.

This spring meeting was in Arlington, Va., in person for the first time since 2019. Our Lobby Day still had to be remote, but we had great meetings on Zoom. We were looking for sponsors for the IMAGE Act and looking for the legislators to contact the House Transportation & Infrastructure Committee about the NSPS draft provision to the 2022 Water Resources Development Act. Also still of concern is the Bacon-Davis Act and making sure that surveyors are paid at the professional level and not labor level.

The Public Relations Committee met and set a couple of goals for the next two years. One is educating the public about what a surveyor does. It would be great if the next generation of grade-school children not only knows what police, doctors and pilots do, but also surveyors. We are also developing a more robust presence on social media.

Which brings me to Work Force Development – if we don't start recruiting young people to work in our companies, students will be studying land surveyors as part of their history classes. The CST program is an excellent way to help survey

technicians develop their skills and achieve pay raises as they progress. Please consider having your employees take the exams. I know of a lot of people that would help get everyone ready and administer the exam. Vermont currently only has two Certified Survey Technicians; I think we can do better.

The student competition was held at the same time as the NSPS meeting. It was great talking with students at the end of the day about how they did and what they found (part of the competition was a scavenger hunt in D.C.)

Next up is Tulsa, Oklahoma, from October 10-13. All you golfers, there will be golf on Wednesday – a team from Vermont would be great!! I'm also trying to get a corn hole competition going for those of us who should never be allowed on a golf course.

See everyone in September and please contact me with ideas or concerns – it is your professional organization. 🌐

**“If we don't start recruiting young people to work in our companies, students will be studying land surveyors as part of their history classes.”**



# A Sneak Peek at Two Seminars Coming Up at the Fall Conference

We'll explore a wide variety of topics to help you on the job.

BY JOSEPH V.R. PAIVA, PHD, PS, PE

I'm looking forward to spending some time with you on September 15. If you haven't heard, I'll be presenting two talks.

The first is entitled "How Close is Close Enough?" Many experienced surveyors develop a "feel" for when they miss closing on a position, a distance or even an angle in reference to anything. It could be published national control, or it could be another survey that you are retracing. So many factors go into determining if the discrepancy is within the margin of measurement error. If it is published control, how do we mathematically justify it? If it is another surveyor's data (could even be our own older data) we are retracing, there are so many factors to consider. First, I always say consider who it was that you are retracing? Then, when was it? Then, how might the previous surveyor have made the measurement and what uncertainties might there be? Finally, you need to consider, "what is the reliability of my own measurement?"

So...we'll go through some fictitious case studies. Perhaps you can bring some nice crisp, clean real-life examples. Why crisp and clean? This kind of discussion can become messy fast, and we'll only have three hours to cover the whole thing! But I always enjoy audience interaction and participation, so thank you in advance for helping to keep the session interesting. I like to also remind surveyors that we often get criticized for not agreeing with each other on measurements. Come prepared to talk about how you answer this criticism. I have some thoughts for you to consider (and use) when you are faced with this next time.

The second talk is "Am I Getting What I Bargained For From My Instrumentation?" This has to do with what you, or any surveyor, can say about the quality of your measurements based on the manufacturer's specifications, plus how you used the instrumentation. Here, again, you need to consider who (the team) was using the instrumentation and when it was used, including factors like weather conditions and a whole bunch of seemingly minor considerations, but I'll try to help you understand how they could be major.



Joe Paiva speaks at a recent seminar

Again, you can help by coming in with your make and model numbers of your instrumentation and what the manufacturer says about how much uncertainty to expect from them. Perhaps, if you can find them, bring in the instruction manuals. Talk to your crews and find out how they use their equipment — not just the total station or GNSS devices but also the peripherals like prisms, prism poles and tripods.

I hope you will find the presentations meaningful to your surveying practice, and perhaps interesting and important enough for you to then conduct your own workshops and seminars at your own businesses when you go back home. Good surveying to all of you! 🌐



Joe Paiva has been an educator in the geospatial field for three decades, including teaching surveying as an assistant professor at the University of Missouri-Columbia; developing and instructing online courses as adjunct faculty at Missouri University of Science and Technology; designing professional and technician continuing education; engineering and geomatics practice; product development; and business management. Joe received B.S., M.S., and Ph.D. degrees in civil engineering from the University of Missouri.

## Bring Your Own Examples to the Seminars

- Real-life situations where you found a discrepancy between surveys
- The make and model numbers of your instrumentation and what the manufacturer says about how much uncertainty to expect from them

See the full conference schedule on page 26.



# Eliminating the Experience Requirement for Licensing

Barnard and Gervais survey technicians Alex Smith and Sam Lagasse conduct a site walk with a client through a densely forested bog in Eden, Vt.

PHOTO: SEAMUS COLLAR

BY KNUD E. HERMANSEN, P.L.S., P.E., PH.D., ESQ.

This is the third article I have prepared in a series giving thoughts on professional practice and education. This topic, I have no doubt, will leave blood on the walls – a metaphor only. I will have good friends that take issue with some of my thoughts. Old age allows opinions to be expressed in a manner that youth cannot do or does so inappropriately.

When I was young, I often cared what people thought of my opinions. Having reached an old age, I have come to realize another person's opinion about me has never paid a single bill I owed. Living to an old age allows friends to mature and enemies to be cultivated.

I will not give a long discourse on my experience, education, and practice. Suffice to say my first of many survey licenses was achieved in 1978 before many that will read this article were born. I will even surmise that my last professional license, that of an attorney, was achieved before many readers of this article were born. I have seen and

experienced much in my life that allows for many opinions.

In this missive I will touch the often-sensitive topic of experience requirements for the surveying program graduate. I will begin by stating I am not so much advocating for change as I am suggesting the profession consider changes. As is so often the case, the way a person did things in their past causes them to feel that way is the best way to do things in the future. I had six years of experience before obtaining my survey license based entirely on my experience. That is my story. Why isn't my way the best way in this case? Old age has taught

me there is often a wide chasm between what was done and what should be done – what is wanted is not always what is needed.

I hoist the target as I once did fifty years ago as a young Marine working the "butts" at the rifle range. Here is the target: I suggest that experience not be required for licensing of a graduate of an accredited surveying program. There I have made my statement and shown the target. I can already hear the shots and bullets passing through my hoisted target from readers. Some reader is already writing to the editor stating in so many words, with heated passion, that

## ARTICLE 3

*Thoughts on Professional Practice & Education*



**“There are over 14,000 pharmacists that graduate each year, are licensed after graduation, and dispense controlled and potentially dangerous and deadly drugs. There are over 155,000 nurses that graduate each year and become licensed RNs mere weeks after graduation and make life and death health decisions for patients.”**

my unsolicited advice is meddling and is not welcome. What is present, works. Perhaps that thought will be the consensus of most of the individuals that read this article.

Why would I make such a statement? Surely as old as I am, I must recognize that experience has taught me far more than four years of surveying education, if not more. I must have learned important knowledge that was never available through education. My answer to both statements is a resounding “yes.”

I must emphasize that important knowledge, complete knowledge, or extensive knowledge is not the purpose of licensing. Licensing’s purpose is to protect the public. Licensing is to ensure the licensee has attained the minimum level of knowledge, established by the profession that is thought necessary for competent practice.

Let us not fool ourselves in thinking two or four years of experience is a constant learning process for an individual. It is not. In many cases, experience is merely the repetition of a limited number of survey tasks repeated over many years. An individual that has spent four years surveying urban lots has probably gained the extent of new knowledge after only three months of employment and after surveying one or two of their first urban lots.

Some readers will counter by claiming that rather than less experience, more detailed experience is required in the licensing application. The application would have to show various complexities and scope of services for experience to count toward licensure. I would suggest that such specificity to experience qualifications will deny licensing for many individuals that work for small survey firms with limited clientele needs or individuals working for large firms that are slotted in specific services offered by the large firm. Such a move will further limit the number of licensees in our profession. The number of licensed surveyors is

already declining from a lack of new and younger licensees.

Back to my days in the Marines, I have cause to look at the large target over my head. There is a new hole from the shooter. The shooter states that my suggestion would allow someone to graduate, be licensed, and provide services to the public soon after graduation. Valuable property rights will be in jeopardy because services will be entrusted to the licensed surveyor without any experience. Incompetence will run unchecked within the profession. The professions’ good reputation will collapse. Millions of dollars in property values will be jeopardized.

I think not. Over 34,000 lawyers graduate each year from law school. Every law school graduate can take the bar exam immediately following graduation. Within months of graduation every one that passes the bar exam can legally practice law without showing one single day of experience. These new, inexperienced lawyers can prepare deeds, write estate plans, argue for clients in court, and so much more. Do they? Of course not. A very few lawyers perhaps - but most work under the guidance of experienced practitioners. I expect the vast majority of surveyors licensed upon graduation after passing their exams will work for experienced surveyors. Very few would set up a practice on their own soon after graduation.

I could go on and shall do so only to beat this argument to reasonable size for some to swallow. There are over 14,000 pharmacists that graduate each year, are licensed after graduation, and dispense controlled and potentially dangerous and deadly drugs. There are over 155,000 nurses that graduate each year and become licensed RNs mere weeks after graduation and make life and death health decisions for patients, dispensing drugs, taking care of injuries, and so on. There are over 10,000 officers commissioned each year without any prior experience in combat leadership that are

placed in charge of soldiers, sailors, airmen, and marines or multi-million-dollar airplanes and make decision affecting lives in combat. (The Lord knows as a Marine sergeant I had my concerns about some new 2nd lieutenants.) I could go on with statistics and facts about ministers, doctors, dentists, cosmetologists, teachers, and other professions that allow graduates to have licenses soon after graduation. I believe I have made my point. Surveying and engineering are in a small minority of professions that continue to require experience in addition to their education before licensing.

So, what is wrong with requiring experience before licensing? I believe it hinders efforts to attract new members to our profession. For an eighteen-year-old high school graduate, the time required to obtain a four-year surveying degree along with four-years of relevant experience to become licensed as a surveyor is a long commitment. The high school graduate can be a licensed engineer in the same time, or become a teacher, nurse, military officer, accountant, forester, electrician, and plumber four years sooner or a lawyer, doctor, dentist, pharmacists, minister, veterinarian, occupational therapist, and architect in one year less. Must the surveying profession erect barriers upon roads that few choose to travel anyway?

Having given my opinion, I now offer advice by suggesting the NCEES model law be changed to allow licensing with a four-year degree and state legislatures adopt this option. At the very least, states should allow graduates to take both their fundamentals of surveying and professional surveying exams near graduation, allowing licensing as soon as experience has been achieved. Some licensing boards have already adopted this option. I will speak more on this latter option in a subsequent article. 🌍

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



# New Training and Certification Program Being Offered in the Northeast

BY MARK CONDODEMETRAKY, PE, PLS

**FEMA and the National Flood Insurance Program (NFIP)** have always been a significant aspect of property ownership adjacent to or in flood prone areas. Properties are required to comply with regulations specific to flood prone areas, and these regulations are included in local ordinances as a direct requirement of a community's participation in the NFIP.

**With sea-level rise and greater storm discharges occurring, floodprone areas are increasing. Northeast residents will need competent professionals more and more often to help them plan and mitigate.**

The surveying industry has been involved in helping property owners and floodplain managers with critical elevation and location information. This Certified Floodplain Surveyor (CFS) Program assists in the public's recognition of the surveyor's critical role in the process. Attending this certification training and passing the certification examination allows a surveyor to show that they have the particular expertise required to be recognized as an authority in the field.

As technology and regulations have changed, so too has the role of the surveyor in the floodplain development industry. With the implementation of the new Risk Rate 2.0 premium rating system and the adoption of LIDAR contour data across the country, the need for elevation certificates and knowledge of floodplain regulations has shifted from the surveyor preparing elevation certificates and letters of map amendments to being the professional resource for floodplain management and community zoning compliance.

New construction adjacent to and in floodplain areas requires specific plans and documentations for the project to be flood resistant and thereby approvable by regulatory agencies. FEMA developed the CFS Program in conjunction with the state of North Carolina, and this program is now being expanded to the rest of the country. NSPS is assisting and will develop the certification database and program coordination in a manner similar to other third party certifications.

As a result of this need, the Northeast Surveying Societies have come together with NSPS to present an opportunity for obtaining the CFS certification for surveyors in our region. The certification program will be a three day seminar from November 2 - 4, 2022, at the Hilton Garden Inn Worcester in Worcester, Mass. Certified trainers from Georgia and North Carolina will provide on-site, in-person training, concluding with the required examination leading to certification. The program will be limited to 40 attendees with registrations accepted on a first-come, first-served basis.

The training includes instruction in correctly completing and filing elevation certificates and letters of map amendments, and reading and utilizing Flood Insurance Rate Map panels (FIRM) and Flood Insurance Study reports (FIS). It also covers understanding model and local floodplain management ordinances and compliance to be able to assist property owners and developers in planning complaint projects. This is extremely important information to obtain, and the CFS designation will allow the surveyor to present themselves as an authority in the field of floodplain management.

With sea-level rise and greater storm discharges occurring, floodprone areas are increasing. Northeast residents will need competent professionals more and more often to help them plan and mitigate. The Certified Floodplain Surveyor designation will distinguish you as a dedicated professional with the knowledge and expertise to be of great value to your clients. Registration for this program is open to all New England and New York surveying state association members at the discounted member rate. The Massachusetts Association of Land Surveyors and Civil Engineers (MALSCE) has agreed to be the lead sponsor and event organizer.

Online registration will be opening in July and will be available on the MALSCE website "Events" page. Don't miss this opportunity to expand your professional knowledge and increase economic opportunities in a field that is in dire need of surveying experts.

For more information, please feel free to contact Rich Keenan at [rkeenan@engineers.org](mailto:rkeenan@engineers.org).

### CFS Certification Program

November 2-4, 2022

Hilton Garden Inn, Worcester, MA

➤ To register, go to [malsce.org](http://malsce.org) and look under "Events."



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# DINAH

BY PAUL HANNAN, L.S.

## WON'T YA BLOW!

**APPRECIATING WHERE ONE STANDS** in the stream of history at any point in time is one of those gifts afforded to few – certainly not to me.

Most of us are too caught up in the day-to-day job of...well, *our job* to have time or talent to step back and think about the implications of what we do or have done. True today for me as a septuagenarian and ever more so at the age of twenty-three, the time-of-life of which I write.

**T**hat tired cliché “hindsight is twenty-twenty” is a cliché for a reason – it’s apt. But only if one is prone to reflection on such matters, or perhaps if given a nudge to do so from an external stimulus. Then, yes occasionally we can see ourselves as having been swept up in a the stream of history not realized at the moment of participation.

John McPhee is undisputedly my all-time favorite non-fiction writer. He has written books with subjects as varied as the birch-bark canoe, geology of the Great Basin, and pre-statehood Alaska. Non-fiction is not for everyone, but his books captivate like the latest Harry Potter tome. (True confession: I never liked or finished a Harry Potter book, but those who did “couldn’t put them down” so the analogy seems to work.)

In 2005 McPhee wrote an article for the *New Yorker* entitled “Coal Train – a Reporter At Large.” It was a long article, so lengthy that even in a magazine known for long articles it was divided over two issues. He subsequently included it in a book on America’s transportation sector called *Uncommon Carriers*. It was reading that article that evoked the contemplation of my unwitting place in history. But wait, I’m getting ahead of myself... let’s cycle back to 1973 and youth’s oblivion to the larger context.

### Go West, Young Man

Anyone who has lived or worked in America’s Intermountain West knows how real the boom-and-bust cycle of energy exploration and extraction is, and

its profound effect on people’s lives as well as the economy. An old timer I used to work with referred to the Depression-era ’30s as a time in Vermont when “you couldn’t buy a job.” I like to quip that Wyoming in 1973 was a time when you had to lock your car doors driving through, or they’d drag you out and put you to work. It was truly boom times.

I’d gone to Wyoming in July of 1973 and spent an idyllic summer helping a college classmate’s uncle build a log cabin on Casper Mountain, but fall was coming on and I thought a “real” job would be appropriate...especially given Wyoming’s legendary winters. I was fresh out of the Ranger School – the SUNY College of Forestry at Syracuse University’s forestry tech program – and had a healthy dose of academic



**“I’d gone to Wyoming in July of 1973 and spent an idyllic summer helping a college classmate’s uncle build a log cabin on Casper Mountain, but fall was coming on and I thought a ‘real’ job would be appropriate...especially given Wyoming’s legendary winters.”**

surveying under my belt. But experience? Not a whit! After a brief but glamorous stint staking mining claims in remote mountainous regions accessible only by helicopter, it sunk in that the slap-dash quality of that surveying was not really advancing my skill level and the glamor wasn't going to pay the rent – the wages were pathetic.

I suppose I could have just driven around with my doors unlocked waiting to be shanghaied, but the local state employment office seemed a more practical approach. As a willing worker with some actual training and skill, I was as popular, and scarce, as a 20-pack of Scott toilet paper at the beginning of Covid.

I left with three referrals but never made it past the first firm: Western Engineers and Architects. "When can you start?" was just about the only interview question. If I tell you I was happy with the starting wage of \$2.50/hour you may get a sense of just how bad the mining claim surveying wages were. And then there was the hook that promised a \$.25/hour raise once I could set the instrument up in under a minute. To say I practiced would be understatement.

I toted that Wild T2 home with me every night and wondered what the neighbors must have thought of this guy setting up and tearing down a theodolite every evening in his front yard. So in about a week I was pulling in \$2.75/hour and was as happy as a Hereford bull in a herd of heifers.

At first the significance of "time and a half for overtime" didn't sink in. But I soon realized that the urgency of a delay-plagued contract to stake 120 miles of new railroad centerline (if you're paying attention, you may see where this is headed) meant I was looking at a

long string of ten-to-twelve-hour days with ten-days-on-four-days-off. That herd of heifers was growing – NOW I was surveying and making pretty good money.

### An Epic Assignment

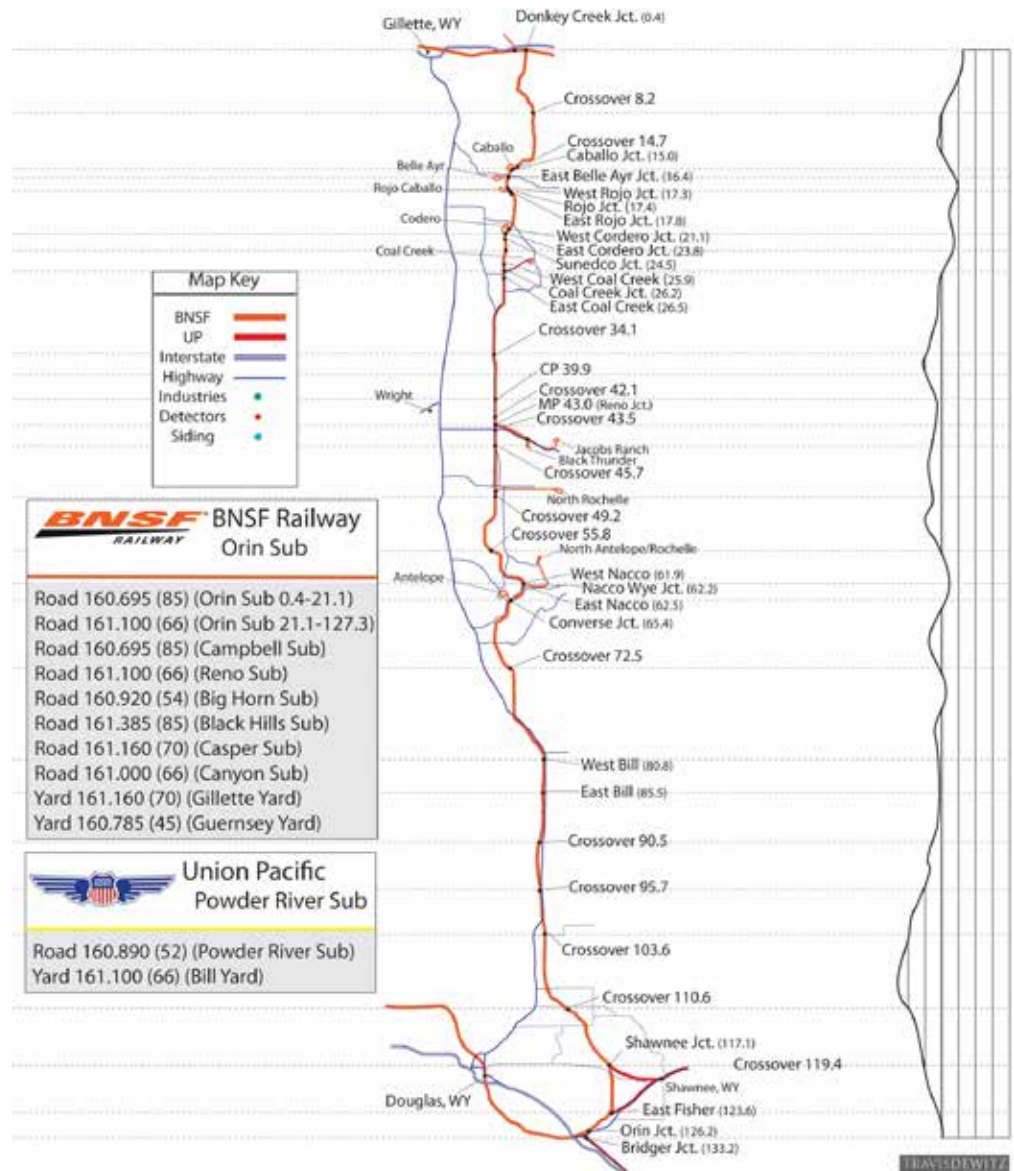
It would be over thirty years before McPhee gave me the context for what at the time seemed just a great job in entirely new country employing state-of-the-art...for 1973... surveying equipment. All I knew was that Powder River Basin coal was suddenly a hot

(pardon the pun) commodity and that the Burlington Northern Railroad was embarking on the largest railroad building endeavor in many decades, if not a century. Gillette and Douglas, Wyoming both had east-west running tracks, but the Powder River Basin coal fields were smack in between – hence the need for a new line connecting both termini.

Our job consisted of setting 2"x2" hubs at the PI, PC and PT as control for every segment of the new line, all to impressively high precision – using that Wild T2 and an HP3800 distance

## Powder River Basin Railroad Guide

Gillette, WY to Douglas, WY





meter, tying into first-order triangulation stations for closure and picking up every available section corner along the corridor as we went. We then came back and set wooden stakes on the tangents on 100-foot intervals and every fifty feet on the curves using a 100-foot steel tape and the theodolite for line and tying-in to the control we'd set at 1/5000 or better, taping for a mile and missing control by less than a foot was fussy work. Oh, did I mention that each curve had a spiral in and spiral out that also had to be staked?

If you are a surveyor reading this, you'll likely understand those terms; if you're not, it could bore you to tears for me to delve into such esoterica (do you really care that a 100-foot steel tape expands or contracts 0.01' for every 15° off 68°F?) But the take-home message is that I could not have asked for a better foundation in the measuring aspects of a land surveying career that has been my pleasure to pursue for the last five decades as well as the finer points of railroad engineering – crucial knowledge to have today when surveying land that abuts a railroad.

### Not the Green Mountains

You've likely flown over, but never walked, northeastern Wyoming's Powder River Basin so you would be forgiven for thinking it flat and desolate. Sagebrush and prickly pear cactus may well be the dominant vegetative species. Hereford and Angus compete for dominant herbivores. But the landscape from 30,000 feet appears deceptively monotonous. Gully, gulch, basin,

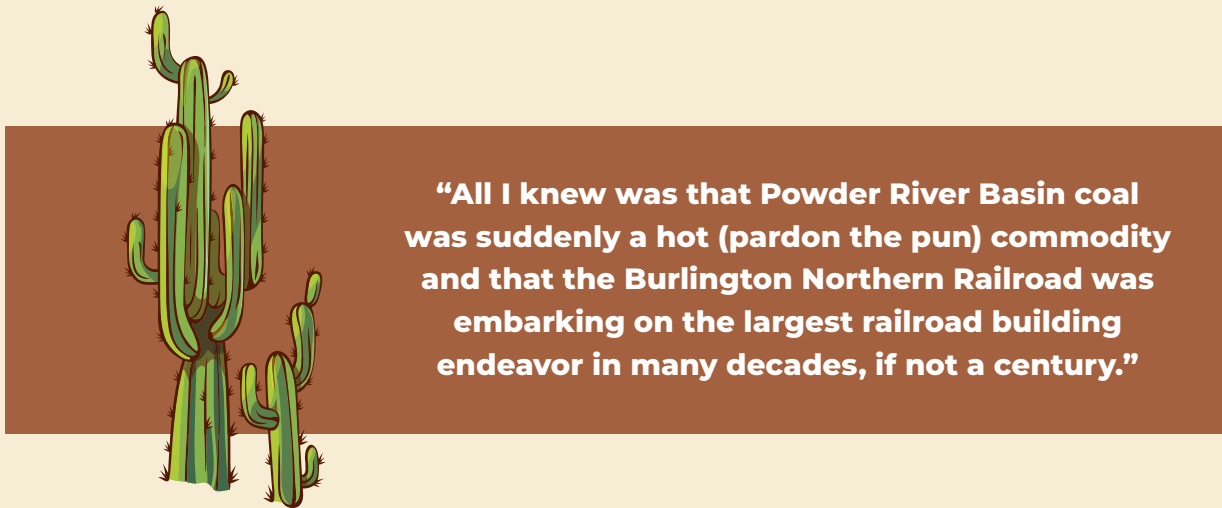
break, cut, canyon, draw, wash, arroyo, butte, mesa, table...the West's poetry of topographic descriptors is rich with purpose. And with a bit of spring rain, that richness explodes to offer a carpeting of showy flowers that provide dramatic contrast to (and compensation for) the drear of the other seasons. Things dry out quickly, well, until the snows of winter do their darndest to thwart surveyors in going about their work.

When I first asked Duke, my boss, how we surveyed in the winter, he said "Oh, the snow just sort of wears itself out blowing back and forth between the fences." He spoke half-truth: the buttes and tables and mesas did tend to be blown free of snow, and if we stayed up on them, we could navigate the terrain. But big 4x4 pick-ups – always in a buddy system – winches, chains, shovels, and tow ropes were standard equipment for the times when high ground just wasn't an option. Many a day ended with the realization that we sure didn't accomplish much surveying but at least we're back in Douglas or Gillette without frostbite and with all our equipment. The challenges of steadying a plumb bob in a 40-mph wind or driving wooden stakes in frozen ground – impossible without a sharpened iron rod indelicately dubbed a "bull prick" – or maximizing short winter days with headlights straddling the prism array for that one last shot, all contributed to survey crew camaraderie and bragging rights at the local watering hole.

I left Wyoming for Washington State in late-1974 and didn't really think about that railroad much after, until relocating

to Vermont in 1979. I started subscribing to National Geographic with hopes that it might help placate our boys over not having a TV in the house (ah, those were the days). In 1981 they published a special report edition entitled "Energy." Thumbing through it I was bemused and a bit pleased by the centerfold-style, black and white photo of a fully loaded coal train snaking its way through the Powder River Basin. "Humph, look at that, they built my railroad. That's cool" I said to my wife. Again, not dwelling on it much.

It was that college buddy of mine with whom I'd moved to Wyoming in '73 – he never left – who sent me that New Yorker Coal Train article around 2005. Where McPhee's writing craft really shines is in providing scope and context for whatever might be his topic. To say the coal trains are big and long can't convey the scale. His statistics help: the trains can have over 150 cars, can be a mile and three-quarters long and weight 23000 TONS. But when he tells you that they are so big, so heavy, and so long, that without coordinated engines both front and rear they will literally tear themselves apart as the front goes up over an almost imperceptible summit and starts the downgrade if the rear engine doesn't push from behind – well that is an image that hits home. He goes on to paint a picture of a gargantuan receiving infrastructure for these trains – an electric power plant near Macon, Georgia. If needed, the plant can empty a train's massive payload in thirty minutes. Even more startling is the fact that it can consume that amount of coal



**"All I knew was that Powder River Basin coal was suddenly a hot (pardon the pun) commodity and that the Burlington Northern Railroad was embarking on the largest railroad building endeavor in many decades, if not a century."**

**“As parochial as it might sound, any Wyomingite with an environmental conscience in the ’70s took the attitude of ‘if you’re going to burn our coal, at least get it the hell out of the state.’”**



ANDREW GRAHAM/WYOFIL

in less than eight hours – 1300 trains per year – mostly to satisfy Atlanta’s inexhaustible hunger for electricity.

Yes, McPhee is a master at conveying scope and scale, but what caught my eye and got me to pondering its effect on my life was this passage:

“It [the boom for Wyoming coal] was the direct economic result of the Clean Air Act of 1970. The immense coal reserves of northeastern Wyoming had been no secret to anybody, of course, least of all to geologists. While a good coal seam in Pennsylvania might be seven feet thick, drill cores and seismology had long shown coal beds a hundred feet thick in the Fort Union formation of Wyoming. There was a small mine from the era of steam locomotives, but on a larger scale no one was interested in this vast domain of coal, because there was comparatively little heat in it. In British thermal units, it was thirty per cent poorer than Appalachian bituminous coal.... Beyond

the detriments of Powder River Basin coal was the signal fact that it was as much as five times lower in sulfur than Appalachian coal. With the Clean Air Act, power plants were required to scrub sulfur out or burn lowsulfur coal. The five hundred power plants that use coal to light, heat, cool, and compute fifty-two per cent of just about everything in the United States were suddenly swiveling their attention to Powder River coal.”

As parochial as it might sound, any Wyomingite with an environmental conscience in the ’70s took the attitude of “if you’re going to burn our coal, at least get it the hell out of the state.” Virtually no one at that time was sounding the alarm of the global atmospheric implications of burning coal anywhere. So, the fact that trains were hauling it away to be burned elsewhere was deemed a good thing. Fifty years later I’m less sanguine about the benefits of Wyoming coal as an environmental

boon – less sulfur, yes, but the sheer volume of emissions has surely hastened the climate change with which we now struggle.

But I do still stand in awe of the forces beyond our ken that shape our lives. One might readily substitute “legislation” for “gods” in that line from King Lear: “As flies to wanton boys are we to the gods.” The direct but unwitting link from the Clean Air Act of 1970 to the trajectory of my own career was surely replicated in that of countless other Wyomingites of that era and continues to ripple – for good or other – to this day. 🌍

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In the next *Cornerpost*, I will offer some practical insight into finding right-of-way information for Vermont’s railroads, both active and defunct, when encountering them in an abutting survey project.



# Use & Abuse

## OF THE “Three-Rod Rule”



Mud season in Vermont

An old Vermont folk story tells of the salesman who stops on the side of the road to ask a farmer, “Where does this road go?” And, of course, the farmer’s laconic response is, “It don’t go anywhere; been right there all my life.”

JOHN LAZENBY

BY TIMOTHY R. COWAN, L.S.

**Would that this were true;** but we surveyors know that roadways can shift, dodge, curve or even straighten through time, and that this can cause us consternation and many extra hours as we try to solve the mysteries of deed descriptions written many years ago when the world seemed so much simpler. Thankfully Vermont land surveyors can often fall back on Title 19, Chapter 1 Section 32 (cited as *19 VSA* § 32), or what I call the “Three-Rod Rule.” I have used

it myself many times, and likely will again. In fact, it has been, through the years, sort of a “Get Out of Jail Free” card for many of us surveyors having to pass judgement on the location and extent of public rights of way as they pass by or through our clients’ properties. But, from time to time I do wonder if it is over-used, or if I am relying on it properly myself.

In 1957 an earlier version of the statute went on the books as *19 VSA* § 36, which stated that in cases where the survey of a highway

“was not properly recorded or the records preserved, or if its terminations could not be ascertained, the board [Transportation Board] or selectmen may use and control for highway purposes one and one-half rods each side of the center of the traveled portion thereof.” Though I am unsure of where the magical width of “3 rods” (49.5 feet) first came about, it is probable that the basis of the 1957 version of the law was a 1947 statute stating that highway rights of way “shall be not less than three rods wide ...” (*Acts of 1947 Section 37 No. 250*) (Now captioned as *17 VSA § 702*). In 1931 Vermont’s legislature passed Public Act 61, “An Act to authorize a state highway system,” which empowered the highway board to take control of many of the multi-town highways (many previously under town or county jurisdiction) throughout the state. Section 6 of this Act stated in part, “This act shall not be construed to transfer the ownership of any real estate located within the limits of highways taken over by the state highway board, ...”. Section 9 of the Act stated: “If the survey of the highway has not been properly recorded or the record preserved, or if its terminations and boundaries cannot be ascertained, the state highway board may use and control for highway purposes one and one-half rods each side of the center of the traveled portion thereof.” The board was also required to file maps of the highways taken over with the town clerks, “signifying transfer of control” to the state.

A 1975 supreme court case that addressed the older § 36 thoroughly was *Town of Dorset v. Fausett*, 133 Vt. 476. In this case a landowner had built and maintained for many years a stone wall along what he understood to be the right of way of a town road, which was one of his boundaries. When he started to extend and improve the wall in the early 1970s, the town road crew objected and the whole thing eventually ended up in Vermont’s highest court. There the court described the statute (§ 36) as “an evidentiary method of proving the boundaries of a public highway otherwise incapable of ascertainment from public records.”

In *Fausett* the court explained that the statute was based on at least two presumptions: first, that the existing highway was originally laid out as a three-rod road, and second, that the center of the road now is where it was originally laid out. Importantly, the court understood that roadways are apt to “shift” through time, and emphasized that these were “rebuttable presumptions”; that is, they can be disproved.

In *Fausett* it appears that more than one contemporary survey of the road had been entered into evidence, and that each of them used the center of the existing traveled way to determine the right of way. The court took exception to that practice; stating that if one part of the presumption was false (the road wasn’t in the same place) then one could not presume that the right of way width was three rods either! The court opined that if it could be demonstrated that the roadway had “shifted,” even a fairly small amount, then the claimant of the right of way was then responsible to establish both the location and the width of the original roadway; basically that § 36 wouldn’t apply!

As surveyors, we know that finding the original centerline of an 18th or 19th century road is easier said than done.

Perhaps the *Fausett* decision (in 1975) and others like it, were the impetus of amending the law just a few years later, in 1985, when § 36 was repealed and replaced with *19 VSA § 32*, which reads as follows:

**§ 32. Assumed width of right-of-way.** A roadway width of one and one-half rods on each side of the **center of the existing traveled way** can be assumed and controlled for highway purposes whenever the original survey was not properly recorded, or the records preserved, or if the terminations and boundaries cannot be determined. (Emphasis mine)

The principle, and significant, difference in this amended statute is the allowance to assume the center of the “existing” traveled way. It wasn’t too long before this 1985 version of the statute found its way into the court.

“This,” Justice Dooley began in a 1990 decision, “is the case of the wandering road.” In *Town of Ludlow v. Watson*, 153 Vt. 437, the town had sought to compel Watson and others to remove posts or fences from what the town believed was its right of way for Red Bridge Road. In the lower court, evidence was provided that a survey of this town highway had been recorded in 1819. The road and the Red Bridge itself had demonstrably moved and changed through the years, and the road was much longer (by over 1400 feet) than the recorded survey. Both sides agreed the location had not remained the same. Unfortunately, the lower court seems to have relied on the *Fausett* (1975) precedent, though the wording of the statute (now § 32) had changed by this time, and ruled that the statute did not apply since it was apparent the roadway had moved.

**“As surveyors, we know that finding the original centerline of an 18th or 19th century road is easier said than done.”**

At the supreme court, this ruling was reversed and remanded back to the lower court since NOW the higher court interpreted the amended statute to allow for one and one half rods each side of the center of the EXISTING traveled way.

In *Watson* evidence had shown that there had been unwritten “dedication and acceptance” of the road’s shifting through the years, a concept that would arise again in the 2006 decision of *Town of South Hero v. Wood, et al.*, 2006 Vt. 28.

This more recent case of Justice Dooley’s “wandering road” took place on the shores of Lake Champlain near the southern tip of the island town of South Hero. Evidence in trial proceedings demonstrated that this undocumented road, contouring the shoreline of Turtle Bay (aka “Hochelaga Bay” or “Knee Deep Bay”) could be seen on maps as early as 1819.

Evidence also indicated that the town had maintained the roadway off and on for many years and was responsible on several occasions for re-building it further and further





**“The more recent case of Justice Dooley’s “wandering road” took place on the shores of Lake Champlain near the southern tip of the island town of South Hero. Evidence in trial proceedings demonstrated that this undocumented road, contouring the shoreline of Turtle Bay (aka ‘Hochelaga Bay’ or ‘Knee Deep Bay’) could be seen on maps as early as 1819.”**

northerly as the lake continued to erode the shoreline. A series of aerial images demonstrated that the roadway’s centerline had retreated about 25’ since 1962 and as much as 100 feet since 1942. It was stipulated that it had become, over time, a town highway by “implied dedication and acceptance.” From the context, the court considers “Implied dedication” is an unofficial “act” by the abutting land owners; the “acceptance” is an act or acts (not necessarily official) by the town.

But, there came a time, in the year 2000, when a land-owner’s good will would run out and Mr. Wood complained to the town road crew which was preparing to re-construct the road, which was once again migrating further into his lakefront property. The town contended that through implied dedication and acceptance they were entitled to a three-rod right of way wherever the road might be. The court agreed, up to a point. They would rule that the town had a full three-rod right of way from the center of the traveled way as it stood at the time the abutters began to object in 2000. Now, since the town desired to move the roadway once again, it essentially argued that the right of way must move with the roadway. At that point the court put down its proverbial foot, pointing out that the town was looking for a “rolling easement” which could move perpetually at the town’s whim, and that this would be beyond the purpose or intent of the statute (§ 32). Apparently alluding to the fact that a highway created by implied dedication and acceptance is technically an easement,

the court made reference to *In re Appeals of Shantee Point, Inc.* 174 Vt. 248 (Vt. 2002) and to *Sargent v. Gagne* 121 Vt. 1 (1958) quoting: “It is the general rule that a way, once located, cannot be changed thereafter without the mutual consent of the owners of the dominant and servient estates.”

Now smelling victory, Woods pressed his advantage and argued that his implied dedication should apply only to the land actually covered by the roadway itself and not the additional width of a right of way. The court rejected that concept, too. The right of way was to be three rods wide, centered on the roadway as it stood in 2000. If more room was needed the town would need to negotiate it with the landowners.

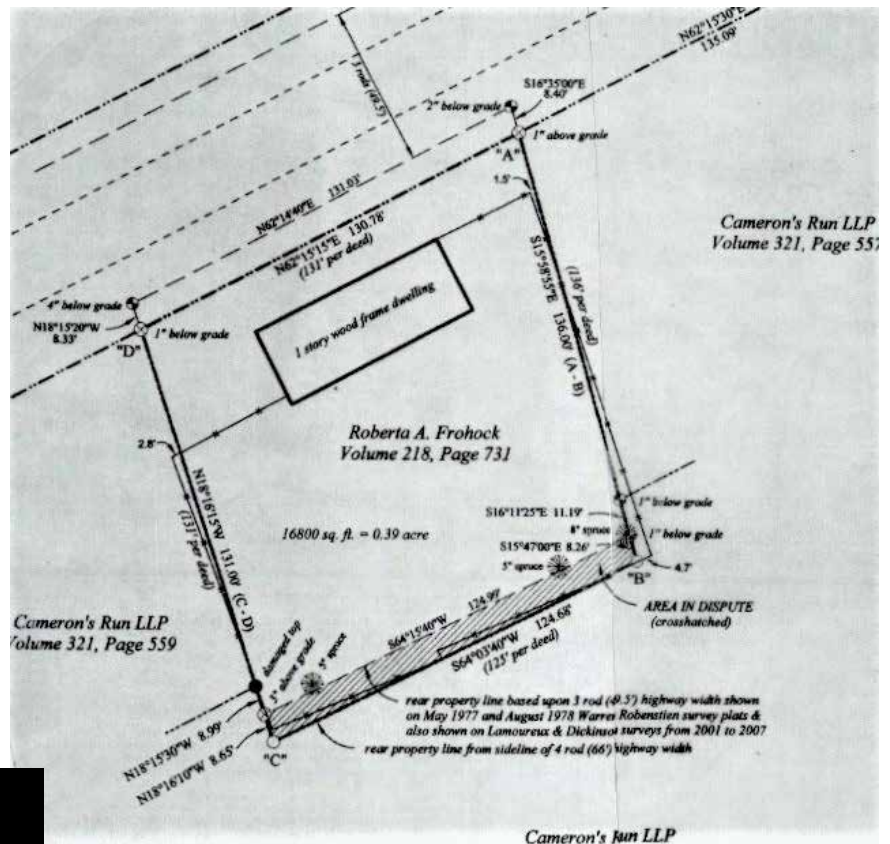
### **Another “Wandering Road”**

The question of moving centerlines is also thoroughly discussed in a 2007 Washington County Superior Court decision captioned *Bren v. Eardensohn* (No. 320-5-05 Wncv). In 1963, surveyor John Roth laid out a subdivision of lands of Mr. Gadd in Warren, Vt. As the lots were conveyed, Gadd retained the strip of land obviously intended for access to the lots. Either through time or its original construction, by 2006, the roadway was no longer centered within the retained strip, though it was conceded that the roadway was still entirely within the platted right of way. It appears that the town and Gadd failed to go through all of the statutory procedures of





**“An unsettling fact of this case is that, in the course of three decades, three different retracing surveyors came up with three different conclusions as to how to interpret the 1964 deed.”**



Survey of Frohock plat ca. 2008-2011. Milton Land Records

uncontested since 1977, Cameron’s Run had ownership to them by adverse possession and Frohock’s fence was over the line!

On appeal, the Supreme Court found a number of errors in the trial court’s decision, including:

- adverse possession had not been claimed or even mentioned at trial, therefore the defendant could not have mounted a defense against such a claim.
- since the defendant’s deed was unambiguous, the lower court had no reason or right to search for extrinsic evidence of intent outside the deed description.
- even if the description was ambiguous, the street was documented to be four rods wide, the deed description called for depths from that street, and the lower court had not reconciled that issue. So, the higher court reversed the decision and remanded the case back to the trial court to address those issues and others. Significantly, the high court faulted the trial court for making the assumption that the scrivener of the 1964 description would have assumed that the street was only three rods wide instead of four.

An unsettling fact of this case is that, in the course of three decades, three different retracing surveyors came up with three different conclusions as to how to interpret the 1964 deed. Surveyor 1 (1977) set front and back corners based on the assumption of a three-rod right of way. In 1997, Surveyor 2

determined that the right of way was four rods and set front corners based on that, but “held” the previously-marked back corners, seemingly maintaining the status quo there, while resulting in a lot depth about a half-rod shy, and leaving Frohock’s fence over the line.

Eleven years later, in 2008, Surveyor 3, working for defendant Frohock, would monument the back line at the deeded distance from the 4-rod right of way, very close to Frohock’s fence line.

In *Frohock* and so many cases involving lot depths from right of way lines, many questions arise: Lacking other evidence of the location of the “back line,” should the retracing surveyor use the record right of way line, or measure back from where the scrivener believed the side line was? At the time of the deed, did they know the right of way width? Do WE know what the right of way width was or where the centerline was at the time?

As one old-timer put it: “Roads, streams and lakes are great things to describe TO; not so good to describe FROM.”

In the next *Cornerpost*, Part 2 of this article will explore more instances where we may be selectively or incorrectly applying portions of § 32, the “three-rod rule.”

The author is not an attorney, and this is not legal advice. Any opinions expressed or implied by the author are his only, and not necessarily the opinions of *The Cornerpost*, VLSL or its membership.

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**February 17, 2022, 6 p.m., Zoom Conference Call**

The meeting was called to order at 6:04 P.M. In attendance were Randy Otis, Paul Hannan, Nate Yager, Becky Gilson, Keith Van Iderstine, Lisa Ginett and our Administrator, Kelly Cochrane-Collar. Absent: Mark Day

**Secretary's Minutes**

Minutes for the Executive Committee meeting for January 20, 2022 were reviewed. The motion was duly made and seconded and the vote was unanimously: to approve the minutes of the January 20, 2022 Executive Committee meeting.

**Treasurer's Report**

Treasurer's report for the period of Jan. 1, 2022 through Feb. 16, 2022: total income was \$18,590.00, total expenses were \$2,801.92, leaving a net income of \$15,788.08. Keith noted that membership is ahead of schedule. It should also be noted that Kelly has made many attempts to get an invoice from Okemo to pay for the fall conference, but no invoice is forthcoming, so she is giving up now. Total bank account balance is \$74,422.02. As discussed in our last meeting, Kelly is working on getting an appointment with Greg Lambesis of North Country Credit Union for she and Keith to discuss investing some or all of the society's CDs and savings account funds.

**Administrator's Report**

Kelly has reiterated that the Spring Seminar will possibly be held at Lake Morey on April 29. The speaker will be Jeff Lucas and the program will be "What Went Wrong? A Study in Surveyor Errors and Omissions." The program Committee will make the decision in mid-March whether to have the program in person or as a virtual meeting.

Kelly has been searching for a venue in Chittenden County for our two-day Fall Conference. She has made an appointment at the Delta Hotel in South Burlington to look at the venue and discuss costs. She has contacted the Hilton in Burlington with the same request but her preliminary review of the costs show them to be much higher than other venues in the area. Kelly has requested a similar review from the Doubletree. Once a location has been chosen, the Program Committee will pick the date and fill in the presenters.

Kelly will be mailing out "The Cornerpost" in mid-March, so anyone who has any articles or photos for "The Cornerpost" should get them to Kelly by late February. Randy has an employee who would like to submit an article about scanning a dock area in Lake Winnepesaukee in New Hampshire. Kelly says that the person should go ahead and submit the article. Randy opined that it was probably too late to make the deadline for this issue. It was also mentioned that the NH Society was had asked permission to print Paul's article on the search for an old Town Highway in their magazine.

The group has discussed for years the idea of getting a table in the Card Room of the Vermont Statehouse for National Land Surveyor's Week. Kelly needed to reserve way ahead of time. This year she was able to reserve that space but unfortunately the State cancelled all activities in the Card Room. Kelly will once again request a Governor's

Proclamation regarding the event. We are still waiting to hear from Seven Days as to the possibility of an article about the shortage of land surveyors and need to bring more people into the profession.

The group also discussed a request from a former society member that VLS might purchase some older maps that he had. The society does not purchase survey plans but the group decided that we could allow the current owner to advertise the plats for sale on our website.

**Licensing Issues with OPR**

Paul reports that he is at a stopping point after receiving Chris Winters' answer to his email request about meeting with him and members of the Board of Land Surveyors and VLS Executive Committee. Paul feels that we need to discuss the issue with some of the Board members to see if the majority feel that they did or did not have the expected input into this matter, as Chris alleges in his email.

**Bill on Way of Necessity Fix H474**

The group briefly discussed the Way of Necessity Bill. Paul said that a local forester noted that there are two sides to this issue. One is the landowner who may lose his way of necessity based on the marketable Title act, thus landlocking his property. The other is landowners who have some of their property rights affected by the way of necessity. Paul mentioned that we are rapidly approaching the cross-over deadline and thinks it unlikely that this Bill will move forward this year. Perhaps we can be better prepared next legislative season.

**Vermont Historical Society James Wilson Globe project**

To date, Stuart Morrow, David Mann and Byron Kidder have volunteered to assist the Vermont Historical Society with their planned field presentations regarding the James Wilson Globes and historical methods of land surveying in Vermont. Amanda Kay Gustin will write a short article in "The Cornerpost" about the summer events with a request for more volunteers.

**Certified Flood Surveyor Program in New England**

Kelly said that she had asked Tim Rockwell if he had any interest in the program, but he did not at this time. Keith suggested that Mark Condodemetraky write a short article about the program for "The Cornerpost" with a request for any volunteers.

**Scans of Terry Harris and Connecticut River maps**

Mark Day, who is sorting through Terry's plats, was absent. Byron Kidder has agreed to look into how to obtain scans of the very oversized Connecticut River maps.

There being no other business the meeting was adjourned at 6:44 PM.

Respectfully submitted,

Lisa Ginett  
VLS Secretary

## March 21, 2022, 6 p.m., Zoom Conference Call

The meeting was called to order at 6:03 P.M. In attendance were Randy Otis, Nate Yager, Becky Gilson, Keith Van Iderstine, Lisa Ginett and our Administrator, Kelly Cochrane-Collar. Absent: Paul Hannan

**Secretary's Minutes**

Minutes for the Executive Committee meeting for February 17, 2022 were reviewed. The motion was duly made and seconded and the vote was unanimously: to approve the minutes of the February 17, 2022 Executive Committee meeting.

**Treasurer's Report**

Treasurer's report for the period of Jan. 1, 2022 through March 17, 2022: total income for period was \$18,990.31.00, total expenses were \$8,428.16, leaving a net income year of \$10,562.15. Keith noted that membership dues are at 82%.

**Administrator's Report**

Kelly reports that *The Cornerpost* is being printed now and will be mailed out next week. She stated that the Program Committee has decided that the Spring Seminar will be presented (by Jeff Lucas as planned) online, still on April 29. Although Kelly had one complaint about the meeting being online, she also notes that it will be much less expensive to put on than if we held the meeting in person. Kelly mentioned that the Fall Conference will be more expensive, as general food and lodging costs have recently gone up. The event will be held at the Delta Hotel by Marriott Burlington on September 15 & 16. There will be vendor demos in the courtyard, but at this time the speakers have not been selected.

Kelly just received the Governor's Proclamation regarding Land Surveyor's week. She is trying to schedule an Education Foundation meeting as there has not been a meeting for a long time. The committee is basically inactive except when we get applications for our scholarship. We also discussed the *Seven Days* article. The reporter interviewed Becky Gilson, Randy Otis and Joe Flynn. The reporter wondered why we, the Society, did not do more self-promoting. The group briefly discussed the issue of how to interest more people in careers in surveying. Many thought that surveying firms need to raise their rates so they could offer employees better pay and benefits. The possibility of TikTok videos was mentioned as a way to get the word out about surveying.

**Investment of VSLS Funds:**

Kelly and Keith talked with Greg Lambesis, the Financial Advisor for North Country Credit Union and the VSLS Education Foundation. It has been four years since the Education Foundation made the investment of \$70,000.00, and after the 5% commission and the 1.14% maintenance fee was taken into consideration, the fund is now worth \$90,000.00. The group talked about investing the VSLS savings in a similar fund, because we are making very little money on the money currently. If VSLS decides to invest in a moderate fund, Greg Lambesis from NCFCU recommends perhaps 80% in Bond Funds and 20% in Balanced Funds. NCFCU would also waive any transfer fees for taking our funds out of our CD, and we can withdraw funds at any time with no penalty.

It was suggested that a subcommittee of Randy, Keith and Kelly will talk with Greg Lambesis and make a final decision about the investment. The Executive Committee agreed to invest \$50,000, with guidance from the subcommittee. A motion was duly made and seconded and the vote was unanimously: to approve creating the subcommittee and investing \$50,000.00 with NCFCU.

**Advertising in the Vermont Tech Athletic Calendar**

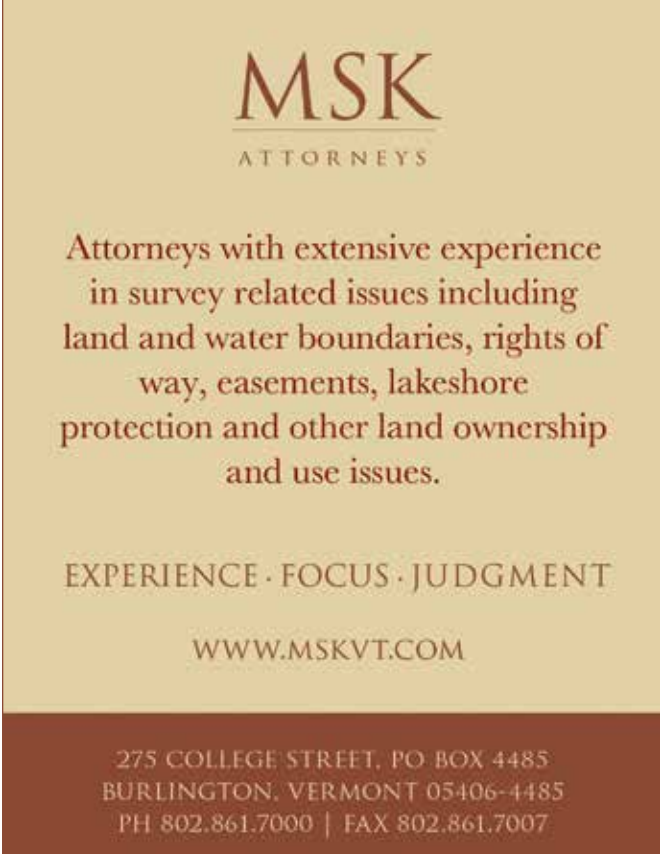
There was a brief discussion regarding the Vermont Technical Center athletic calendar ad. Last year VSLS did a 1/8-page ad, which costs \$250. Given that we're trying to attract more surveyors to the profession, the group agreed to proceed with a larger, quarter-page ad at a cost of \$400.

The group discussed that there were only a few surveying classes currently offered at Vermont Tech and that some regional colleges had dropped their surveying programs, so options for Vermont students to attain a surveying degree are limited.

There being no other business the meeting was adjourned at 7:15 PM.

Respectfully submitted,

Lisa Ginett  
VSLS Secretary



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## April 21, 2022, 6 p.m., Zoom Conference Call

This meeting was held on April 21, 2022 by Zoom. The meeting was called to order at 6:02 P.M. In attendance were Randy Otis, Paul Hannan, Keith Van Iderstine, Lisa Ginett and our Administrator: Kelly Cochrane-Collar. Absent: Nate Yager, Becky Gilson and Mark Day.

**Guest Attendees**

Bryan Dickinson attended the meeting; he is a mathematics teacher at North County Union High School in Newport, VT. Bryan received a grant from the Rowan Foundation to take a sabbatical year to create a mathematics course that will integrate math skills with hands-on outdoors experiences. He is attempting to create a course that will use GIS and surveying tools to map conservation projects, trails, etc. Bryan has studied math and GIS at the Northwood Stewardship Program and wanted to ask the group what tools surveyors are currently using in the field. Paul commented that GIS and GPS together make mapping for any project easy. He pointed out that non-survey grade GPS was no longer prohibitively expensive and is great for most mapping. Both he and our guest use QGIS for mapping purposes. Keith suggested adding a "how do you find a boundary" portion to his projected curriculum and named several surveyors in the Newport area. Bryan hopes to implement this new course in 2023.

The group also suggested some reliable resources for information about surveying such as NSPS, the VSLs video, reading "The Cornerpost," checking out maps for forestry and management plans and any ways that gather data and depict it graphically. Keith suggested the Boy Scout Merit Badge in surveying. Kelly mentioned our Scholarship Program and the Vermont Historical Society project this summer to showcase James Wilson's globes and historical surveying techniques.

Adam Franco also attended the meeting after becoming interested in talking to the group due to the *Seven Days* article. Adam wanted to make us aware of the Open Street Map project. He is a hobbyist mapper and told us about World Map Wikipedia, which was built by a community of hundreds of thousands of people adding data. The mapping is used for many purposes, from humanitarian aid to addresses, navigation, truck routing, trails and roads mapping, and uses an active editing process. He thinks it might be a good way to introduce kids to mapping and the surveying profession. Adam is on the U.S. Foundation Board, which supports OSM initiatives such as lesson plans and curriculum for training teachers for geography.

**Secretary's Minutes**

Minutes for the Executive Committee meeting for March 21, 2022 were reviewed. The motion was duly made and seconded and the vote was unanimously: to approve the minutes of the March 21, 2022 Executive Committee meeting

**Treasurer's Report**

Treasurer's report for the period of Jan. 1 2022 through April 18, 2022: total income for period was \$25,439.54, total expenses were \$13,802.51, for a net income of \$11,637.03 and a bank total of \$71,285.14. Keith and Kelly noted that we finally received an invoice from Okemo for the 2021 Fall Conference and already paid it.

**Administrator's Report**

Kelly reports that the *Seven Days* article generated a lot of interest, at least in terms of visits to the VSLs site. She says that we usually get up to 50 visits a day and that the day the article came out there were 450 visits.

Kelly reported that about 75 people have registered for the Spring Seminar to date. Keith asked if Kelly had sent notice about the seminar to the engineering community, and she had not. Randy told Kelly to send the information to Carolyn Cota at the Vermont Society of Engineers and that he would send her a link. Randy is Secretary of VSEA. Gayle Burchard had asked Kelly if Mark Condodemetraky could speak for 15 minutes at the Spring Conference about training for certification for Floodplain Surveying. The group assented but said the short program would be optional during lunch hour.

The Fall Conference will take place on September 15-16 at the Delta Hotel in South Burlington. So far there is one morning planned for tech time, having vendors doing demos in the courtyard. She was hoping that they might be able to get a speaker through Jarlath O'Neill-Dunne from UVM. There are no other speakers firmed up.


**Investment of VSLs Funds**

Keith was unable to get this discussion updated for us as he has been too busy. Keith, Randy and Kelly discussed when they might be able to have a meeting regarding the issue of this investment.

There being no other business the meeting was adjourned at 7:02 PM.

Respectfully submitted,

Lisa Ginett  
VSLs Secretary



got maps?

We do! VSLs has thousands of old surveys that are available to our members.

- Visit [www.vsls.org](http://www.vsls.org).
- Go to **Member Login**.
- Enter the password **vslsmember** to search the database.

**May 19, 2022, 6 p.m., McCain Consulting Engineers, Waterbury**

The meeting was called to order at 6:00 P.M. In attendance were Randy Otis (via Zoom), Paul Hannan, Keith Van Iderstine, Nate Yager, Becky Gilson, Mark Day, and our Administrator: Kelly Cochrane-Collar. Absent: Lisa Ginett

**Secretary's Minutes**

Minutes for the Executive Committee meeting for April 19, 2022 were reviewed. The motion was duly made and seconded and the vote was unanimously: to approve the minutes of the April 19, 2022 Executive Committee meeting.

**Treasurer's Report**

Treasurer's Report for the period of Jan. 1 through May 16, 2022. Total income for period was \$31,441.73, total expenses were \$24,548.79, for a net income of \$6,892.94 and a bank account total of \$65,526.97. Keith noted that membership dues are increasing slowly and that we did well with earnings from the Spring Seminar, with a net profit of \$7,192.52.

**Administrator's Report**

Kelly reported that the Program Committee had met two days earlier to firm up plans for the Fall Conference. The event will take place September 15-16 at the Delta Hotel by Marriott in South Burlington. Speakers will include: Joe Paiva, CEO of Geolearn, who will give two seminars on topics that are still being hashed out; Ed Fitzpatrick, Esq., who will discuss online deed research; Tim Terway, VCGI, who will speak about best uses of the state's GIS website; and Jim Nadeau of Nadeau Realty, who will give seminars on Value-based Fees and Changing the Role of the Land Surveyor in the NFIP. We will also have two hours of Tech Time with vendors on Friday morning. Aaron Fuller had suggested having a presentation about barbed wire, after seeing a promotion for a seminar from the Kansas City Barbed Wire Museum. Kelly left a message with the museum, with no response. Scott Taylor may have an idea of a local barbed wire expert.

Kelly mentioned that Vermont is supposed to host the NESS meeting this year and asked the group for their thoughts about this. Apparently at the last NESS meeting in Maine, they set aside time for a meeting for other New England society attendees. Mark suggested having this meeting during the breakfast time on Friday morning.

Kelly mentioned that the deadline for articles and photos for the summer Cornerpost is July 1.

**Investment of VSLs Funds**

Keith will email Greg Lambesis at North Country Federal Credit Union to set up a meeting with him and Randy about investing the VSLs savings funds.

**Update on Terry Harris Scans**

Mark has the maps organized and just needs to find the time to bring them to Repro for scanning and naming. The group spoke about the larger issue of scanning retired/deceased surveyor plats or at least keeping track of them. Kelly will send an email to members to ask "do you own any other surveyor's plat collections?" She will continue to grow the database that she has had for several years.

**Other Business**

The group discussed the Certified Flood Surveyor certification program being organized by Mark Condodemetraky and spearheaded by MALSCE. This will be an in-person, two-day training later this year, as far as we know. Keith and Becky expressed interest in participating, and we may have others who are interested as well. Gayle Burchard had queried whether VSLs could pay for a portion of a member's attendance at the training, including travel and lodging expenses. The group agreed that unless this was a "train the trainer" commitment, where the member would come back and train other VSLs members, we would not be willing to pay for their expenses because it would be for their own professional benefit.

Becky mentioned that she's received a number of calls in response to the *Seven Days* article, with people interested in learning more about a career in land surveying. Becky will forward their names to Kelly, and Kelly will try to connect them with members for summer employment, a day in the field, or at least a phone conversation.

The group talked about the need to call a meeting of the Education Foundation. Kelly will reach out to schedule something soon.

There being no other business the meeting was adjourned at 7:15 PM.

Respectfully submitted,

Kelly Cochrane-Collar  
VSLs Administrator



# JOIN US

The Executive Committee meets on the third Thursday of each month, and members are welcome to attend meetings. Please call or email Kelly Collar for more info about times and locations: 802-777-6507 • [kelly@vsls.org](mailto:kelly@vsls.org)





# 2022 Fall Conference

Thursday and Friday, September 15-16, 2022  
Delta Hotel by Marriott · South Burlington, Vermont

## CONFERENCE SCHEDULE

### Thursday, September 15

7:00–8:00 AM	<b>Registration Opens / Breakfast</b>
8:00–11:00 AM	<b>How Close is Close Enough?</b>
11:00 AM–noon	<b>Am I Getting What I Bargained For From My Instrumentation? Part 1</b>
noon–1:00 PM	<b>Lunch</b>
1:00–3:00 PM	<b>Am I Getting What I Bargained For From My Instrumentation? Part 2</b>
3:00–5:00 PM	<b>Online Deed Research: New Opportunities and Tools</b>
5:00–6:30 PM	<b>Member Mixer</b> (Please join us for light appetizers in the Exhibit Hall / your first beverage is FREE)

### Friday, September 16

7:00–8:00 AM	<b>Registration Opens / Breakfast</b>
8:00–10:00 AM	<b>Tech Time: Demos of New Products with Vendors</b>
10:00 AM–noon	<b>Value-Based Fees</b>
noon–1:00 PM	<b>Lunch and Business Meeting</b>
1:00–3:00 PM	<b>Changing the Role of a Land Surveyor in the NFIP</b>
3:00–5:00 PM	<b>Accessing GIS Resources at the Vermont Open Geodata Portal</b>
5:00 PM	<b>Final Announcements</b>



### HOTEL INFO

Delta Hotel by Marriott  
1117 Williston Road, South Burlington  
888-236-2427  
\$249/night, register by Aug. 15 to guarantee your rate

### OTHER LODGING

We're seeing unusually high lodging rates this year. Additional options you might try include:

- Anchorage Inn, S. Burlington
- Comfort Inn & Suites, S. Burlington
- Best Western Windjammer
- Courtyard by Marriott, Williston
- Airbnb

### 16 PDH

This event has been approved for 16 professional development hours by the Vermont Board of Land Surveyors.



kelly@vsls.org  
802-777-6507

## CONFERENCE FEES

	Full Conference	Thursday Only	Friday Only
Member in good standing of VSLs or kindred association	\$295.00	\$195.00	\$195.00
Non-member	\$395.00	\$295.00	\$295.00
Life Member	\$221.25	\$146.25	\$146.25
Non-member technical staff attending with member	\$250.75	\$165.75	\$165.75
Three attendees from same firm (one must be a member)	\$250.75	\$165.75	\$165.75

\*ADD \$25 LATE FEE AFTER AUG. 31

## CONFERENCE SEMINARS

### How Close is Close Enough? (3 hr)

*Presenter: Joseph Paiva, CEO, GeoLearn*

This presentation will discuss the inevitable discrepancies that happen in surveying. The most common of these is making a measurement between two verified points (whether boundary markers or control survey points), not getting the exact distance, direction or coordinate differences and deciding that it is close enough, virtually the same or so different that more analysis and measurements need to be done. Not only is this topic useful in virtually daily situations surveyors encounter, but it can also help them answer with simplicity, clarity and scientifically backed theory, those awkward questions like “why doesn't your measurement agree with the other surveyor's?”

### Am I Getting What I Bargained For From My Instrumentation? (3 hr)

*Presenter: Joseph Paiva, CEO, GeoLearn*

It is not uncommon for surveyors to implicitly trust their technology when making measurements. The suspicion usually only comes when there's a discrepancy. However surveyors are often not able to state clearly what the quality of their measurements are. In this presentation, we will discuss how instrumentation work, what their tolerances are, how to estimate the quality of measurements, and most importantly, how to evaluate the accuracy of the instrumentation and how to take action if deficiencies are found, especially in the field.

### Online Deed Research for Land Surveyors (2 hr)

*Presenter: Ed Fitzpatrick, Esq., Bergeron Paradis Fitzpatrick*

Land surveyors were thrown into a challenging new world when Covid-19 hit in early 2020, bringing with it severe restrictions for visiting town clerks offices and libraries around the state. This seminar will look at some of the changes this shift brought about, with new opportunities in the way surveyors work.

### Tech Time: Demos with Vendors (2 hr)

During this hands-on session, we will rotate through different vendors and get a close-up look at new products and technologies. All attendees will visit every vendor, including Cadnet Services, Maine Technical Source, Reprographics, Waypoint Technology Group, and more.

### Value-Based Fees (2 hr)

*Presenter: Jim Nadeau, Nadeau Realty*

Determining the appropriate fees for land surveying services requires an organizational belief that such services are both important and unique. In this program, we'll discuss strategies to increase individual and organizational worth, build confidence, and convey competence to prospective clients. We will explore how time and materials fees compare to value-based fees, and their role in creating a profitable business model, as well as using other parameters of value and the importance of service diversity to further support a transition to value-based fees.

### Changing the Role of a Land Surveyor in the NFIP (2 hr)

*Presenter: Jim Nadeau, Nadeau Realty*

The National Flood Insurance Program (NFIP), which offers flood insurance to more than 5 million policyholders nationwide, has transitioned to Risk Rating 2.0, a more automated rating methodology which uses “system-generated” values to perform more efficient and equitable flood risk analyses. Much of this data was once collected and analyzed by land surveyors. As technology continues to change the role of the land surveyor, it calls for continued education and a willingness to evolve as professional consultants. This program will review important changes in the NFIP, as well as what has not changed. We will discuss how Flood Zone Determinations, Elevation Certificates, and Letters of Map Change still play an important role in helping property owners understand flood insurance and mitigation options, and explore different ways land surveyors can remain actively involved through a variety of real life examples.

### Accessing GIS Resources at the Open Geodata Portal (2 hr)

*Presenter: Tim Terway, VCGI*

The Vermont Center for Geographic Information (VCGI) stewards the Vermont Open Geodata Portal, which hosts more than 1,000 freely available spatial datasets sourced from multiple publishers. How does one access the resources offered there? This session will cover best practices for finding the information you need. We will also introduce basic concepts and workflows for porting GIS data for CAD use. activities that promoted its expansion.

## REGISTRATION | Please mail this form or register online at [www.vsls.org/fall-conference-2022](http://www.vsls.org/fall-conference-2022)

Name \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Email (required) \_\_\_\_\_

Dietary restrictions: \_\_\_\_\_

Please return your form with payment to:  
VSLs, P.O. Box 248, Montpelier, VT 05601-0248.

I would like to register for:

Full Conference    Thursday only    Friday only

Payment amount: \_\_\_\_\_

If you're attending on Thursday, do you plan to stay for the Member Mixer after the seminars?    Yes    No

Check enclosed, payable to VSLs.

Credit card payment:    VISA    MC    AMEX    DISC

Card Number \_\_\_\_\_

Exp. Date \_\_\_\_\_ Security Code \_\_\_\_\_





# The Cornerpost

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