



May 2017

# BACKSIGHTS & FORESIGHTS



Photo by Brandon Huppler, RLS

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**"There is a loftier ambition than merely to  
stand high in the world.  
It is to stoop down and lift mankind a little higher"**  
*Henry Van Dyke*

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## PUBLICATION DEADLINES

Material Cutoff	Publication
January 15	February 1
April 15	May 1
July 15	August 1
October 15	November 1

### Backsights and Foresights

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## Still Making Surveying Great:

(aka From The President)

Following the release of the last Backsights and Foresights (March 2017) I received a nice phone call from a friend and a thank you card from Edward H Sunde. Edward explained he had been retired from surveying for over 15 years and that he has moved to Minnesota. An inquiry to Janelle, I learned he is one of the founders of the SDSPLS. I am glad he still keeps in touch by reading the professional survey news of the Backsights and Foresights. Gomer Pyle use to use the phrase "hey "; so I send a big "Hey" out to Edward and thank you for your continued interest in the Society.

There is new interest in the condition of the Southwest corner monument of South Dakota by the other states that share this corner. Seems the fence and sign at this site are in need of repair. The B.O.D. is gathering info and we hope to get involved with this project. Coming into this position of President I had wanted our society to go look at the other corners of the state. My thought was that if any of the members were in the area or wanted to make a special trip they would take a photo and write a bit about the site and getting there. Share your story with the rest of us by sending the info to Janelle. I know retirees are busier than they were when working but maybe these folks can make a day trip and have an adventure to one of these boundary corners and see what if any monument exists. There are a minimum of 10 corners and then there are 2 initial points. And from what I understand there is a secondary initial point for the 5<sup>th</sup> Principle Meridian in SD where the line coming from the south was not happening fast enough so by other means there was a point set along the base line located on the north line of Township 100. This supposedly causing a correction near the east state boundary line. You history buffs might have this info and correct my statement here.

This activity of looking at the monuments of South Dakota is like fishing. Cast in your line and see what you pull in.

In my last message about highway knowledge I shared the history from prior to statehood to 1939. This was when the state legislature granted by law the State Department of Roads its right to securing its own right of ways. I had mentioned there seems to have been several ideas about how to record the title to the roads that were or had been platted. Many of you may have experienced the highway plats of the 1930's to the 1980's. Some showed a location of the road along a section line or across a quarter section, some with measurements and angles and some with no measurements or angles. Most of these plats used the theoretical distances of the section and true north bearings. The deeds used were a combination of warranty deeds and Highway use deeds. Like today

there are times when the road cuts a corner or leaves a severed piece of a landowner's property on the other side of the road. When requested by a landowner the state would add the severed piece to the highway deed as the "Cut Off" in the quarter section. Unknown by me and maybe others is that someone realized the law about right of way in 1939 did not include the purchase of land, but "right of way" only. So in 1961 the legislature passed another law (31-19-42 and 31-19-43) that allowed the DOT to purchase land as needed with respect to road and the lands that were severed by the highway. The lands that had been purchased as remnant cut offs prior to 1961 could not be considered the departments properties even though they show on a deed of record. It seems that case law points to the fact that the words "highway right of way" means the corridor on which the road is built and not those properties shown or described as remnant cut offs prior to 1961 (31-1-1). The Counties and Municipalities were by law authorized to purchase remnants commonly called "uneconomic" in 1983 (31-19-41.1), but not fee simple right of way.

This is not the end of understanding right of way ownership. The DOT was taken to court over a right of way disagreement and the ownership type the department felt it held with the 1939 law. In a 1963 decision of the Supreme Court the DOT learned the meaning of the 1939 law. What came out of that legal battle was that the state did not have any more ownership than a perpetual highway easement and the landowner still held the fee simple rights to the land with the present 1939 law in place. South Dakota Legislature passed another law finally in 1986 that the DOT could buy right of way in fee interest (31-19-42). This law withheld this right from the cities and counties. One exclusion to this new law was that if a right of way was taken by eminent domain then the state could only have that right of way as a highway use or perpetual easement.

Adverse possession applies to the needs of a highway. If the public agency has had an established road in a location for twenty years then the land used to support the road corridor is established as 33 feet each side of the centerline of the road unless more is shown to be needed. This may include backslopes, inslopes, culverts and areas between the fences (SDCL 31-3-1). Again this right of way assumed by a public agency is presumed to be a perpetual highway easement.

In 2010 – House Bill 1214 changed SDCL 31-19-42 allowing the cities and counties to secure right of ways as fee interest. Like the state they can purchase right of way in which ever means is needed or wanted (easement or fee). Also law indicates that a dedicated street, alley, or road is owned as fee simple by the public.

*(continued on Page 10)*





# It Pays to Belong

## How NSPS benefits members/ the profession:

### Advocacy Program

- Political Action Committee (PAC)
- US Congress
- Federal Agencies
- Assistance on state specific matters (if requested)
- Other geospatial organizations
  - International Federation of Surveyors (FIG)
  - Coalition of Geospatial Organizations (COGO)

### Education

- ABET-Lead Society for surveying/geomatics program evaluation for accreditation
- Scholarship Program – 15 annual awards

### Licensing/Standards

- NCEES – Participating Organizations Liaisons Council (POLC)
- ALTA/ACSM Land Title Survey Requirements
- NSPS Model Standards

### Outreach Opportunities

- Trig-Star
- Boys Scouts Surveying Merit Badge
- National Surveyors Week

### Certification Programs

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# PICK-SLOAN HISTORY

Between 1932 and 1957, U.S. Army Corps of Engineers Omaha District built six main stem dams and many smaller dams along Missouri River tributaries. These, along with a system of federal and private levees, provide flood risk reduction for urban and agricultural property.

In 1943 a spring thaw caused eight of the Missouri's tributaries to spill over the banks. The main stem itself flooded between Pierre, South Dakota and Rulo, Nebraska. A total of 700, 000 acres were submerged with damages reaching almost \$8 million.

Later that year, two separate downpours inundated 540,000 and ½ million acres. The estimated damages amounted to \$32 million. The floods interrupted wartime training, production, and ruined crops needed by American allies overseas. The combined torrents, known as the "Flood of '43" had a long-term impact on the Missouri River basin. The flood became the catalyst in markedly changing the mission and program of the Civil Works program within the Omaha District.

Colonel Lewis A. Pick's concern as Missouri River Division Engineer focused on flooding. Pick had served as the New Orleans District Engineer just after the record-breaking Mississippi River floods of 1927 and had served as the engineer assistant to Secretary of Commerce Herbert Hoover on the Relief Commission to the area.

Pick's experience with the lower Mississippi River garnered credibility toward his 13-page proposal that addressed managing the Missouri River. Previous river developments in the valley had been oriented toward specific projects rather than a broad program. Pick's plan shifted the emphasis from a single to multiple-purpose concept. It envisioned a vastly expanded federal water policy in the basin.

Pick recommended that the USACE construct multiple-purpose dams in the Dakotas. These dams would store flood-producing water and use it to provide hydroelectric power, wildlife and recreation facilities, a navigable channel and irrigation, plus water for domestic and sanitary needs. He expected other benefits as well, including protecting lives and property, and stabilizing and encouraging economic development.

His plan proposed a progressive development. Pick concluded that it would not be feasible to construct all the multiple-purpose units simultaneously. He recommended an orderly, four-phase approach as circumstances and funds permitted.

Also focused on taming the Missouri was William G. Sloan, assistant direction of the Region 6 office of the

Bureau of Reclamation in Billings, Montana. After the passage of the 1939 Reclamation Act, Sloan was assigned to prepare a basin-wide water resources development plan in order to bring the greatest good to the greatest number of people. The Bureau's report assumed that farming would remain the primary basis of the basin's economy.

## The USACE and Bureau Join Forces:

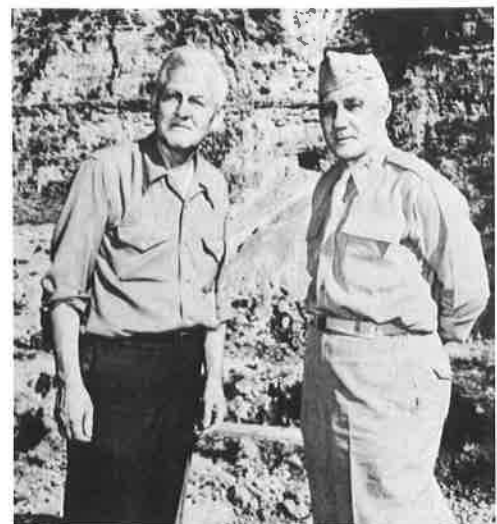
The Pick plan, with its emphasis on flood control and navigation, drew its strength from lower basin interests and their advocates in Congress. Support for Sloan's plan for irrigation and hydroelectricity came from upriver and had congressional backing.

Both of the original plans proposed a series of big dams and reservoirs on the main stem above Sioux City. Both would develop hydropower, where feasible, after meeting primary demands for irrigation or navigation and flood control. The two agencies made major compromises on proposed main stem dams between Fort Peck and Sioux City. They agreed on five in the Dakotas, which would impound 72 percent of the new water storage in the entire basin. The USACE and the Bureau settled additional differences in the original proposal, bringing together both groups through the Pick-Sloan Plan.

On December 22, 1944, President Roosevelt approved the Flood control Act, authorizing the Pick-Sloan Plan. The legislation provided the framework for the development of water resources on the Missouri River and the basis for Omaha District major undertakings on the main stem in the years to come with eight authorized purposes: flood control, navigation, fish and wildlife, irrigation, hydropower generation, recreation, water supply and water quality.

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Cooperative Connections, March 2017



William G. Sloan, Assistant Director, Region 6, Bureau of Reclamation, Billings, Montana, and Colonel Lewis A. Pick, Missouri River Division Engineer, coauthors of the Pick-Sloan Plan



May 8, 2017

SDSPLS  
NSPS 2017 Spring Report

I had the privilege to attend the NSPS Spring Business Meeting in Silver Spring, Maryland in March. What this consisted of were Committee meetings, Lobby Day with the State Representatives and also the Board of Directors meeting. Most of my time at this event was spent helping out with the Workforce Development Committee and being part of the Great Lakes Directors Council meeting, including attending the Board of Directors Meeting.

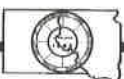
The Workforce Development Committee is new to NSPS. Since the average age of a surveyor is 58, it is a priority that this need is addressed. Our main goal for this group was to nominate a Chairperson and figure out what our goal for the committee is. Once that was accomplished we derived ideas on what we would like to focus on. Below are a few of the items discussed:

1. Implement programs for High School Teachers to learn about surveying teach a very basic course on the subject.
2. Have your State Society put a booth at the Annual Conference for Guidance Counselors as they are the ones that are routing the high school students in certain directions.
3. Possibly have NSPS provide a Geo-fence solution to internet searches that populates information about Land Surveying.
4. Find a way to have High School Placement tests show Land Surveying as a career option instead of just Civil Engineering.
5. Have States implement the CST program more in the Private Companies. This program can be very beneficial in providing a career ladder for technicians. Also, it can really provide employers with a way to evaluate applicants and an opportunity to promote the quality of their technical staff. With our State only having one CST in 2016 I think this is something that should definitely be looked into. (<http://www.learnrst.com/>)
6. Possibly have each State buy or build an Augmented Sandbox to use for Career Fairs within the State. The cost to build one is approximately \$5,000. To see what this is, please Google "Augmented Sandbox". A lot of States have had a ton of interest by having this at a booth. (<https://www.youtube.com/watch?v=CE1B7tdGCw0>)
7. A good website to search and view about what we could do within our State to promote surveying is located at ([www.becomeatexaslandssurveyor.com](http://www.becomeatexaslandssurveyor.com)).

Within this committee, we are also in the process of forming an online Survey Monkey to discuss items related to Workforce Development from which we can discuss and looks for ways of improvement within the National and State level.

Other items that were discussed during the Board of Directors meeting were:

1. NSPS is putting in a bid to host the 2022 FIG Conference.
2. NSPS implemented that Land Surveying is put in every Infrastructure Bill.
3. Possibility of having a UAS Certification within the NSPS to hopefully help regulate some of the applications that are being used right now.





4. The BLM continues to move forward with the implementation of the DPPS program of establishing Public Land boundaries within the State of Alaska. NGS has led a movement to disclose the flaws within the program with NSPS support. The NSPS Government Affairs Committee without delay will draft a position paper stating that NSPS opposition to the BLM DPPS method of Public Land Surveys in Alaska and elsewhere.

I could go on and on with this but above are just a few of the key items discussed during these meetings. Please take the time to browse the NSPS website. There is a lot of valuable information with it. To have an up-to-date idea of what is going on Nationally, please read the NSPS "News & Views". This is a great read and you can have them email you individually on all updates.

Respectfully Submitted,



Beau Koopal  
NSPS Director for South Dakota

## HAPPY RETIREMENT FRED!

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*(Still Making Surveying Great – continued from pg 4)*

Along the way there have been a number of other highway laws that have been created for utility companies that elect to be in the right of way. One allows the utility to stay in place even if the road moves to a new location without getting an easement or moving (31-19-1.2).

This brings me to an end for today.

There are facts in life that are true. Singer Roger Miller recorded for our enjoyment in 1965 “ You can’t roller skate in a buffalo herd” I am not going to try to prove him wrong and I have also read the lyrics on the internet so this must be a true fact.

2017 SDSPLS President Fred Leetch

**“The evening news is where they begin with ‘Good Evening’, then proceed to tell you why it isn’t.”**

**- Farmer’s Almanac -**

## **Congratulations To the 2017 Trig-Star Contest Winners!**

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# Investing in the Future of the Profession

## ADAPT, BUT REMEMBER

By: Dru Smith, Ph.D.

Friends and colleagues, I am truly honored to have been chosen to give the keynote speech at your conference today, and I thank you sincerely for the invitation. The purpose of a keynote speech, I am told, is to set the tone for a meeting, so let me see if I can do that. The theme of this year's meeting is "Investing in the Future of the Profession", which is timely since the future of surveying is frequently on my mind these days. If I were to add my own approach to that, it would have to be "Adapt, but remember." I hope you'll see what I mean before we're done.

When considering the future of surveying, I appear to be in good company. As I prepared for this speech, I skimmed through some back issues of *American Surveyor*, *POB*, *Professional Surveyor*, *xyHt*, *Coordinates* and a few other appropriate magazines. That was an eye opening exercise, as even a cursory glance at them regularly turned up articles and op-eds concerned with the future of surveying, going back almost 20 years. Topics such as the rising median age of surveyors, the rapid changes in technology and the lack of understanding by the public as to what surveyors even do all have caused surveyors angst in the last few decades. Over and over, the question is raised "What does the future hold for the surveying profession?"

It would be egotistical for me to stand up here and proclaim any kind of answer to that question. But as my job at the National Geodetic Survey is to not only envision the future, but also try to make it happen, I am hoping that I can at least add some reasonable thoughts to the conversation. So let me begin by talking about one particular example ...

Consider the following companies: JVC. Orion. Panasonic. RCA. Sanyo. Sony. Zenith. They all have one thing in common. They all produce one particular type of technological device: the glorious VHS player!

As you may be aware, there's not a lot of call for VHS players these days, and so ... some of these companies have gone out of business, or been bought out by other companies. Of the seven big producers of VHS players, only Sony and Panasonic remain as independent companies.

So, what did these remaining guys do right, that everyone else did wrong? Well, I'm no businessman, but I can tell you that these companies did something

that I hope we all are doing: They adapted, while remembering what their strengths are. Sony and Panasonic remembered that they are experts in electronics. But they adapted to a changing climate by getting out of the VHS business and getting into the business of DVD players, TVs, game systems and other electronics which people wanted. They did their same job of providing quality electronic entertainment products, but in entirely new ways than VHS.

So, then, if you'll allow me a seemingly ridiculous question: What do surveyors do?

Well, when I was at The Ohio State University, taking classes toward my bachelor's degree in Land Surveying, I took many classes focused on how to use certain surveying instruments. But each one of them could arguably have been called "How to Measure things." So, those who don't know much about surveying might hear that and say "Surveyors measure things"? Is that all? Measuring may be critical to Surveying, but it is not, by itself, surveying's purpose. Saying that "Surveyors measure things" is a statement that lacks nuance. It lacks distinction; and it is that distinction which properly frames the purpose of the professional surveyor.

But, and here's the real challenge, what does the general public think surveyors do? Well, I think there's two sides to that question. On the one hand, there are adults who need to hire a surveyor but may not even realize that they have this need. Or perhaps they are told they need a survey done and are wondering why. On the other hand, there are those young people who we would like to see become future surveyors, but perhaps they have never heard of the profession or have some mistaken ideas about it. Bear with me as we consider ... High School Students.

If someone is going to become a surveyor, they will probably do so at a fairly young age. So what do high school students think surveyors do? Let me tell you what I know.

Every year, I go to my local high school for career day. I'm surrounded by doctors, lab technicians, accountants, artists, policemen, CIA analysts ... in fact a really wide variety of jobs. I set up a total station on a tripod, put a few reflectors around the room, and try to teach 10<sup>th</sup> graders about surveying. Now, the total station is key, because these kids want to push buttons. They want to play with the tech. But what first draws them in is that big yellow and orange tripod.

"You're the guys that stand on the side of the road, looking through those weird telescope thingies", I hear.

"Yes, indeed" I will answer. "Do you know what we're doing with it?"

(Continued on Page 12)



**(Adapt, But Remember – continued from Page 11)**

“It’s for construction” they’ll often say, but not really knowing how our job relates to construction. If I’m lucky, 1 student in the entire day will say “You’re measuring things”.

Yes, we measure things. But that, it seems, is the outer limit of our profession’s perception to most of these prospective surveyors. And so they remain that: prospective surveyors. I do my best, in five minutes, to explain the distinction between measuring and surveying.

But a growing issue is this - they don’t want to set up a tripod and measure. They want to see me do a laser scan of the room. They want to see me fly a lidar-equipped hover drone and build a digital topographic map of their lunchroom. And they want to control all that tech from their smartphone.

And so, my observation of the future of surveying, in a nutshell, has to be “adapt, but remember”. Remember that surveyors do more than measure.

Remember that any civilian with a tape measure can measure something. But surveyors ... surveyors understand how to measure, whether to measure, who has already measured, what the measurement means, and how good that measurement is. Sure you’re trained in geometry and statistics, but also in law and history and all of the other things which come with the surveying profession. You are experts in a world that is growing increasingly full of, as Dave Doyle would call them “junior geodesists”.

We live in the smartphone world now. The world of instant access to information, taken predominantly OUT of context.

With about 5 seconds of button pushing, I can have my smart phone tell me my latitude and longitude (to about 10 meters). But it will also tell me the address I’m standing at. It will show me a satellite image with my location on it.

So why do I need a surveyor if I can get all of this out of my smartphone? Because of what a surveyor can tell me that a smartphone can’t.

- ñ That smartphone won’t tell me what datum the data are on.
- ñ It won’t tell me how well it is estimating those coordinates.
- ñ It won’t tell me if the address it’s feeding me is correct or not.
- ñ But what it will do is provide enough information for people to feel like they are an expert when they are not.

This isn’t just a problem with positioning technology. Consider the following example. A member of Congress actually said to Jane Lubchenco, the head of NOAA: “I don’t need your weather satellites ... I have the weather channel”.

This is the world of the future. It’s here now. It is full of people with half-answers and half-understandings and some of them are making billion dollar decisions based on that ignorance.

You are experts in providing facts in a world that is increasingly forgetting that it needs such experts. In a word, you are fact finders in a world full of, as Stephen Colbert calls it, “truthiness”.

Alright, so by now it seems that I’m way off topic. What can this have to do with the future of the profession? Well, mostly it serves my point about remembering. Remember that you are providers of facts and remember that people need those facts, even when they forget.

We all must adapt to a world that seems increasingly hostile to facts and science. As surveyors, you are providers of accuracy and excellence. You know why we can’t let people stake out a property corner using their iPhone coordinates. Yet I hope you also know how useful an iPhone can be when seeking local geodetic control. What I’m saying is: adapt to the good parts, discard the bad parts, and remember what you are an expert at.

This is, in fact, precisely what NGS is doing with our recent NSRS Modernization efforts.

Truth be told, NGS has been adapting and evolving along with the surveying community for decades. When Bilby Towers were the height of technology, we used them. When Doppler, EDMs and GPS came along, Bilby Towers were mothballed. When geodetic leveling was the only tool in our arsenal to determine orthometric height differences, we used it to level across the entire continent, coast to coast, 60 meters at a time, double run.

But the times, they are a-changing.

Take, for example, the 1998 Report to Congress on Height Modernization. A lot of research went into that report, and some very important findings were listed. Among those findings was this one: “America needs a reliable and efficient means to determine absolute elevations, relative only to the earth’s center”. The means of accomplishing that were 55,000 new benchmarks, at 10 km spacing.

But since 1998, so many things have changed. We’ve identified over 50 cm of bias in NAVD 88. We’ve identified a 1 meter tilt in NAVD 88. GPS has gotten faster and more accurate. Airborne gravimetry has



matured quickly, bringing geoid accuracy along for the ride. Meanwhile, line of sight leveling looks about the same as it did in 1998.

When you compare the speed and accuracy of getting an absolute height out of GPS and a geoid model ...

When you consider that a published height on a passive control mark begins to get stale the moment you walk away from it ...

Basically this all points to the inadequacy of relying upon a leveling-based vertical datum for determining absolute heights on continental scales. And so, NGS remembers the importance of the vertical datum, but is adapting our plan. In the future, NAVD 88 will be replaced, and the source of your orthometric heights will be your GNSS receiver.

But let's not think NAVD 88 alone has issues. The NAD 83 reference frames – all three of them – have their own problems. First of all, the center of the frames are over 2 meters off from the center of mass about which all GNSS satellites orbit.

If you think that's no big deal ... that it isn't worth the trouble of replacing NAD 83, I present to you evidence that a non-geocentric national reference frame will no longer serve your purposes. Trimble RTX, TOPCON TopNET Global, IGS Real Time Service. These are just three examples of high accuracy, publicly available geocentric positioning services. One of them, the Trimble RTX, is designed to work right off of your smartphone. Just plug in the antenna, initialize and start working. How long do you think it'll be before non-surveyors are getting geocentric centimeters out of their smartphone? It's just around the corner.

And how long do you think it will take them to begin noticing a 2 meter horizontal mismatch between their "centimeter-accurate smartphone" and the official horizontal datum of the NSRS?

NGS remembers that geodetic control must be more accurate than any survey or map built upon it.

And we remember it is our job to provide geodetic control to the nation.

So we are adapting, and that means replacing NAD 83 with a system that is geocentrically aligned to the global standard, the ITRF, in 2022. The modernization of the National Spatial Reference System is coming. It is about so many things.

- ñ It is about replacing the three NAD 83 reference frames with four new plate fixed terrestrial reference frames

- ñ It is about replacing every source of heights, gravity, geoid undulations or deflections of the vertical with one self-consistent geopotential datum
- ñ It is about making your lives and our lives easier by making OPUS-Projects a do-everything tool, capable of processing GPS, Leveling and more
- ñ It is about providing time-dependencies as a service, so you can see whether a point is subsiding or not, based on your re-surveys.
- ñ Or showing you how fast the tectonic plates is rotating, and removing that rotation so you can see whether or not your point is actually stable, relative to the plats.

In short, NSRS modernization is about more than replacing the datums. It is about all of the improvements NGS can make to continue to remember our jobs, while adapting to the fast pace of technology.

The future can be scary, but to stop adapting to it is to quickly become irrelevant. It's why CORS will rule the NSRS in the future. It's why we'll give you not only your latitude and longitude from OPUS, but also your orthometric height and your acceleration of gravity. It's why we'll partner with RTN operators so that the NSRS will be available in seconds, not just hours.

The National Geodetic Survey continues to serve the nation by providing world class geodetic control in the form of the National Spatial Reference System. It's just that we're adapting how we do it, while remembering our strengths and our core purpose.

NGS is headed into the future. I hope to see you all there.

***This article is taken from the Keynote address given by Dr. Smith at the 2017 Surveyor's Conference. PSLS is grateful to Dru for taking the time to attend the conference and share his wisdom.***

Dr. Dru Smith was Chief Geodesist of NOAA's National Geodetic Survey from 2005 until 2015, and now serves as the NSRS Modernization Manager, responsible for overseeing the replacement of NAD 83 and NAVD 88. He first entered NGS in 1995 after receiving his Ph.D. in geodetic science from The Ohio State University. He has published over 40 papers on research topics ranging from geodetic surveying to ionosphere determination to geoid modeling.

He is a member of the American Geophysical Union, the International Association of Geodesy and is a Fellow of the American Congress on Surveying and Mapping (now the National Society of Professional Surveyors) and has previously served on the Board of Directors for the American Association for Geodetic Surveying. He has received the Bronze, Silver and gold medals from the Department of Commerce for outstanding federal service.

As seen in The Pennsylvania Surveyor, Winter 2017

# THANK YOU NOTES

## FROM SDSPLS SCHOLARSHIP RECIPIENTS

SDSPLS BOARD

AS ONE OF THE 2017 SCHOLARSHIP AWARD WINNERS I WOULD LIKE TO SAY THANK YOU AND WHAT AN HONOR IT WAS TO BE SELECTED. MY EXPERIENCE AT THE CONVENTION WAS SO VALUABLE AND I LEARNED SO MUCH FROM NOT ONLY THE SPEAKERS, BUT THE OTHER PEOPLE I TALKED TO WITHIN THE PROFESSION AS WELL. IT WAS TRULY AN HONOR AND A PLEASURE TO SPEAK WITH SO MANY PEOPLE FROM ACROSS THE STATE OF SOUTH DAKOTA. A SPECIAL THANK YOU TO JANELLE FOR SETTING EVERYTHING UP FOR US SCHOLARSHIP WINNERS AND MAKING SURE WE WERE TAKEN CARE OF. WITHOUT YOUR HARD WORK THE CONVENTION WOULD NOT BE WHAT IT IS TODAY. A HUGE THANK YOU ONCE AGAIN AND I LOOK FORWARD TO CONTINUING TO ATTEND THE ANNUAL CONVENTION.

SINCERELY,

*John Haight*  
2017 SCHOLARSHIP RECIPIENT

TO SDSPLS,

I WOULD LIKE TO EXPRESS MY GRATITUDE FOR CHOOSING ME AS ONE OF THE 2017 SCHOLARSHIP RECIPIENT'S. THE MONEY I RECEIVED IN JANUARY GREATLY HELPED WITH THE SEMESTER'S COST OF TUITION. I ALSO, WOULD LIKE TO THANK YOU FOR THE HOSPITALITY AND WONDERFUL EXPERIENCE OF ATTENDING THE SDSPLS ANNUAL CONVENTION. IT WAS A GREAT HONOR TO RECEIVE SUCH AN AWARD FROM AN OUTSTANDING ORGANIZATION.

THANKS AGAIN

MATTHEW SPURER

*Matthew Spurer*





SDSPLS,

THANK YOU FOR SELECTING ME AS THE RECIPIENT OF THE R. TURNER SCHOLARSHIP, IT IS TRULY AN HONOR TO RECEIVE THIS SCHOLARSHIP. THE AVAILABILITY OF SCHOLARSHIPS, LIKE THIS ONE, SPEAKS VOLUMES ABOUT THE SOUTH DAKOTA SOCIETY OF PROFESSIONAL LAND SURVEYORS DEDICATION AND COMMITMENT TO THE FUTURE OF THIS PROFESSION. MY LONG TERM GOAL HAS ALWAYS BEEN TO BECOME A PROFESSIONAL LAND SURVEYOR, AND THIS SCHOLARSHIP WILL HELP ME TREMENDOUSLY OVER THE NEXT TWO YEARS WHILE I CONTINUE MY EDUCATION.

THANK YOU,  
AARON BOOCK

To SDSPLS,

AS ONE OF THE 2017 SCHOLARSHIP WINNERS, I WOULD LIKE TO TAKE THE TIME TO THANK YOU FOR THIS AWARD. THIS AWARD HELPED WITH THE SEMESTER'S COSTS AND I GREATLY APPRECIATE IT I WOULD ALSO LIKE TO THANK YOU FOR THE OPPORTUNITY TO ATTEND THE CONVENTION THIS YEAR. IT WAS A GREAT EXPERIENCE AND I LOOK FORWARD TO ATTENDING IN THE FUTURE.

THANK YOU AGAIN,  
LANE WARZECHA  
*Lane Warzecha*

SDSPLS BOARD

I WOULD LIKE TO THANK THE BOARD FOR THE SCHOLARSHIP AWARD I RECEIVED IN JANUARY AT THE CONVENTION. THE SCHOLARSHIP HAS BEEN EXTREMELY HELPFUL IN SUPPLEMENTING MY FUNDS FOR TUITION, BOOKS AND FEES. I WOULD ALSO LIKE TO THANK YOU FOR THE WONDERFUL EXPERIENCE I HAD AT THE SDSPLS CONVENTION.

THANKS AGAIN,

BRIAN CARTER

# ALTA/NSPS Surveys

By: Paul Burn, PLS

A few musings about ALTA/NSPS surveys:

As many of you are aware, the latest Standards for ALTA/NSPS survey went into effect February 23, 2016. The standards are updated and revised every five years or so, and the new standards supersede all previously issued standards. For reference, the current requirements, including Table A Options, can be found online at <http://www.nspis.us.com/news/246928/2016-ALTANSPPS-Standards.htm>. I will be referring to some specific portions in this writing.

First, these surveys can be the most rewarding of maps for surveyors, in that they combine boundary, topographic, and easement burdens of a parcel all at the same time. The completeness of their functions has caused some to refer to them as the "Cadillac" of surveys, although that may need to change to "Subaru" or "Toyota" nowadays. Anyway, the reliance on the data included is used for several functions, by many in the legal and financial fields, as well as title people and others. It has been said that the most important reason is that, for a prospective buyer, the title company's insurance coverage will cover many items included in the survey, but will not insure them if the survey is not done. This also leads one to surmise that they may also carry the highest level of liability for the certifying surveyor. Certainly, if a financial institution is lending money on property they may not have even seen, the portrait of the property is of paramount importance to them. Thus, the surveyor must take care in the execution and delivery so that the survey represents detailed facts existing on the site at a time certain.

The ALTA/NSPS is a private survey, existing between the surveyor and his client, and his client's designees. Rarely is an ALTA/NSPS survey recorded, so the boundary location is not automatically a benefit to surveyors following on the site, unless the owner chooses to share that information with them. It is important to note that extensive boundary research must be done by the certifying surveyor, not because the information becomes public like a recorded map, but because a claim against the surveyor that leads to lawsuit will involve a surveyor on the opposing team. If that surveyor produces evidence found in public record that could sway a court against the certifying surveyor, the result could be a loss in court, in insurance, and in the pocket (not to mention severe "egg-on-the-face").

This legal aspect is also evident in the interior of the map. Building placement, with the corresponding perpendiculars to boundary, should be accurate. If you had the site flown, your aerial data usually represents a

roof drip line, often not the building dimension that is often understood to be shown for the use of zoning reviewers or real estate personnel. The nominal square footage of buildings, shown when Options in the 7's are selected, is to building walls, not roof lines. Not only Realtors, but Title Officers as well rely on the correctness of the ALTA/NSPS survey. A similar deficiency sometimes arises when an aerial is used to circumvent the walking of property lines to execute fallings to physical features within five feet. A wall that's six inches wide cannot be accurately determined to be on or off property line unless it is physically located at interval, and reported on the survey..

These are just some notable characteristics of this type of survey. In actuality, the components of a thorough ALTA/NSPS are numerous, which leads to the conclusion that they must then be very prone to disagreement, and possible litigation. If the certifying surveyor does his job with care, he can stand behind the survey confidently, and answer any challenge. A boundary line dispute can be argued from different points of perspective, with the possibility that both sides have solid evidence for their positions. If the certifying surveyor has done quality research and based his/her conclusions on firm evidence, no one will fault the surveyor, even if the court decides for the opposition. But if the surveyor showed a fire hydrant within easement because the aerial located it there, and it is found by simple field recon that it's actual location was a couple feet out of easement, there will be consequences. Yes, this is true of all surveys, but the occurrence is much more prevalent in an ALTA/NSPS, as it is often used to determine these types of data. Are driveways completely on property? Do overhead power lines encroach without easement? Does the neighboring property's roof lie across property line? The aforementioned wall along property line is of particular importance to all parties (buyer, seller, lender, attorney, title ...) because it either shares property line (often the original intent) or exists on one side of that line. More difficult is a wall that begins on one side at one end, and then begins to exist on both properties, even occasionally ending on the other property completely. These are details that are important to all interested parties for a myriad of reasons.

For many of you readers, much of the preceding is not new news, merely a refresher of sorts. So, in the spirit of more interesting reading, let me relay some items that you may not know already, but may find interesting. Those of you that know me are probably aware of my service at NSPS on the ALTA Committee, which has now exceeded a decade. In that time, I have heard most every comment/suggestion written in to the committee, meant to "improve" the Standards. Our committee considers every comment, and most are genuinely constructive. There are, as you might imagine, also some that are not. Probably the most common of those that are not considered are those based on certain



geographic area. Since the Standards are inclusive of all states, local concerns cannot be incorporated into the body of necessities. Often, in these instances, our reply is to take advantage of Table A, Option 21, which is additional inclusions to the survey as agreed to by the client and surveyor. For example, hypothetically, a cranberry bog runoff in Massachusetts, or an access gate to a flood channel in New Mexico, or a movable exterior elevator across property line in Chicago are challenges that may occur only in those or similar areas and must be addressed on their survey, but not itemized in the Standards. Every five years or so, it becomes clear that modifications must be made to the Standards, and those points that have been gleaned over the years from comments sent in are increasingly discussed.

Those that are deemed the most beneficial are then put into usable, concise language and are written into the draft. The committee must consider both the surveyor's point of view and the perspective of the American Land Title Association for new or revised entries. When the summer before implementation of new standards is upon us, a meeting is held with about a half dozen each of Surveyors and title representatives, and every word of the proposed new Standards is reviewed. This writer has been fortunate enough to have participated in this meeting prior to both the 2011 and the 2016 Standards, and found it to be one of the most rewarding of times in my career. The people from title were amazingly aware of what we do and how we do it. They were attorneys and title experts that understood clearly what they need in the surveys, and argue well their points. Fortunately for surveyors, our group also included some bright people who argued well for our interests, and compromises that have been found are rarely detrimental to our work. The issue that sticks out in my recollection the most is the discussion of Table A, Option 6, "Zoning". Title people stated that they rely on the surveyor to determine setback lines and graphically depict them, as they don't feel that they're qualified to make judgment on their location, especially in more complex scenarios. When the discussion reached that point, we surveyors knew we were going to prevail, because our argument was on the same basis. Unless a qualified third party (government, or private specialist) can make those determinations and provide them to us, we are no more qualified than the title officer to determine what is a "front, rear, or side" of any property. Hence, you see the current Option 6 as a result of this discussion.

The committee is not always right, either. Now, I realize that some of you are saying "here, here" to that statement, but even as a group some decisions have been less than stellar, but always sincere. An example was the inclusion in the 2011 Standards of the Table A Option concerning Wetlands. It became apparent rather quickly after those standards went into effect that we surveyors are no more qualified to define Wetlands that we are at determining zoning setback applications. The

committee developed new language early on for the 2016 standards, and when we discussed at the summer meeting with the ALTA group, they understood and supported what became the current Option #18.

While I can't claim that kind of success in every aspect that we put forth to make the Standards more defining and useful for surveyors (we still have HUD issues, eh?), we certainly try to keep them germane and purposeful for the uses that they are involved in.

One final thought – you may have heard that NSPS is beginning to move forward on an agenda to institute an ALTA/NSPS Certified Surveyor program. While in its early stages, this plan is intended to set up a program of testing and awarding certificates to those P.L.S. candidates that take the course(s) and have the desire to be so named. While any P.L.S. can perform an ALTA/NAPS survey, those that deem it beneficial to be certified will be able to exercise that path. Stay tuned over the next year or two for this to become a reality.

And, one final ALTA/NSPS survey consideration ... when a facility uses stacked parking in portions of its available parking count, how do you count them, and how do you map them? Just not that typical here in the West, but interesting just the same!

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As seen in The Nevada Traverse, Vol. 43, No. 3, 2016

## **DATES TO REMEMBER**

### **West River Chapter Fall Seminar**

Friday – September 29, 2017

Journey Museum

Rapid City, SD

(watch for registration details

on the website and in the August newsletter)

### **2018 SDSPLS Annual Convention**

January 10, 11 & 12, 2018

**(Wednesday, Thursday & Friday)**

Cedar Shore Resort – Chamberlain, SD

For reservations call: 1-888-697-6363



# Are One-Person Surveys Safe?

**By: Joe Breaux, RPLS  
TSPS Safety Committee Chair**

I think it is reasonable to say that most surveyors have heard about the advantages of a one-person survey crew. Some firms do utilize one-person crews. With a robotic total station or with RTK GPS, either a rover in a network or one with a base station, one person can do a tremendous amount of work on most surveys, on many job sites. With today's technology where a survey controller (data collector) is mounted on the prism rod or the GPS rod, one person is controlling and collecting the critical shots. No more "old school" party chief directing the rod person to get this shot and then that one while he or she takes notes.

It's great when technology can eliminate the rod person and cut down the size of a crew. One less employee to call in "sick" on those critical days. Just come up with the dollars, buy and learn the robot or rover and then get the work done. Less dependency on things for which we sometimes have little control over.

Economy? Yes! After the initial purchase of high tech surveying instrument, there is occasional maintenance and re-calibration. But unless one is careless with their treatment of these instruments they are typically durable, very accurate and precise. Dependability? Yes to that too! Buy good quality, name brand surveying instruments and take good care of them and they will last many years and perform well. Trustworthy? It's as good as the person running it, and even better and more capable. A good value that will probably reduce costs and increase production if used properly.

But what about the safety and liability that also go with a one person crew using this modern technology? Yes, there are many issues and considerations associated with a one person survey crew. From the safety perspective, what happens if the one person gets injured while out on the job? An injury such as stepping into a hole and resulting in a sprain or a broken bone. There is also the prospect of being bitten by a snake, which is even worse and could be more life threatening to the one person crew. Without help, a victim of a snake bite just might not be able to get to help or call for help. Keep in mind, too, that in some areas, especially rural areas, that cell phone coverage is either spotty or may not exist. Don't count on your cell phone as your only "life line" to safety.

Let's also look at the operation of taking a shot on a property corner or topo feature. The operator must look at the survey controller/data collector to punch at least a

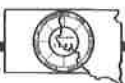
few keys to collect and describe the point and store the shot. I'm sure that some will say "but a shot only takes a few seconds to collect, describe and store a point and I only look away for that short time." To me, the danger is where the person is standing when the shot is taken. In open countryside, on private property and away from traffic, there is little risk except for bugs, plants, varmints, or livestock. That's not considering the potentially armed, irate landowner on whose land you are trespassing because you only needed that one shot so you jumped his fence.

When the shot is near or in a travel lane of a public roadway, the danger factor goes up quickly. And the higher the speed limit and greater the traffic volume, the more the risk. I know of instances where a truck sideswiped a surveyor with the side mirrors causing arm bruises; another where a car jumped a curb and ran over and killed a young surveyor on or behind a city side walk; and where a truck hit and killed a young surveyor working near pavement in the right of way of a US highway. Also, take a look at the number of crash sites at road right of way lines where a white cross is now situated or where the trees, brush and/or fences are visibly damaged. Obviously someone ran off of the road and struck the tree, fence or other objects. Taking any type of shot within a road right of way, for any length of time without a lookout person is risky for the person focusing on the survey controller and on getting the shot. Even searching for a property corner in a right of way line without a lookout is extremely dangerous, too. Any time one is looking down, focusing on locating the property iron or collecting a shot, or with your back to the oncoming traffic, that takes away the lookout capability of the one person crew and greatly increases the potential for injury. At a minimum a two-person crew provides one person to work and one to look out for dangerous conditions.

Another issue with regard to modern technology and a one-person crew is the potential for the instrument to be stolen if not monitored closely. If a total station or a GPS base station is being used, who is minding the instrument while the collector is getting the shots away from the instrument? I've heard stories of a one-person crew working at the instrument's maximum distance on a construction site or a city street and suddenly the signal goes down. When the one-person looked up, a truck was speeding away with the robotic total station.

Is there potentially additional liability if one is directed to go out as a one-person crew and an injury does occur in the field? I don't know the answer to that question, but it sure makes me think twice about directing a worker to go out alone for the very reasons previously mentioned. In my work place we stopped using and being a one-person crew a number of years ago. Safety is first.

I respect the owner of a surveying business who chooses to go out as a one-person survey crew and



utilize modern technology to complete field work for a survey. All of the direction and responsibility for decisions is in the hands of the owner who is the field person and who may also be all other company employees, too. That is a business decision that is made knowing that all responsibility rests on their shoulders. If anything such as an injury happens in the field, there may be problems without solutions when it comes to safety and summoning help. A business decision if you will.

Determining the appropriate field crew size and equipment to send to the field is to minimize risk and create safer working conditions. This is a business decision which is sometimes difficult, but one which is necessary. Time is short for completing the job, staff is spread thin, and someone didn't show up today. What is one to do? The TBPLS has taken the position that they won't regulate the use and application of surveying instruments as it relates to performing surveys. The board leaves that to the decision of the professional land surveyor to choose and apply the proper surveying instrument/technology to obtain the required and desired accuracy, precision and results for measurements for a survey. Taking that approach a bit further, I say that it is up to the professional to also make an appropriate business decision on the use of the appropriate number of persons in a survey crew by giving proper consideration to the job conditions, the intended outcome and to maintain a safe working environment even for the field persons.

A good business decision is one that takes into consideration as many of the variables as it can. One that gives careful consideration to known and perceived variables. A good business decision is not always the cheapest solution, but is one that provides the most reliable results. Safety is a significant variable and there is a cost for safety. On the other hand, the cost for problems that can result from not working in the safest way can be devastating. I just hope that this cost is not the life or well-being of an employee who is a one person survey crew simply because it is the cheap way to go.

So the next time that we think about how we need to get a job done and a one-person crew using modern surveying technology will cut time or cost, think about safety and the potential for injury or death. Also think about the risk of instrument theft. The most important part is to make good decisions when it comes to personal safety and to make decisions that will always allow work to be done in the safest way possible.

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As seen in The Texas Surveyor May 2017

**MOVING?**

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# Land Surveyors Insurance Program

## Land Surveying is no easy task.

It takes a crew of dedicated, hard-working specialists to turn points into boundaries. A faulty instrument, calibration error, a lapse of concentration, or even uncooperative weather can turn the task at hand into a liability nightmare.

We at NSPS have joined forces with Assurance Risk Managers Inc. dba ARM Multi Insurance Services to provide you with a great multi-carrier program that offers competitive rates, be of service attitude with state-of-the-art on-line risk management, and loss control services finally causing one to say, "It Pays to Belong". Our program will tailor a land surveyor's insurance policy to protect you and your crew from those exposures that you face everyday.

Even the most well run business can face disaster. Despite your hard work and successful management, the unexpected can occur. Whether you have a crew or work on your own, focus on residential jobs, commercial work or both, boundary surveys or construction staking, your specific operations come with a set of exposures and challenges that require the experience and expertise of a firm that specializes in protecting the land surveyor for over 20 years. That firm is Assurance Risk Managers dba ARM Multi Insurance Services and the NSPS Insurance Program.

Our program can cover you for injuries and damages caused to your customer or employees; damage to your equipment in the event of a loss; damage or loss to your trucks, trailers and other vehicles; error & omission; and much more.

We also understand the importance of Professional Liability (Errors & Omissions) coverage to secure that contract, defending your work performance, or in proving that you operate your business in compliance with state and local government rules and regulations. As a Design Professional specialist, and through our multi-carrier approach with A- or better insurance companies, we can provide you with the Professional Liability policy you need at affordable pricing.

But, we go even further. Providing land surveying services may be just the beginning of what you may offer and understanding all the services you make available is critical at Assurance Risk Managers and the NSPS Insurance Program. We will review your operation in detail to make sure you have the right coverage and adequate limits for the services you are providing as your ONE STOP SHOPPING experience.

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## Program Features:

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# The Land Surveyor's Guide to the Supreme Court of South Dakota Part 18 – 1924 to 1928

*This article represents the eighteenth in a series of excerpts from a book prepared by South Dakota licensee Brian Portwood. The complete book can be obtained in PDF form by double clicking on the link in the lower left portion of the SDSPLS Homepage. It covers 120 years of historic South Dakota cases, answering fundamental land rights questions of potential interest to land surveyors, which are being presented in chronological order here in Backsights & Foresights.*

## Can the section line right-of-way impact PLSS boundaries? Kreider v Yarosh (1928)

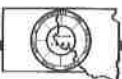
At this point we examine a decision of the Court that effectively closes out the era of unauthorized independent resurveys and their unfortunate ramifications, by conclusively condemning the selective use of original survey evidence that had been routinely practiced by many early retracement surveyors in South Dakota, through the Court's wise application of the public trust doctrine to section lines. This case represents a true PLSS boundary dispute, properly argued and resolved as such, without the intervention of any title issues such as adverse possession, which features the presence of multiple township resurveys, both properly and improperly done, that are in effect in direct competition, although conducted at widely divergent times, creating a situation from which the final retracement surveyor emerges victorious, based on his strong knowledge of the proper priorities to be honored during any resurvey. Before reviewing this gratifying scenario however, a few other relevant cases from this period are worthy of note, as they also provide insight into the Court's view of the integral relationship between section lines and the public right-of-way that has been forever linked to them in the Dakotas. In 1918, in *Kohlmorgan v Roswell Township*, *Kohlmorgan*, a farmer who owned the south half of a certain section, managed to prevent Roswell Township from building a road straight between the two southerly corners of his section, by successfully proving that the GLO quarter corner monument had been set 50 feet south of a straight line between the section corners. He did so by showing that two roads running along the section line, one to the east and one to the west, when extended to intersect at the quarter corner in dispute, pointed to the original corner location maintained by him. Confirming that the existing roads were the best evidence of the corner's original location, the Court agreed with *Kohlmorgan* that the corner at issue, although physically absent, was only obliterated and was not lost, since the two road

alignments served as conclusive pointers to its original location, holding therefore that the section line right-of-way at that point was in fact 50 feet south of the straight line location asserted by the township. Also in 1918, and again in 1920, the Court even more emphatically upheld the proposition that an existing section line roadway is valid and potentially controlling evidence of an original section line location, which prevents any section corner or quarter corner on such a line from being treated as a lost corner, in *Larson v Edison Township*. In that case, a surveyor who had declined to accept an existing section line road as legitimate evidence of an original section corner location was severely criticized by the Court, as having been "absolutely incorrect" in viewing the corner in question as lost and setting it outside the roadway. Then in 1926, in *Lawson v Viola Township*, citing the *Randall* and *Hoekman* cases that we have previously reviewed, the Court yet again ruled that an existing section line roadway is superior to plats, field notes, or any other form of measurement or dimension, as evidence of an original quarter corner and section line location, once again rejecting the suggestion that a township has any authority to straighten a section line road that deflects at a quarter corner. With this strong and highly consistent line of decisions, the roots of which lead back to the seminal 1891 *Wells* case, the Court had amply demonstrated its ongoing commitment to diligently protect the section line right-of-way, in its original location, in every instance.

**1868** - A certain township was surveyed and platted by the GLO in Brule County. Exactly when the actual settlement of this township began is unknown, but it was apparently steadily populated in the typical manner over the ensuing years.

**1886** - A resurvey of this township was performed, during which most, if not all, of the original GLO monuments, or evidence of their original locations, were recovered and re-monumented. By this time, the township was well populated, some section line roads had come into use, and many boundaries had been established through use and improvement of the land. This resurvey was evidently well executed, faithfully perpetuating many existing corner locations, by honoring the testimony of the entrymen, which verified that their established boundaries had been based on original monuments that they had found and relied upon, despite the discovery of numerous measurement discrepancies in the original survey, and there is no indication that any boundary disputes or other disruption of the community resulted from this resurvey.

**1904** - For unknown reasons, another resurvey of the entire township was ordered by the township officials, and this resurvey was performed by Meyers, who was evidently not a resident of the township, and was brought in by the local officials to assess the validity of the original survey and the



established boundaries that had been based upon it. Meyers openly stated that it was his objective to straighten out all of the section lines running through the township, and he pledged that he would do a better job of surveying the township than the earlier surveyors had done, promising that he would provide this township with the best survey that had ever been done in the county, so he proceeded to make measurements and set new corners throughout the township, disregarding all physical and testimonial boundary evidence. Once Meyers had completed this resurvey, the township officials called a meeting and instructed those in attendance to vote to either accept or reject his work, and this vote was in favor of accepting the resurvey, by a margin of about 3 to 1, whereupon the township officials declared that the newly set corners and lines were official and the original survey was thereby abandoned. Not all of the residents of the township accepted this procedure and abided by this outcome, but many of them did, apparently including Kreider, who owned the west half of Section 11. The resurvey had evidently shifted the east line of Section 10 an unspecified distance to the west, and Smith, who was one of the officials who had ordered the resurvey, and who was also the owner of the east half of Section 10, acknowledged the validity of the new line between Sections 10 & 11, so he and Kreider openly accepted that line, and both of them treated it as their mutual boundary henceforward.

**1905 to 1927** - At an unspecified time, presumably during the early part of this period, a road was built on the resurveyed line between Sections 10 & 11, and this roadway eventually became part of a longer highway that continued for several miles to both the north and the south, as additional portions of it were built and opened. Over the ensuing years, fences were also built along various portions of this route by Kreider, Smith and the owners of other land in the sections to the north and to the south, who had chosen to adopt the resurveyed section lines as legitimate. Although this highway was continuous it was not straight and it contained various bends and jogs at property corners, making it's alignment less than fully satisfactory for more modern high speed automotive travel. Therefore, near the end of this time period, yet another resurvey of the township was conducted, by order of Yarosh, who was a county commissioner, with the objective of marking the location of the existing section line right-of-way, for the purpose of constructing a new highway to replace the old roadway running between Sections 10 & 11, and between all of the many other sections lying directly to the north and to the south along the intended route. Mather was assigned to perform this resurvey, and he evidently fully understood his task and executed it very well, successfully locating most of the original GLO corner locations within the township, or acceptable evidence thereof, including

some of the corners that had been remonumented in 1886, while discounting all of the corners that had been set by Meyers. The entire new highway was then built upon the section line alignment that was identified by Mather, which was an unspecified distance to the east of the existing roadway, in accord with the original survey evidence that he had recovered, with the exception of the portion that was to run along the line between Sections 10 & 11, which could not be completed because Kreider refused to allow any construction along the west side of his property, resulting in a one mile gap in the new highway. Kreider was convinced that he owned all of the land east of the section line that had been run by Meyers, so he filed an action seeking to have that line declared to be his west boundary, and to prevent the new highway from being extended through what he believed to be his land, lying east of the Meyers line.

Kreider must have realized that the resurvey executed by Meyers was neither faithful nor equivalent to the original GLO survey, because he did not argue that it should control by virtue of being a perpetuation of any original corners or lines. He argued instead that the Meyers resurvey had been officially authorized and adopted, by both the township officials and many land owners, so he was fully entitled to rely upon it, as he had done in erecting fences along the west side of his property, and the public had acquiesced in his boundaries, as they were defined by that resurvey, so he could not be legally compelled to accept any boundaries other than those marked by Meyers. Yarosh argued that the Mather survey had been properly executed, while the Meyers survey had not, therefore the alignment that had been monumented by Mather controlled, as a valid representation of the original work of the GLO, and the Meyers resurvey could not be treated as controlling, despite the fact that it had been approved by local government officials, because such officers have no power to authorize or approve any resurvey that fails to respect all existing evidence of an original survey, and fails to preserve all established original corner locations. Yarosh further argued that the fact that no one had ever objected to the location of the section line in question, as it had been delineated during the Meyers resurvey, was of no significance, because mere inaction, in the form of acquiescence, by government officials, or by the public at large, could not operate to legally relocate any existing public rights. The trial court agreed that the Mather resurvey was legitimate and the Meyers resurvey was of no value, so Mather's work controlled, and the highway could legally be built within the existing section line right-of-way, on the alignment that had been staked by Mather, without damage to the rights of Kreider and without any payment to him, requiring him to cease his objection and allow the construction work to proceed.

It appears that Kreider's legal team was cognizant of

*(Continued on Page 24)*



the principle that original surveys control, and they knew that for that reason there was no use in directly arguing that the resurvey done by Meyers could effectively supersede or replace the original survey done by the GLO, yet they had a very difficult row to hoe, so they opted to make an effort to cast doubt upon the allegedly original corners by pointing out known measurement discrepancies. Specifically, they called the attention of the Court to the fact that several of the sections that were located in the part of the township around the Kreider property were not precisely 80 chains in length, highlighting Section 13 as 81.98 chains, Section 14 as 78.75 chains, Section 15 as 82.30 chains, Section 16 as 74.08 chains, and Section 17 as 80.88 chains, thereby suggesting to the Court that the work of the GLO had been intolerably sloppy and unacceptable. The Court was quite predictably disinclined to take this view however, dismissing the idea that any such discrepancies could invalidate the original survey, nor did such errors indicate that any monuments had been moved, or incorrectly restored after being obliterated, in the eyes of the Court. To the contrary, the Court knew only too well by this point in time that sections which deviated from their platted dimensions were not the least bit unusual, and quite understandably so, since the GLO surveyors themselves had been fully aware that their monumentation would be absolutely controlling, wherever they set it, and relatively few of them had developed a reputation for being meticulous in their measurement making, nor should they be expected to have achieved great precision, because their principal duty was simply to get the public domain platted for disposal. Since the evidence that Meyers had set out to perform an independent resurvey, and had never even intended to honor any physical evidence of the original survey, was undisputed, there was no chance that his survey could be deemed controlling by the Court, and in view of the many explicit directives that had been handed down by the Court, warning that no such survey could control, it stood either as an indication of ignorance of the law on the part of Meyers, or as an act of deliberate defiance of the law. Assuming Meyers was genuinely ignorant, and really believed that his own survey work was legally superior to that of the GLO, the misunderstanding embodied in this scenario is the idea that precision of measurement is the most vital element of land surveying, so superior measurements can serve to negate the integrity and authenticity of original surveys, and it was this erroneous notion that had precipitated all of the damage to the land rights of parties such as Kreider, which had resulted from the work of Meyers. Mather, on the other hand, obviously understood that original surveys do not control because they were superior in quality, they control because they generated essential land rights, which must be deemed fully reliable in order to have any value at all, and of course it was this wisdom demonstrated in his work, along with his diligence in recovering original survey evidence, that earned Mather the praise of the Court,

and allowed his work to prevail. Clearly realizing that Mather's work was superb, as was the work of the 1886 surveyor, the Court applauded their monument perpetuation efforts, before moving on to quote in part from an Iowa decision, in addressing the second issue that had been posed by Kreider:

*"Mather has succeeded in finding ... mounds and pits which marked the original corners ... the government field notes do not accurately show the distance between the government mounds ... Meyers marked the corners with apparently little regard for government mounds, pits, established roads, or ancient fences ... The trial court found that the said proposed and pretended Meyers survey was not made or established along the line of the original government survey ... the marks adopted and established by the survey of Meyers ... were not the original locations fixed by the United States ... the line as re-established by Mather is upon the line of the original government survey ... The findings ... should not be set aside, unless it be, as appellant contends, that the county has no right to change the boundary line between sections 10 and 11 established by the Meyers survey and acquiesced in, and adopted, by the owners ... no provision ... permits section line highways to be changed by agreement of adjoining land owners ... no one representing the public is authorized to enter into an agreement upon, or to acquiesce in, any particular location ... an official of the county or township is not authorized to establish the line other than in its true location, it follows that the public cannot be bound by such an agreement, if made, or by acquiescence in a line."*

The only chance Kreider had of prevailing in this dispute was to convince the Court that he was an innocent party who had relied in good faith upon a certain survey, so his rights in relation to that survey should be protected, and he or his legal team made the doctrine of acquiescence their tool of choice, with which to try to accomplish that mission. In this context, they were again facing an uphill battle, which was doomed to play out in futility, since as we have noted in reviewing previous cases, the Court by this time had already defined the operation of acquiescence in the arena of land rights as being merely one means of proving adverse possession, and of course the validity of the concept of adverse possession of public rights is universally denied. Kreider did not present an entirely unsympathetic figure however, although its very doubtful that he was truly unaware of the rule of original monument control, and he was therefore not completely innocent in his acceptance of the bogus Meyers resurvey, so the Court endeavored to clarify just why acquiescence could not operate in his favor. In a sense, the Court recognized, Kreider had been victimized by the unauthorized actions of the township officials who had



set up the public vote on the validity of the Meyers resurvey, which had been genuinely misleading to Kreider, causing him to believe that he could rely on the outcome of such a vote. The township officers, the Court observed, had no authority to order an independent resurvey, no authority to approve it, no authority to overturn the GLO survey based on any public vote, no authority whatsoever to take any action that had the effect of relocating the public section line right-of-way, and absolutely no authority to acquiesce to any kind of alteration of established public rights, including any change in the location of such rights. So even if the reliance placed upon the work of Meyers by Kreider or others had been completely innocent, the Court indicated, it could not be upheld, because it stood in blatant contradiction to the public trust doctrine, which holds among other things, that public land rights based on original surveys that were mandated and performed by the federal government for the benefit of the public, such as the section line right-of-way, are not subject to change or damage through unauthorized acquiescence. Concluding that the public rights embodied in the location of the section line right-of-way represented the ultimate controlling factor, making the original section line location necessarily absolute, and always subject to use for its intended purpose, the Court fully upheld the lower court ruling against Kreider, enabling the construction of the new highway to proceed to completion. The Court had thus made it very clear that certain equitable concepts and principles, such as acquiescence, become inapplicable in the presence of public rights, because although private individuals can be bound by their own inaction, public officials cannot, since the binding nature of the acts of government officers is derived solely from their authority, so anything that they lack the authority to do, such as betraying the public trust or any interests of the public, can have no meaning or value, and can be given no legal effect. Likewise in this instance, the agreement between Smith and Kreider, relating to the Meyers section line, even if deemed to be a valid and potentially binding agreement between two private parties, could be treated only as a nullity, because even if they had the authority as land owners to forge an agreement concerning the location of their mutual boundary, neither party to that agreement had any authority to relocate the public section line right-of-way, which in the view of the Court renders every relevant section line location a matter of public interest.

In 1931, the Court was compelled to address another PLSS boundary controversy in which the location of the center of a certain Section 4 was instrumental, in the case of Iverson v Johnson. The evidence presented in that case convinced the Court that the GLO had actually run and marked not only the exterior lines of that particular section, but also the quarter section lines within the section, setting original monuments at quarter mile intervals, described by the Court as "80 rod mounds", in so doing, including one to mark the center quarter corner. Iverson owned the northeast quarter of the section, while Johnson owned

the southeast quarter, and Johnson obtained a survey in 1928 which placed the center quarter corner nearly 200 feet north of the monument that had always been accepted as marking the center of the section by Iverson and by Johnson's predecessor, who were both the original patentees of their respective quarters. So Iverson filed an action, seeking to have Johnson's survey invalidated, on the basis that Johnson's surveyor had erroneously failed to accept the original GLO monuments located inside the section, and the testimony of Johnson's predecessor, regarding the authenticity of the original monuments, proved to be highly persuasive to the Court. Reiterating the position that it had taken in the Coulter case of 1913, previously reviewed herein, the Court agreed with Iverson that the original monuments marking the quarter section lines had been improperly rejected by Johnson's surveyor, since the fact that they were substantially in disagreement with his own quarter section lines was not a valid basis upon which to deem those monuments to be "uncertain, doubtful or lost", fully upholding the lower court's ruling that the original quarter line monumentation controlled. Despite the great emphasis historically placed by the Court upon the value of superior evidence, as opposed to measurements, in the determination of boundary locations, the Court does not approve and adopt testimonial evidence of boundary locations as controlling in every case, and the 1932 case of Christianson v Daneville Township presents an example of a situation in which the Court was unconvinced of the validity of an alleged original section corner monument location. In that case, Christianson owned the southwest quarter of a certain Section 21, and he claimed that he had marked the original southwest corner of his land with an iron stake, at the spot where he had once found what he believed to be remnants of a GLO section corner monument, that had been set in 1866. The location thus marked by Christianson operated to create a jog in a proposed section line road however, so Daneville Township chose to contest his claim, forcing Christianson to file an action to attempt to prevent the township from improving the road along a straight line between known section corners to the north and the south. Noting that 7 witnesses had testified in support of the section corner location asserted by Christianson, but 7 others had testified to a contrary location, the Court reversed a lower court decision in his favor, and declared the corner in question to be genuinely lost, thereby enabling the township to utilize the straight section line right-of-way, running between known section corners to the north and the south. In addition, the Christianson case is noteworthy as the occasion upon which the Court first formally approved the use of proportionate measurement for the restoration of PLSS corners that are truly lost.

**Who owns a platted city street?  
Henle v Bodin (1928)**

*(Continued on Page 26)*

By the time our next case arrived before the Court, a quarter of a century had passed since the Court had set forth its view of the significance of the dedication of platted streets in the context of boundary law, in the 1903 Sweatman case that we have previously reviewed, establishing that the dedication of streets by means of a plat is not presumed to operate as either a restriction on the fee ownership of a grantee of a platted lot, or as a reservation of fee ownership of any street to a grantor of any such platted lots. Dedication, in the perspective taken by the Court, is an important concept that creates essential public rights, but it does not presumptively equate to fee ownership of land, because the purpose of dedication, as a principle supporting vital public interests in land, does not require any transfer of land in fee, it requires only that the land subject to dedication shall be impressed with such rights as are necessary to make and to keep the dedicated area in a state or condition that is useful and beneficial to the public. Under the public trust doctrine, approved and applied by the Court, dedication effectively commits land to public use, typically for a specific purpose and for a period of time governed by the duration of the need for its use, but presumptively dedication has no restrictive or otherwise adverse effect upon the fee ownership of the dedicated area, which passes by conveyance to every grantee of the land to which any relevant portion of the dedicated area is appurtenant. The burden or encumbrance upon land that is represented by dedication thus typically forms an easement, allowing the public to function as the dominant party with respect to the dedicated area, yet providing for the potential removal of that right, at such time as the need for the land to bear such a burden ceases, while leaving the ownership of the underlying land intact, as part of the relevant adjoining estate or estates, and it is this scenario that the case we are about to review very well illustrates. A rather unique situation, demonstrating one limitation upon the concept of dedication, played out in 1917, in the case of Grand Crossing v City of Mobridge. In 1908, Grand Crossing platted a large addition to Mobridge, consisting of many blocks containing typical city lots, but 2 of the platted blocks were labeled "Reserved for Courthouse Square" on the plat, in anticipation of the Walworth County Courthouse being built in that location, yet the dedication statement on the plat made no reference to those 2 blocks, which represented the proposed site of the county seat. The county seat was subsequently situated in Selby, leaving the Mobridge site abandoned in effect, so Grand Crossing wanted to subdivide and sell off the 2 reserved blocks, but this idea was protested by Mobridge, on the basis that Grand Crossing had dedicated the 2 blocks so they belonged to the city. The Court upheld a lower court decision that Grand Crossing had not dedicated the 2 blocks, Mobridge had no rights or interest in the land, and Grand Crossing was free to dispose of the blocks in question as it saw fit, because a reservation for an intended use or purpose that never occurs does not constitute a binding dedication. In so

ruling, the Court explained that "The word reserve ... is not expressive of an intention to make a present grant or donation" instead it indicates an intention to retain, except or withhold land, therefore Grand Crossing escaped the burden of dedication and kept fee ownership of the land, based upon the company's wise decision to label the proposed site as a reservation, which the Court found to be clear notice to all parties reading the plat that no dedication of the site at issue was being made.

**Prior to 1914** - Beresford, in Union County, was platted at an unspecified date, presumably during the 1880s, the plat evidently being typical of that time period, created an unspecified number of blocks containing typical rectangular lots and several city streets. This plat evidently served to successfully dedicate the streets that were thereby created, but it apparently did not specify whether those streets were dedicated in fee or in the form of an easement. One of these platted streets was Willow Street, which was 80 feet in width, and a portion of that street ran along the south side of Block 9. Whether or not the land lying along the south side of Willow Street was also platted is unknown, presumably it was not, since it was never referenced as such. The portion of Willow Street lying south of Block 9 was never opened or used as a street, and at an unspecified date, a 100 foot by 150 foot tract of land, the north side of which adjoined the centerline of this portion of Willow Street was acquired by Lehman. Who originally created this tract, when it was created, and who had owned it prior to Lehman, are all unknown, but by the time Lehman acquired it, this tract was fully fenced and it contained a house that had been occupied for several years. Evidently no one representing Beresford ever made any suggestion that this tract encroached upon Willow Street, and it was never suggested that the fence or house needed to be removed from the platted right-of-way of Willow Street, but neither was this portion of Willow Street ever officially vacated. In 1914, after having occupied and used this property as his residence without any objections for several years, Lehman conveyed it by warranty deed to Henle, describing the north line of the property as being 40 feet south of Block 9, but this deed made no specific reference to the existence of Willow Street.

**1920** - After residing on the subject property for 6 years, apparently without incident, Henle conveyed it to Bodin by warranty deed, again describing its location with reference to Block 9, but giving no direct indication in the description that part of the tract was situated within the right-of-way of a platted street, and under the terms of this deed the property was mortgaged by Bodin to Henle.

**1923** - Whether or not Bodin ever actually occupied or used this property himself is unknown, but he



mortgaged it again at this point, although he had not yet paid off his mortgage to Henle, using the property as security for a loan he obtained at this time from the Beresford State Bank.

**1925** - Bodin somehow discovered, or was informed, of the existence of Willow Street, so he learned at this time that the northerly 40 feet of his property was within the platted right-of-way of Willow Street. There is no indication however, that any plans ever existed to open the street, or that there was ever any suggestion that any of the improvements situated on Bodin's property might need to be relocated.

**1927** - The second Bodin mortgage, created in 1923, which remained unpaid by Bodin, was assigned by the bank to the Beresford Holding Corporation. Since Bodin had also failed to pay off his original mortgage, Henle filed a foreclosure action against him, and against the bank, and the holding company, and the city. Bodin, apparently convinced that his title to the property was of little or no value, due to the presence of Willow Street, and deciding that he therefore no longer wanted the tract, responded by conveying it to the holding company, by warranty deed, in an attempt to satisfy the 1923 mortgage, thereby dropping out of the action and leaving the holding company to engage Henle alone, should the company elect to attempt to fight Henle's claim of ownership of the subject property based on his right to foreclose the 1920 mortgage.

Henle argued that the title to the entirety of the subject property was good, and that it had been legally conveyed to him, and that he had legally conveyed all of it to Bodin, regardless of the fact that a portion of it was located within a platted public street, so he was entitled to full payment for the property in question, under the terms of his conveyance to Bodin, as the holder of the senior mortgage, and in the absence of such payment he had the right to foreclose upon the subject property, thereby retaining ownership of all of it in fee. The Beresford Holding Corporation, acting as the sole defendant, since Bodin and the bank and the city had all removed themselves from the matter, by asserting no interest in the subject property, argued that the title to the subject property had never been good, because Beresford held title in fee to the north 40 feet of the property, by virtue of the dedication of Willow Street as a public street, so Henle had never owned the entirety of the property in fee, and he therefore had failed to fulfill his commitment to convey all of the property in question to Bodin, rendering his foreclosure claim invalid. The trial court decided that Henle had never acquired or owned the north 40 feet of the subject property, which was owned in fee by the City of Beresford, by virtue of the dedication by plat of Willow Street, so his fee ownership was limited to the south 60 feet of the property in question, therefore his mortgage claim was valid only to that extent.

The scenario before the Court in this case was quite typical of those situations that develop from a lack of attention to detail regarding land rights, on the part of local officials who may often have only very minimal knowledge of the law, and who frequently hold various mistaken views pertaining to land rights, having never personally studied that subject or been otherwise educated on such matters. Its likely that the local authorities responsible for the public streets in Beresford at this time simply assumed that all of the platted streets were public, as a result of having been shown on the original plat, regardless of whether or not they had ever been put into any actual use for purposes of travel, so they were unconcerned with any private uses of any portions of those streets that had never been opened, and just assumed that they would remain public forever, whether they were ever used by the public or not. Its also quite possible however, that a decision had been made at some point, by someone in a position of proper authority, that part of Willow Street would never be needed, but there had appeared to be no reason to bother with formally vacating it, or the importance of documenting the vacation or abandonment of streets was not understood, or that was meant to be done but was forgotten. In any event, the Court noted, the street in question had been platted as a properly defined public right-of-way, but it had remained utterly unused for several decades by the time of the trial, and there was absolutely no evidence of any acceptance of the relevant portion of that street by the public, which was essential to perfecting any offer of dedication, in the form of either physical evidence or documentation of any kind, aside from the plat itself. Therefore, the Court indicated, whether or not Beresford actually held any rights at all to the portion of the street in question was a matter of serious doubt, and the fact that the present city officials had decided to claim no rights to that area, choosing instead to drop out of the current litigation, rather than challenge the rights asserted by Henle, was strong evidence, in the eyes of the Court, that the city either believed that it held no rights to the land in question, or it simply no longer cared about that strip at all. Nevertheless, at the trial the litigants had agreed, by means of a stipulation, that Beresford held title to Willow Street, so the fact that Beresford held some form of rights to the strip in question had been freely acknowledged by all parties and had never been expressly denied by anyone, the Court observed, leaving only the nature of whatever rights to the area at issue might be currently held by the city as an open question. Well aware of the common misconception that a right-of-way typically represents a fee boundary, and that all platted streets are owned in fee by the public, the Court deemed this an appropriate opportunity to once again provide a reminder of the presumption at law to the contrary, finding that:

*"it does not appear that any of said grantors, grantees, mortgagors, or mortgagees knew, until*

*(Continued on Page 28)*



*about 1925, that the north 40 feet of the tract in question is the south half of Willow Street ... dedicated as a street when the addition was platted and never having been vacated ... it was stipulated by the parties that .... the north 40 feet ... belonged to the city of Beresford for the purposes of a public street ... the trial court made findings ... that appellants were not, at the time of their conveyance to Bodin, the owners of the north 40 feet ... There is no evidence whatever that, at any time, said premises were used and occupied as a street ... for over 30 years said premises were used for residence and garden purposes ... the word title signifies the means by which the owner of land rightfully holds the possession thereof ... If the city of Beresford claims the fee title to this 40 foot strip ... such claims may be adjudicated ... the trial court could render no judgment determining their rights ... Appellants are asking for a new trial because the trial court held that their mortgage was not a lien on the north 40 feet ... only the south 60 feet ... if appellants were the owners of the south 60 feet of this land, and, by dedication the city of Beresford acquired the right ... to use this north 40 feet for street purposes, appellants would still be the owners of the soil and freehold of the street in front of such lot to the center thereof, incumbered only by the easement in the public for passing and repassing ... conveyance of property fronting on a highway is presumed to carry title to the center thereof unless the fee is expressly reserved ... to limit appellants foreclosure to the south 60 feet was ... unwarranted."*

Harkening back to the powerful Sweatman case of 1903, a decision which itself was based on boundary and ownership principles that had been developed in even earlier cases that we have also reviewed, the Court here again expressed its unswerving support for the conveyance of private land rights to their maximum possible extent, thereby making it clear that grantors can claim to have reserved nothing from their grantees that they failed to remove from the operation of a conveyance by use of the clearest possible terms. Since there had been no evidence presented relating to how the particular tract of land that had been conveyed to Henle had been originally created, the Court was entirely unwilling to agree with the conclusion that had been reached by the trial judge, to the effect that Henle could not possibly own the 40 foot strip in controversy, in fact the trial court had been completely unjustified in drawing any conclusion on that issue, in the view of the Court, once the city had dropped out of the case, since public rights were involved. Furthermore, the Court went on to point out, there was no valid basis upon which to portray Henle as anything other than an innocent grantee, who relied upon his warranty deed from Lehman in good

faith, which he had a perfect right to do, so there could be no justification for setting up any presumptions against the ownership of the entire tract at issue by Henle, and he was fully entitled to the benefit of those legal presumptions that are applicable to any typical grantee. Henle, the Court recognized, had acted somewhat unwisely in agreeing to the stipulation language, which had made reference to Beresford being the owner of Willow Street, and the holder of title to the platted right-of-way of that street, yet the Court was disinclined to hold that agreement against him, and chose to treat it instead as an insignificant technicality, explaining that title to an easement was no less valid than fee title, since the evidence indicated that Henle had entered the stipulation agreement on that basis. Henle was perfectly willing to concede that Beresford held title by dedication to all of Willow Street as platted, because he evidently understood that under the law dedication is always presumed to be made in the form of an easement, rights of that nature being the only rights logically required to put any right-of-way to its intended use, as a public thoroughfare in this instance. Bodin, on the other hand, apparently took fright in the extreme when he learned that a substantial portion of his property sat within a platted public right-of-way, deciding to simply bail out of the situation and abandon the property, all unnecessarily, illustrating the potentially adverse consequences of ignorance of the law pertaining to dedication. Having discerned the presence of no definitive evidence to the contrary, the Court held that the centerline boundary principle was applicable, concluding that the original description of the tract must be presumed to have been written with knowledge of the law, and therefore it had intentionally and correctly encompassed a portion of Willow Street, regardless of whether the plat dedication of that portion of that street, presumably intended only as an easement, was ever legally accepted by the public or not. For that reason, the Court remanded the case back to the lower court, with directions to grant Henle's request for a new trial, in order to give him the opportunity to successfully foreclose upon the entirety of the subject property and maintain complete ownership of it, or to be compensated for the full value of the entire 100 foot by 150 foot tract.

**“The art of being wise  
is the art of  
knowing what to overlook.”**

**- William James -**



The following information is taken from meeting minutes of the  
**South Dakota Board of Technical Professions**

complete meeting minutes can be found at:  
<http://dlr.sd.gov/btp>

**November 18, 2016**

Approve the following examinee for passing the Fundamentals of Surveying (FS) exam:

Eric Joseph Christianson - #S-12129

Approve the following Land Surveyor (LS) applications by comity:

Randy Michael Davis – LS 13118 (OH)  
Dustin Jordan - LS 13119 (ND)

**January 20, 2017**

Approve the following examinee for passing the Principles of Surveying (PS) exam:

Andrew Earl Kangas – LS 10400

Supersede previous motion to approve the examinee and deny the examinee to take the Fundamentals of Surveying (FS) exam:

Alexander Julian Cushman

Approve the following examinee to take the Principles of Surveying (PS) exam:

Lundee Michael Stadler

Approve the following Land Surveyor (LS) individuals by comity:

Shawn Douglas Clarke – LS 13190  
Ivan R. Hernandez – LS 13191  
Terry Lee Rowe – LS 13192

Deny Land Surveyor (LS) individual by comity:

Jon Caspar Collins

**March 17, 2017**

Approve the following examinee passing the Fundamentals of Surveying (FS) exam:

Tyler Steve Kasuske - #S-12194

Approve the following examinees to take the Fundamentals of Surveying (FS) exam:

Matthew Robert Bruzek  
Brian Thomas Carter  
Vitold Chernatinski  
Austin Brent Droll  
Cameron Kurt Facile  
Justin Douglas Fluit  
Jacob Allen Haight  
Danielle Rae Huewe  
Staci J. Lodahl  
Dalton Louis Nelson  
Kole Thomas Nordquist  
Jericho Wendell Poppinga  
Lane Gregory Warzecha

Approve the following examinees to take the Principles of Surveying (PS) exam:

Dustin Curtis Fiebelkorn  
Daniel Kinney Johnson  
Dustin Matthew Ross

Approve the following Land Surveyor (LS) individuals by comity:

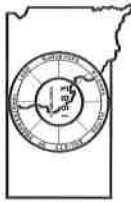
Timothy J. Lamprecht – LS 13261  
Eric Benjamin Lindgren – LS 13262  
Justin G. Ness – LS 13263  
Bradley D. Neumiller – LS 13264  
Michael Allen Stang – LS 13265

Approve a previous LS comity application on second review:

Jon Caspar Collins – LS 13309

**“I try not to spend a day  
without at least a couple of  
good hearty laughs,  
and the rest of it,  
I try to smile as much as I can.”**

**- Steve Harvey –**



# SOUTH DAKOTA SOCIETY OF PROFESSIONAL LAND SURVEYORS

Affiliate of the National Society of Professional Surveyors

## APPLICATION FOR MEMBERSHIP

### Complete the following

**Name:** Last:   
 First:

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**City:**   
**State:**  **Zip:**   
**Phone:**   
**Email:**

### Home: (Required)

### Check one and sign below

Member (In-State w/NSPS):	___ \$160	Technician:	___ \$60	Life Member (In-State w/NSPS):	___ \$65
Member (Out of State):	___ \$125	Associate:	___ \$50	Life Member	___ \$25
LSIT:	___ \$90	*Student:	___ \$25	Sustaining:	___ \$250

*In-State classifications are determined by the home mailing address.*  
 Fees for In-State Members (\$160) include NSPS membership.  
 Fees for Out-of-State Member (\$125) do not include NSPS membership.  
 In-State Life Members have the option of selecting NSPS membership (\$65)

### Member:

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

### LSIT:

Any person who has successfully completed the LSIT examination according to state or provincial statutes.

### Technician:

Any person who has successfully completed any level of the Certified Surveying Technician program as administered by and through the National Society of Professional Surveyors.

### Associate:

a) Pre-Professional: Any person who by their employment is actively engaged in a program leading to a career in the profession of surveying;

b) Subscriber: Any person with an associative interest in Surveying whose qualifications do not meet the requirements of Member, LSIT, or Technician.

### \*Student:

Any person who is a full-time student studying surveying or related fields.

### Sustaining:

Any person or organization, either individuals, partnerships or corporations, who or which are engaged either in the manufacture or distribution of surveying instruments, equipment or supplies, or in the compilation or reproduction of maps, or in the performance of services for land surveyors.

### Life Members:

Any person who has attained 60 years of age and has retired from active practice as a land surveyor and who has paid dues for each of the nine years preceding and also in the year which he or she attained such age or so retired, whichever is later.

### Signature of Applicant

I certify that I qualify for the class of membership I have applied for as outlined below.

\_\_\_\_\_  
 \*Signature of Faculty Member (required for students)

I certify that the applicant is a full-time student. (12hrs or more)

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Institution

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