

# HOOISIER SURVEYOR

Quarterly publication of the Indiana Society of Professional Land Surveyors, Inc.

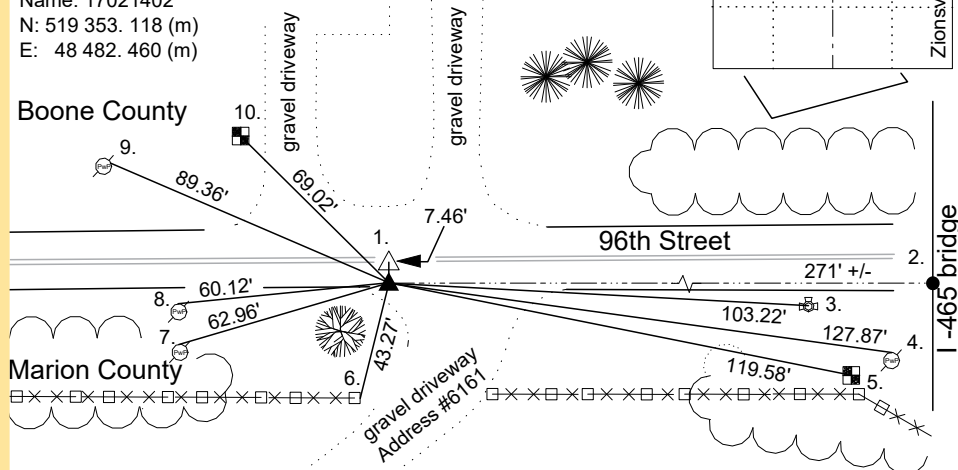
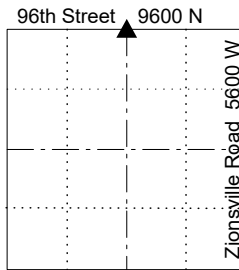
## MARION COUNTY SURVEYOR'S OFFICE

DEBRA S. JENKINS  
MARION COUNTY SURVEYOR

### SECTION CORNER RECORD SEC. 14 TWN. 17<sub>N</sub> RNG. 2<sub>E</sub>

BRYAN F. CATLIN, PS  
TECHNICAL SUPERVISOR

Date: 11/21/2019  
Party Chief: Pangelinan  
Crew: Wilburn, Lindo, Duncan  
Type of Marker: Harrison  
Method of Establishment: County: 4/18/2000  
IN S.P.C. E Zone, NAD 83 (1986)  
Name: 17021402  
N: 519 353. 118 (m)  
E: 48 482. 460 (m)



Original post set in 1821 by Wm. B. Laughlin with witnesses: 12" Beech N 30°W 15 links, 14" (plat, 10" notes) Lynn S 27°E 21 links (Marion County Atlas pg. 4). Kern 1/31/1963 called Bolt set flush in road. Mose 5/1963 called Stone 4" down. Burres 1/23/1964 called Stone 4" down. McLand 7/31/1973 did not specify marker. Miller 4/9/1975 called RR Spike. Wilcoxon 9/21/1981 excavated, a hole 2 1/2' x 2 1/2' was dug 3' deep, probed 2' further, no stone or other marker was found, set RR Spike. Greene 3/11/1988 called RR Spike. Kiste 8/21/1995 excavated RR Spike found at surface, Harrison monument set.

20/2006 called Harrison 2" down. Wilcoxon / Greene 2/2019 found Harrison 4" down, added 2" riser. After the location of the Harrison based on 1965 Highway Plans for line S-M-6 (ISHC Proj. 4 IND I-465-4(111)135, FY 1965, sheet 55) which called for a Stone, James Swift, Boone County Surveyor's Office, 11/20/2019 (Pangelinan ties dated 11/21 /2019)

Agreeing with an April 14, 1963 Weihe survey of #66-657) which called for a Bolt, the Stone is 7.46' from the Harrison previously used, set new Harrison over Stone. The ties from 1973 to November 2019 all appear to have been to an incorrect location.

N: 519 355. 397 (m) E: 48 482. 562 (m)

2.	271' +/-	Due E to I -465 bridge
		N PwP #34-154 8" up
5.	119.58'	Cut "x" top of concrete R/W marker
		E 5"x 5" wooden post 2' up
		PwP no# 30" up
		PwP no# 10" up
9.	89.36'	MAG Nail w/ BLN washer NE PwP #56-765 55" up
10.	69.02'	Cut "x" top of concrete R/W marker

JW

## IN THIS ISSUE

The Case of the Errant Corner

COVID-19 Impact on College Programs

'Reminiscences of an Old Surveyor'

Getting the Most Out of Your Insurance



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## COVER IMAGE

Tie sheets such as this one, based on field work by the Marion County Surveyor's Office, as well as one prepared by the Boone County Surveyor's Office, locate a stone that marks a quarter corner on the boundary between Boone and Marion counties. The stone was found Nov. 20, 2019, by Jim Swift, PS, of the Boone County Surveyor's Office and Norman Hiselman, PS, of Weihe Engineers, Inc. Hiselman describes the search for the stone on pages 9-10.

## FROM THE EDITOR

Deadlines for copy for various planned issues of the Hoosier Surveyor are as follows:

- Winter - February 1
- Spring - May 1
- Summer - September 1
- Fall - November 1

The Hoosier Surveyor is published quarterly by the Indiana Society of Professional Land Surveyors to inform land surveyors and related professions, government officials, educational institutions, libraries, contractors, suppliers and associated businesses and industries about land surveying affairs.

Articles and columns appearing in this publication do not necessarily reflect the viewpoints of ISPLS or the Hoosier Surveyor staff, but are published as a service to its members, the general public and for the betterment of the surveying profession. No responsibility is assumed for errors, misquotes or deletions as to its contents.



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## PRESIDENT'S MESSAGE

By Eric N. Banschbach, PS, ISPLS President

**W**ow, here we are, four months into the year and, honestly, those four months are already a blur. Perhaps the last month and a half has had an influence on that, but that's just a hunch. As I am sure many of you have had to adjust to as well, working "remotely" outside the proverbial "normal" has presented some significant challenges. As our governor has imparted on all of us, the "Hunker Down Hoosiers" executive order, not to mention the use of common sense, in dealing with this pandemic, has had varying effects on each of us.



I continue to pray each day, and am hopeful, that each of you and your loved ones have successfully avoided the virus. I am sure we are all experiencing anxiety with things changing continuously; each day feels like we're experiencing multiple news cycles. Unfortunately, the current and future economic effects on all of us may be unavoidable. Our Board made a conscious effort early on to try to mitigate the potential fallout to our members and the survey industry as a result of the pending shutdown. We drafted and forwarded a letter to the governor explaining the critical importance to the state of keeping our folks working, indicating we are "Essential Critical Infrastructure Workers" performing necessary and critically important responsibilities to our fellow citizens. The intent was to gain a possible exemption to the pending executive order for activities associated with our

industry, or at the very least to give us some flexibility in the ability to keep working, while still following CDC guidelines.

Hearing from some of you throughout this situation, it sounds like many are still out in the field, which is good to hear. As long as we conduct our business in a responsible manner with low health and safety risk to our own staff, as well as our fellow citizens, we should be able to continue to carry out our essential activities. To be sure, we all face a long and challenging list of unknowns. We are both gaining and losing our vision of what our new reality will be.

To say there has been a wrench thrown into the gears of what I was hoping we could accomplish and expand upon this year is certainly an understatement. However, certainly all is not lost, and I do have an optimistic opinion of what we can still accomplish. We may have to adapt and overcome some challenges but I'm confident, with your help, we can do it.

Please don't hesitate to reach out with any questions or if the Board can be helpful or supportive of you in any way. And if I could make a special request: If you know of any creative or innovative changes you have implemented in your businesses that have helped during this period, or just a suggestion, I'm all ears.

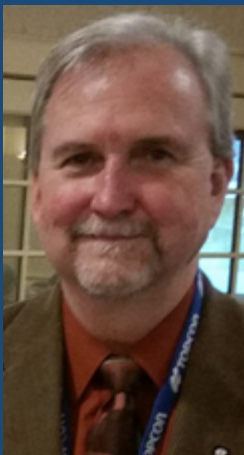
God bless and stay safe out there.

Eric N. Banschbach, PS  
ISPLS President

## 2020-21 NSPS LEADERSHIP

During the April 17, 2020 NSPS Annual General Membership Meeting (held via a virtual meeting platform), NSPS Executive Director Curtis Sumner installed officers for their respective terms.

Treasurer Robert Miller and Secretary Craig Amey will serve the final year of their two-year term.



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## THE LAND OFFICE BUSINESS - MARKS ON TREES

By Jim Swift, PS

It is well known that surveyors of yore made marks on trees. History books tell us that for Native Americans, marks on trees which were made by surveyors proved an early indication that the English settlers pushing into the Ohio River valley were there to stay. They weren't just passing through. They were marking the trees. Claiming and measuring the land.

Federal instructions give us specific detail about how trees were to be marked as the Public Land Survey System was laid out. Pertinent to Indiana, Surveyor General Edward Tiffin made clear in 1815 exactly what marks should be placed on trees.

Per Tiffin's General Instructions for Deputy Surveyors, "All township or sectional lines which you may survey are to be marked in the manner hitherto practiced in the surveys of the United States land, viz: All those trees which your line cuts must have two notches made on each side of the tree where the line cuts; but no spot or blaze is to be made on them, and all or most of the trees on each side of the line, and near it, must be marked with two spots or blazes diagonally or quartering towards the line."

As for witnessing the corners, which were to be marked with posts, Tiffin states, "The places of the posts are to be perpetuated in the following manner, viz: at each post, the course shall be taken and the distances measured to two or more adjacent trees in opposite directions, as nearly as may be, which trees, called bearing trees, shall be blazed on the side next the post and one notch made with an axe on the blaze, and there shall be cut with a marking iron on a bearing tree, or some other tree within and near each corner of a section, the number of the section, and over it the letter T with the number of the township, and above this the letter R with the number of the range."

Got it. Blazes, shallow vertical marks, on the trees facing the line. Notches, deeper horizontal marks, on the trees through which the line passes. And a vertical blaze with single horizontal notch on the bearing trees, along with shallower markings made by marking irons, to identify the corner. Thank you, Mr. Tiffin. That is specific.

What about those marks on the bearing trees? How well did they survive? How long were they visible? Did future surveyors use them to positively identify the tree and provide a reliable reference point from which to find or establish the corner? Surely, the earliest settlers and surveyors could see them and held them as the reliable evidence they were. But what about later surveyors? What about the passage of time and the inevitable growth of the tree over the mark, or the death of the tree itself?



Let's look at my favorite primary resource, the Boone County Indiana Surveyor's Record. I have become quite familiar with this record in the years I have spent hunting for corner stones in Boone County. One feature of the record which presents itself repeatedly — again and again — is the call for a bearing tree in reestablishing corners. Among the hundreds of examples of this type of entry is a series of calls from 1863: "Reest from Oak bearing tree." "Original corner found from stump of red oak bearing tree." "Reest - found stone at corner and marked it. Found roots of one sugar bearing tree."

And many more such calls:

- 1865: "Reest from the trees – Oak green – Walnut cut down. Dug up stake at corner. Rock 14.5.2 + on side, mark on top, brick bat under it."
- 1868: "Reest from beech (green). Set rock 20.11.8 marked +."
- 1870: "Reestablished from one tree. Set a Rock 12.10 by 6 + & four small ones under it."
- 1880: "Reest from sugar (green) and oak stump. Set rock 19.13.9 +."
- 1891: "Reestablished from sugar (green yet)."
- 1901: "Reestablished from witness trees. Found stake of original survey."
- And 1904: "Est. from w. oak witness. Set rock (blue) 4x6x12."

Page after page of the Boone County records call for corners established from bearing trees, or the roots thereof.

Most of these entries only mention the tree, but some of them also call for a mark. It is noted that most of the references to bearing trees date from 40-80 years after the original corner was set and tree marked. Either no longer visible or only apparent as a scar, the mark was found by chopping into the tree, as evidenced by calls such as these:

- 1869: "Reest. from oak. Chopped & found mark."
- 1871: "Reestablished from trees. Boxed ash and found mark. Hickory out."
- 1872: "Reestablished from stump of Oak. Mark found by chopping. Set Rock 9.6.6 +."
- And 1879: "Chopped notch out of B. Oak. ... also found S.W. original stump and rock at corner."

Many entries note that the corner was established from the stump of a bearing tree, some of which indicate that the stump was cut into to prove that it was the true bearing tree. Or perhaps that the tree had fallen, and the mark was found by chopping into the fallen tree.

- 1870: "Reest from both trees. Elm dead cut out the notch. Set a rock 16.10.7 +."
- 1878: "Reest from stump of Walnut (tree cut about 1 yr) found mark."
- 1879: "Found from ash stump which is entire (chopped out notch)."
- 1880: "Tree has fallen but is here and retains mark. Set rock 15.9.9 + on top."
- 1880: "Reestablished from Ash. Found rotten scar. Also measured lines for satisfaction. Set Rock 24x16x7 marked + on top."
- 1899: "Found from stumps of both trees. Mark in one. Burned out of other."
- 1899: "Reestablished from Oak witness. Found scar on stump."

Or perhaps a previous surveyor had already chopped into the tree, as in this entry from 1863: "Reestablished from one original tree, had been previously blocked out, was considerably decayed, but mark still visible. Set two rocks. ..." And this entry from 1881: "Reestablished from N. tree after tracing the lines meeting here to prove that it was the tree (as the tree had been boxed before). Set rock 17,13,9 +."

Sometimes no mark or scar was found, as in an 1881 entry which includes various details of a survey leading up to the comment, "also old stump there yet, but no visible mark, which was right distance, direction & size. Set a rock 22.10.18 marked + on top." And in 1887: "Reestablished from the stump of Elm (plain)."

On occasion, instead of referencing the bearing trees, the surveyor held the trees marking or witnessing the line. 1869: "Traced line by blazes finding the elm sight tree called for." Or 1871: "Reestablished. Rock 15.12.5-1/2. ... Boxed a blazed swamp ash that stood a little E. of cor that represented about 50 years since blazing, agreeing with date of survey."

Clearly, the Boone County Surveyors of the late 1800s knew what they were looking for. They knew how high up on a tree or stump one would expect to find the mark, they had an idea of how deep to chop into the tree, based on the years passed since the mark was made. And they must have known for what mark they were searching. The combination blaze and notch of Tiffin's instructions, we presume? Yes, indeed, evidently so.

In the hundreds of calls for trees or marks on trees, I have found two entries which describe the mark. Only two. But they clearly state what was found. Writing about the east quarter corner of Section 26, Township 20 North, Range 1 West of the Second Principal Meridian, Boone County Surveyor David M. Burns states, in an entry of March 3, 1860, "Reest'd from the original trees. Found blaze&notch in closest Beech and stump of the other." And referencing the north quarter corner of Section 2, Township 17 North, Range 2 West, the same surveyor states, in an entry of July 20, 1865, "Reestablished from stump of oak bearing tree. Found blaze and notch."

Thank you, Mr. Burns. That is specific.

*Jim Swift is a Professional Surveyor who lives in Crawfordsville, Indiana, with his wife, Beth. He has devoted much of the last thirteen years to perpetuating the section corners of Boone County, Indiana. A keen student of history, Jim spends a lot of time searching for evidence of the original survey of the PLSS and thinking about the early surveyors and pioneers of Indiana.*

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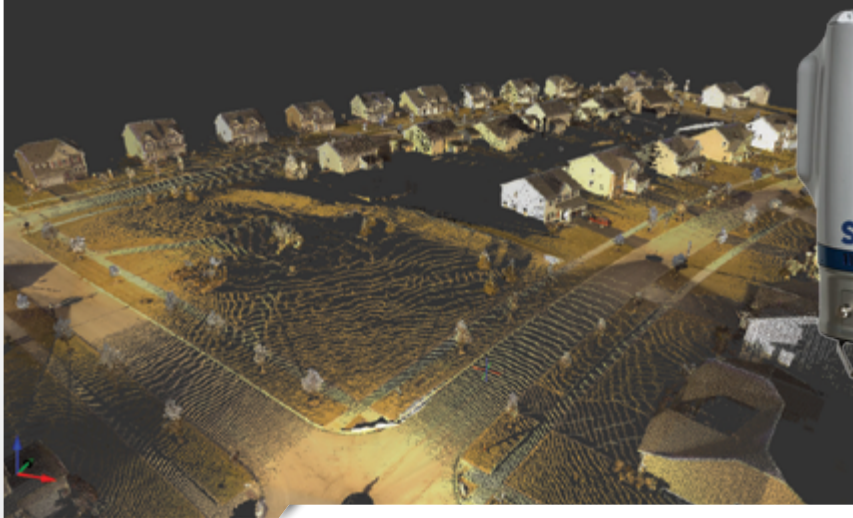


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## KNOWING WHERE TO DRAW THE LINE

By Tammy Davis, *Business People*

Though many people assume land surveying only requires a working knowledge of angles and measurements, it takes a lot more than math and mapping tools to know where to draw the line. It also involves a healthy dose of judgment, particularly when past surveys of the same site may vary from current results. Such judgment, the product of the ability to navigate long-held property rights, changing terrain, technological advances, municipal code and human expectations, is how one surveyor distinguishes himself from another.

Todd Bauer, founder and principal of the civil engineering and land surveying firm ForeSight Consulting, explains, "It's an art and a science. I liken it to law; it's a practice, and you have to work in lots of different types of projects to understand the complexities of boundary law."

Continual learning has been the hallmark of Bauer's career. He got hooked on surveying while he was in college when one of his professors offered him a summer job. As they traveled together between job sites, Bauer's professor would explain what they had done and why. Bauer hungrily soaked up the commentary that went along with his practical experience.

Thirty years later, Bauer has become an expert in his own right. He has taught surveying courses, served as the president of both the local and the state Society of Professional Land Surveyors, and currently serves on the board of directors of the latter. He has even been called on to offer expert testimony in matters of litigation. And he never shies away from a challenge.

"When a project stretches or challenges you or requires extra work," says Bauer, "it becomes a growth opportunity."

Above all, Bauer believes that in this profession of measurements, calculations and analysis, the most important element is actually building relationships with people. "If you're talking to other people, you're not just living in your own little bubble," says Bauer. "You can learn from what others have done."

Whether it's with customers, regulators, inspectors, or colleagues, Bauer stresses the importance of being present, being a resource, and being respectful.



*Todd Bauer, founder and principal of ForeSight Consulting, LLC, and past-president of ISPLS*

"I always work under the assumption that we're all on the same side and trying to get the same thing done," says Bauer. "I take the time to understand each project's requirements so I can perform to them."

Some people, observes Bauer, approach surveying as if simply applying a formula will produce appropriate results. With all the different variables involved, such methodology rarely yields consistently satisfied customers. Professional qualifications and experience – not just having a license – make a difference.

"Find someone who will put the time in to do it right and do a professional job," says Bauer. "I'm always going to give my customers a product I'm willing to stand behind."

*This article was originally published in the [March 2020 issue of "Business People" magazine](#). Reprinted with permission.*



## ISPLS Career Center

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## THE CASE OF THE ERRANT CORNER

By Norman Hiselman, PS

During the last convention, I took several classes earning mandatory CEUs. I like to get those out of the way to be safe in meeting continuing education requirements. There seemed to be a common theme in those classes covering or mentioning the Act of 1805: “Thou shalt not move or correct original monuments” and “following in the footsteps of the original surveyor.” I had just finished working on a troublesome survey that had given me fits, and the things discussed in the sessions could not be more relative to my findings.

In 1821, William B. Laughlin set a post at the north quarter corner of Section 14 / south quarter corner of Section 11, Township 17 North, Range 2 East. The section line later became the line between Boone and Marion counties, and finally 96th Street was constructed partially along this line. The history of the corner goes cold until 1963 when Marion County Surveyor’s Office staff found a stone four inches down. In 1975, a railroad spike was found at the surface of the road near the centerline, then in 1981 the location of the railroad spike was excavated to a depth of three feet and nothing was found. A railroad spike was reset at that position. During the 1970s and 1980s, a residential subdivision and other land divisions on the Boone County side of the line were created, and all was fine in the world. The Marion County side remained farmland with one or two new parcels created. In August 1995, a Harrison cast iron monument was set in the position of the railroad spike.

Fast forward to 2019, when my client engaged Weihe Engineering, Inc. to retrace his boundaries on land he owned in both Boone and Marion counties. I was assigned as project manager for the task at hand.

While working in Boone County, survey crews found rebars, pipes and other deed corner monuments all working well with the Harrison, just a bit of a problem with the southwest corner of Section 11, two monuments four feet apart, east-west; that corner is reserved for another discussion. When we got into Marion County, things got interesting.

Unlike the surveyed parcels on the Boone County side of line, the Marion County side is bounded on the east by Interstate 465. When I reproduced the right of way and other control lines for the highway, the quarter corner stone showed on the plans (circa 1965) plotted about 6.5 feet south of the Harrison, near the south edge of pavement. There were two control lines along 96th Street as shown on the highway plans, “S-M-6” being the quarter section line and “S-M-6 PR” which is close to the physical centerline of the street. Some right of way taking was off the S-M-6 line and other parts off the S-M-6 PR line. Some of the older houses and other structures shown on the plan by station and offset were still there, so I knew that I was within a foot of reproducing the control lines. I also had a Weihe survey

from the early 1960s that used the northeast quarter corner, northeast sixteenth corner and the north quarter corner of Section 14 (all stones) during a survey. When taken into consideration, that placed the stone about 0.8’ further south of the highway plan location. To make things a little more complicated was the fact that the Indianapolis Water Company had installed a 20-inch water main down the south half of 96th Street in 1995. Could this be detrimental in proving my mathematical reconstruction by not finding a stone? I contacted the surveyor’s offices in both Boone and Marion counties to alert them to my findings. Apparently, responsibility for roads and other things along east-west county lines belongs to the county on the north side of line, so I started a dialog with the “Stone Hunter” (a.k.a. Jim Swift) of Boone County.



*A cut made on West 96th Street by Jim Swift, PS, of the Boone County Surveyor’s Office advanced a search by Norman Hiselman, PS, of Weihe Engineers, Inc., for a stone that marked the quarter corner on a line in Township 17 North, Range 2 East between Section 14 in Marion County and Section 11 in Boone County. The stone was found at a point 7.46 feet south of the previously referenced Harrison marker, which is spray-painted pink at the top of the image. (Photo provided by Jim Swift)*



I had my field crew mark where I thought the corner should be according to highway plans and arranged to meet Jim at the site the next morning. When I arrived, Jim had already cut through two layers of asphalt and was laying prone on the road, overhanging the excavation, and removing dirt by the scoopful as if he were an archaeologist on an ancient dig. The north side of his hole came down the south side of the concrete cap and #53 gravel from the water main installation, not looking good for a corner recovery. He came to a layer of pit run and stated that in Boone County, stones were generally found just below the old roadbeds. But trooping on, he hit 53s and other rock and realized the area had been excavated before, dug a little further and hit pit run again, but no stone. He asked where the Weihe survey showed a stone and I said, "About eight-tenths farther south." Jim started scooping out dirt to the south and found a black piece of wood oriented vertically which, when he removed it, I thought that cross sectionally was about the size of a piece of lath. Jim probed the area and then came the gratifying "thunk." Indeed, there was the stone almost four feet down, seven feet south of the existing Harrison.



Resting 31 inches below 96th Street in Marion County is a 7-inch by 7-inch quarter corner stone sought by Norman Hiselman, PS and Jim Swift, PS, at a location agreeing with the findings of a 1963 Weihe Engineers survey. (Photo provided by Jim Swift)

Jim placed a Harrison cast iron monument over the stone and covered all back up and capped with an asphalt patch.

Now what?

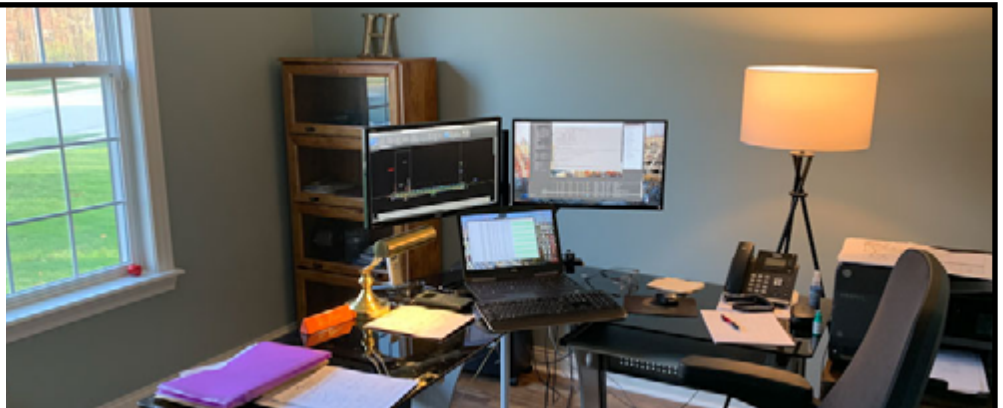
I really had reservations about exposing my doubts concerning the existing monument at the corner, because I knew that if proven true, at some point in the future there is going to be some surveyor come along, find the new Harrison, say that is the "true corner" and pull all of those Boone County deed lines south, opening that proverbial can of worms. But then again, the original position of the corner cannot change. It is where it is and, if in doubt, I had to prove it. So, what about all those deed lines and the subdivision boundary on the Boone County side of line? They, too, should remain as originally laid out. I can follow the footsteps of the original surveyor and how he located those first subdivision lines. I know he used a monument found to be in error, but that monument and most of the original monuments at the deed corners are still there, so I can follow his footsteps. The sidelines of the parcels adjacent to the section line are merely lengthened to begin or end on the true section line, shown as measured vs. deed. Where did that railroad spike come from that was the initial cause of the error? Did someone stand out in the middle of 96th Street, do a "slap 90" to a fence line and set the spike? From its location relative to the control lines on the highway plans, I came to the conclusion that someone had set the spike on the "S-M-6 PR" line in line with the north-south quarter section line, for the purpose of setting highway right of way monuments.

*Norman Hiselman is a senior project manager at Weihe Engineers, Inc. in Indianapolis, and has nearly 50 years of experience in land surveying. He has been an adjunct instructor at Indiana University-Purdue University Indianapolis teaching the fundamentals of surveying. Norm has supported the profession of land surveying by serving as President-elect of ISPLS and Past President of the Indiana Professional Land Surveyors Foundation.*



## COVID ROOM

*This mornin' in front bedroom I sat  
With laptop to create plat  
O'er mouse and keyboard with ease  
Tis Weihe's clients I please  
By late afternoon I will scat  
-Norm Hiselman's humorous  
depiction of COVID life*





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## BOB VOLLMER RETIRES AT 102 YEARS OLD

By Brent Brown, Indiana State Personnel Department

Want to live to be 102? Eat a lot of red beets.

Want to work until you're 102? Work hard, follow the Golden Rule and — you guessed it — eat a lot of red beets.

That's the advice of Bob Vollmer, Indiana's oldest (and longest currently-serving) state employee who, after nearly 60 years on the job as an Indiana Department of Natural Resources (DNR) surveyor, decided in January that it was finally time to "call it a career."

### Living Well

Vollmer credits his longevity to the care provided to him in his youth by his parents, who ensured Bob and his siblings always received nutritional meals.

"Eat a lot of red beets," Vollmer's grandmother would say. "That's what makes your blood red."

"I thought, 'What a bunch of baloney,'" Vollmer remarked with a nostalgic look in his eyes and a flippantly dismissive wave of his hand at the happy memory.

But eat those beets he did, along with a litany of other fruits and vegetables. He never once smoked a cigarette, even when it was fashionable to do so ("I always thought [smoking] was so stupid," he said curtly), and he held a job that required him to stay on the move. He was health-conscious long before such a mindset was commonplace, and it's served him well all these years, allowing this man of slight height and build the opportunity to leave an enormous and indelible mark on DNR — and the Hoosier State as a whole.

But reaching 102 might have seemed impossible all those decades ago when World War II raged and Vollmer manned a machine gun as a member of the U.S. Navy. Out

### Editor's Note

This article appeared in the February issue of "The Torch," the official newsletter for Indiana state employees. Bob Vollmer retired Feb. 6 and his 103rd birthday is May 20. He is a life member of ISPLS.

to get mail one day while on duty in Alaska, an avalanche nearly took the distinguished Hoosier several decades before his time. To hear him tell the story of his escape from the snow-slide is to be transported to that long ago and far-away place and time, to become an enthralled observer to a vivid scene Vollmer recalls as freshly as if it had happened only moments before.

He used drops of snow to determine which way would be "out" of the avalanche and went about grabbing snowballs from one side of the icy entrapment and placing them on the other, slowly creating an escape route.

"Rob Peter, pay Paul," Vollmer said as he pantomimed the act that certainly saved his life. "I still don't know what happened to that mail," he joked after a moment.

### Storied Career

But that harrowing incident is far from the only yarn he is apt to spin. With a long, distinguished life of service to his country and the Hoosier state, Vollmer has accumulated volumes of stories he clearly loves to share as often as the time to do so presents itself.

Whether it's recalling selling his personal airplane to purchase a Lincoln Continental for his first wife, Helen, or managing to balance a heavy class load at Purdue University (he'd been encouraged to attend "one of those Big



Bob Vollmer returned to the ISPLS Annual Convention in Fort Wayne, January 22-24. In these photos, he is seen posing with Indiana's NSPS Director Tony Gregory, addressing attendees at the annual Awards Banquet, and posing with ISPLS Board of Directors member Rich Hudson. (left and right photos provided by Rich Hudson; center photo taken by Evan Hoffmeyer, ISPLS)

10 schools” after growing dissatisfied at the University of California, Berkeley) while working and expecting his first child, Vollmer’s memories are shared with the enthusiasm that can come only from having experienced so many of the joys — and yes, even the more difficult circumstances — life can bring.

As his final day working for the DNR approaches, the Washington, Indiana, native’s passion for life and for his work remains inspiring, and though he never fancied himself a Hoosier legend of any sort, time, dedication, and an infectious spirit all his own have made him just that in the eyes of those who know him.

### Consummate Professional

On the job since the Kennedy administration, there isn’t much Vollmer hasn’t encountered, and there’s precious little of it he doesn’t recall. Vollmer, who was in his mid-40s when he joined Indiana’s Department of Conservation at the behest of its then-director, has watched the department grow into an agency stocked with conservation-minded professionals who would do right by Indiana’s treasure trove of natural beauty.

He remembers a time when protecting natural resources in Indiana was far less organized and headed up by people whose expertise might not have meshed with the goal of ensuring Indiana’s bountiful resources were well cared-for. All that began to change when DNR was formed in 1965.

He’s especially proud that DNR has come to embody the agency envisioned by those who wanted to establish a level of professionalism that had been lacking all those years ago.

He said he felt the leadership of the agency’s fledgling days would “be very happy” with today’s DNR.

Vollmer’s role was integral in the agency’s mission as well by making certain that property lines were understood and abided by. Managing often delicate situations involving encroachment cases or other property disputes made up a good chunk of his work throughout his lengthy career, though his encyclopedic memory has proven as valuable to his colleagues as his nearly unmatched level of experience.

Dean Illingworth, assistant director of DNR’s Engineering Division, remarked that Vollmer, in many cases, knows by heart the exact lines where properties diverge; the markers are permanently etched in the veteran surveyor’s memory.

“I asked him, ‘How do you know that?’ and he just said, ‘Because I put it there,’” Illingworth recalled with a chuckle that was equal parts astonishment and admiration.

Vollmer’s ability to recollect minute details from days long since passed is yet another reason he’s something of a living marvel. He can recite the preamble to the U.S. Constitution verbatim from memory, and a portion of his

retirement time is set to be dedicated to reading more of that storied document. Indiana’s constitution is also on his retirement reading list. Even at 102, he is eager to learn. He’s stayed up on the incalculable changes in technology that have occurred in more than half a century on the job, and he has regularly attended Indiana surveyor’s conferences to maintain certifications necessary in his work.

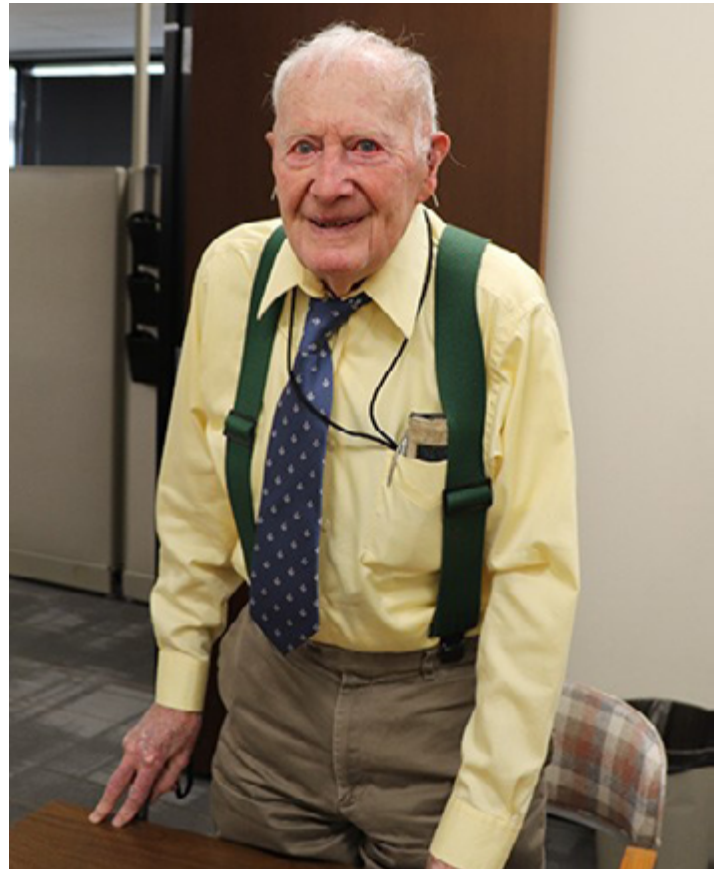
### Staying Busy

Vollmer’s work is the kind that keeps a mind and body busy.

Marching out into the oft-changing whims (and winds) of Mother Nature in Indiana, Vollmer’s work was anything but a desk job, though in recent years he’s spent an increasing amount of his time operating out of his home office. He also worked one day each week in the DNR offices located on the second floor of Indiana Government Center South in Indianapolis.

No matter where his work took him (90 of Indiana’s 92 counties, for instance), or from where it originated, his unrivaled knowledge and expertise are appreciated and will be missed by his present colleagues, many of whom weren’t even born when he began his surveying career.

The news that the state’s senior workforce member had decided to put down his surveying tools for good attracted



*Longtime Indiana DNR surveyor Bob Vollmer officially retired Feb. 6. Vollmer, 102, spent nearly six decades working for the State of Indiana. He said he plans to read and travel during his retirement. (Photo provided by State of Indiana Personnel Department)*



the attention of numerous media outlets. Illingworth helped coordinate Vollmer's busy media schedule in the days leading up to his retirement. From Indianapolis TV stations to an Associated Press piece that made it to Time, Vollmer's amazing longevity and lively spirit were profiled across the country and shared with readers throughout the globe.

He's no stranger to popping up in heartwarming stories on the local news, either. With his voluminous knowledge, boundless spirit, and natural inclination not to mince words, it's easy to see why Vollmer's life and work have captured the attention of so many Hoosiers in the twilight days of his career as a public servant.

But accolades also are nothing new for Vollmer.

Then-Lt. Gov. Eric Holcomb honored him in 2016 as a Sagamore of the Wabash — one of the state's highest civilian honors. There is also a trail in Brown County named after Vollmer. When he stepped forward to greet Holcomb after his name was called at the 2018 Governor's Long-Term Employee Reception at the Indiana Statehouse, Vollmer received a standing ovation from his colleagues. On that date, he was recognized for more than 55 years of service to his state.

The words of gratitude and appreciation continued for weeks leading up to Vollmer's final day working in his Indianapolis office.

### Leaving a Legacy

Ever loquacious but always modest, he believes he owes much of his success in his life and career to his willingness to speak out when necessary.

"I think my biggest accomplishment was opening my big mouth," he said facetiously. "I told people the way that it was, gave credit where credit was due."

He was able to speak up when necessary, and that was a vital skill in his day-to-day work trudging through Indiana's exceptionally diverse "great outdoors." Being able to handle situations where residents are angry or upset over property boundary disputes is no easy task, but he was always up to it.

"I protected Indiana property," he said, summing up decades of important work in as few words as possible.

In many ways, he attempted to emulate one of his favorite politicians, former President Harry Truman, who notably coined the phrase, "the buck stops here." That's Vollmer in a nutshell: no excuses, always professional, never afraid to speak up when the situation calls for it.

As he departs public service planning a possible visit to the family farm on which he lived earlier in his life, perhaps to dig for Native American artifacts as he enjoyed doing many years before, Vollmer leaves a legacy unlikely ever to be eclipsed by another state employee.

Holcomb took notice of the longtime surveyor's retirement decision when it was made public in January.

"Bob Vollmer, our oldest state employee at 102 years old, has been providing great government service at the Indiana Department of Natural Resources for decades," the governor wrote on Twitter. "I was honored to present him with a Sagamore in 2016 and wish him the absolute best in his retirement."

## CINCINNATI STATE'S NEW LAND SURVEYING BACHELOR DEGREE PROGRAM APPROVED

Cincinnati State is currently accepting new students into the Bachelor of Applied Science degree in Land Surveying for the Fall 2020 semester.

Information about the degree can be found on [the school's website](#), including a schedule of virtual information sessions.



(photo provided by Cincinnati State)

For specific questions, please contact Carol Morman at [carol.morman@cincinnati-state.edu](mailto:carol.morman@cincinnati-state.edu).

Students can start in the summer semester by applying to the LS.AAS program. Summer and fall registration are currently open. Because of the COVID-19 pandemic, all summer courses are being offered entirely online. All surveying courses start June 1 and run through August 8.

  
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**Land Surveying**

## CORONAVIRUS-RELATED CHANGES AFFECT COLLEGE SURVEYING LABS

By Mike Davis

For land surveying students at Indiana colleges — especially those whose courses included outdoor lab exercises — the spring semester took on a much different look about the middle of March.

As the coronavirus outbreak grew, distance learning became the standard for education throughout the state. Getting hands-on experience with surveying instruments proved to be a bigger challenge.

At Indiana University-Purdue University Indianapolis, where Jacob Hoffman, PS is an instructor, in-the-field lab work in his Fundamentals of Surveying course was suspended after spring break.

With the campus closed, students didn't have access to any of the school's instruments. "We couldn't really utilize any of the labs," Hoffman said. "This is really problematic . . . because so much of learning the basics involves the hands-on usage of the equipment."

Instead, students received copies of remaining lecture slides and information, and Hoffman was available by email to discuss questions they might have. Grades would be maintained at least where they were before spring break, remaining homework assignments were offered as extra credit, and a final lab practical or exam was not required.

At Vincennes University, where Jessica Hess, LS is the coordinator for the surveying technology program, hitting deadlines and accommodating the resources of all students meant adopting an approach of "This may not be the most ideal way to handle it, but it is only half a semester and temporary."

She said it was easy to transition some classes, such as ones that focused on calculations and textbook theory,

and the students were close to graduating, had substantial hands-on experience or were working for surveying companies.

"For more basic level classes, I resorted to making videos of some field work processes," she said. Examples of content included how to set up a base and rover Global Navigation Satellite System unit and what to consider and steps to follow in taking measurements. Students answered questions on worksheets that were process-related and dealt with provided measurement data.

Hess also used Google Earth to prepare a slide show that showed the relief of a site. Students needed to mark where they would take field shots to produce a contour map in Civil 3D, and she then provided data to be used with a student license version of the software to create a contour plat of the site. Students who didn't have computers that met the software's specifications received worksheets that guided them through the same steps they would follow in CAD, and they were to use a Civil 3D textbook in completing them.

"I'm also utilizing any available webinars I can find that relate to the topics we would have normally covered," she said. "For students who will be returning for fall classes, I plan to 'catch them up' on the hands-on components as a part of their other surveying classes."

With fall plans still in flux, she hopes for a return to normal — but also will be prepared to switch to online courses if necessary. Students will be encouraged to get computers that can run common software used at the school, and she plans to develop alternative lab options.



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## COVID-19 FALLOUT AT THE STATEHOUSE

By Mike O'Brien, 1816, Inc.

The General Assembly adjourned Sine Die in the early morning of March 12, just days before the state was put on lockdown as the coronavirus arrived in Indiana. It was a short session and the legislature was required by law to adjourn by March 14. Had this been a long budget session, like the forthcoming 2021 session, some contingency plan would have been needed.

The state closes its books on June 30 for this fiscal year. The expectation is that the budget situation will be dire. A loss of economic activity and tax revenue combined with a delay in 2019 and Q1 estimated tax remittance is creating a cash flow crisis for the state. Millions in stimulus dollars are coming to Indiana as the result of federal action but still unclear is what strings are attached to those federal dollars and what holes in the budget can be filled with it. What is clear is that policymakers are operating on the assumption the state's rainy day fund is all but gone. While Indiana was fiscally healthy and certainly better positioned than other states, no budget can withstand such a substantial drop in revenue.

The Legislative Council met Wednesday, May 13 to assign subjects for study to various interim study committees. That process begins during the regular legislative session when lawmakers request certain topics be studied and developed over the summer. Shortly after session adjourns, the

Legislative Council - a committee comprised of legislators from both chambers and both political parties - meets to decide which of those study requests will be pursued. From there, committees convene and begin to develop proposals for next session, which will begin full-time in January.

Given the state of affairs, it is unknown at this point what topics will be studied, or even how committees will meet. Can legislative committees meet in person? Will rolling shutdowns of state government be duplicated in the halls of the Statehouse? How do organizations like ISPLS influence and advocate policy decisions when committees meet virtually and lobbyists can't roam the halls of the Statehouse? Those of us who spend our days shaking hands and meeting in elevators are going to be forced to adapt and react to this new scenario.

Gov. Eric Holcomb has laid out a plan in five phases to reopen the state and the economy between now and the July 4 weekend. The best case scenario permits large gatherings, reopened retail establishments, and employers to reopen offices over the next six weeks. An aggressive testing and contact tracing protocol accompanies this gradual easing of restrictions so health officials can track how the virus is spreading through communities.



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## LEGISLATIVE UPDATE - FINAL REPORT

By Evan Hoffmeyer, ISPLS

The Indiana General Assembly's 2020 Legislative Session was quickly overshadowed by the COVID-19 global pandemic as lawmakers and Governor Eric Holcomb's administration pivoted to minimize the state-level impact.

Now that the state is getting ready to reopen for business, we want to look back at what impact the session had on the surveying profession.

Out of the ten surveying-related bills lawmakers considered this year, four passed and were signed into law. The most important headlines for surveyors, though, arguably came from bills that didn't pass.

[HB 1008](#) would have allowed licensed professionals from other states who move to Indiana to get licensed here so long as they could prove they had passed a similar licensing procedure in their home state.

"ISPLS opposed surveyors being included under this bill and they were, in fact, exempted," said Gary Kent, chair of the ISPLS Government Affairs Committee. He said that while the bill would have allowed the Board of Registration leeway to say an applicant's original license wasn't "substantially equivalent" to Indiana's, those decisions could have been overruled.

"The result would have been that a professional surveyor from, say, Massachusetts, would have to be granted a license in Indiana without proving any competence or knowledge in the U.S. Public Land Survey System or Indiana laws and regulations," Kent added. "We believe having unqualified surveyors performing boundary surveys in Indiana would most certainly not be in the best interests of the public."

For the second year in a row, an ISPLS initiative to close a court-created loophole failed to get final approval.

Results of a legal survey can be overturned by a neighbor's adverse possession claim even if that neighbor never appealed the results of the survey per the statute. [SB 71](#) would have required that if a neighbor is affected by a legal survey and they believe they have a valid adverse possession claim, they must file an affidavit of adverse possession or otherwise make their claim known before the statute runs out (90 days for in-county owners; 1 year for out-of-county owners). If no affidavit has been filed in that time, the lines would become binding on all owners.

The bill, written by practicing land surveyor and ISPLS member State Sen. Blake Doriot, R-Elkhart, passed the Senate 49-1, but then didn't even make it out of committee in the House.



"There may be one more effort to address this issue in the 2021 Session, and possibly an initiative to address the destruction or moving of survey monuments," according to Kent. "That is an issue that has likely been a problem for every single surveyor in the state at one time or another."

Among the bills that did pass, [Senate Enrolled Act \(SEA\) 427](#) provides that the Board of Registration is now allowed to issue 365-day provisional licenses to spouses of active duty military members who are transferred to Indiana, providing they meet certain criteria.

County surveyors in particular will be interested in [SEA 229](#), which Doriot also wrote and was supported by the County Surveyors Association of Indiana. It says a permit is no longer required from the Indiana Department of Environmental Management for the reconstruction or maintenance of regulated drains for purposes of the law concerning state-regulated wetlands.

Also of interest for county surveyors is [SEA 20](#), which provides that for the purposes of the advisory planning law, a county surveyor's designee must be a resident of the county to serve on the county plan commission, regardless of if they are a permanent designee or only filling a vacancy or serving as an alternate.

[SEA 100](#) doesn't have much of a direct impact on surveyors, but those who prepare plot plans may be interested to know it allows the restoration and reconstruction of nonconforming residential single-family homes within their existing footprint. To qualify, the homes can only be nonconforming as to lot size, setbacks or other dimensional requirements; be habitable as an assessed residential property; and not have been condemned.

All four laws take effect July 1.



## ISPLS WELCOMES 2 NEW STAFF MEMBERS

Two new staffers joined the ISPLS team in recent weeks.

Millie Lawrence joined in April as meetings and membership coordinator. She is a graduate of IUPUI with a bachelor's degree in tourism, conventions and event management with a minor in business management. Millie is currently working on her master's degree in event tourism at IUPUI.

Her previous employment includes internships with Downtown Indy Inc., Indiana Bicentennial Torch Relay and Walt Disney World.

When she's not working, Millie enjoys all things arts and crafts. From theater to woodcarving, she is constantly looking for new ways to be creative.

She is excited to be part of the ISPLS staff and may be reached at [mlawrence@ispls.org](mailto:mlawrence@ispls.org).



Jordan Nussear joined in May as communications coordinator. She is a recent graduate of the University of Indianapolis with a bachelor's degree in marketing and a minor in public relations.

Her previous work experience includes internships with the Greater Greenwood Chamber of Commerce, Hiron, and the University of Indianapolis Athletic Development.

Jordan enjoys a variety of artistic endeavors and has recently taken up watercolor painting. She also enjoys traveling and has visited 10 different countries.

She is excited to be part of the ISPLS staff and can be reached at [jnussear@ispls.org](mailto:jnussear@ispls.org).



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## REMINISCENCES OF AN OLD SURVEYOR: MEASURING A DISTANCE BY TAPING

By Knud Hermansen, PLS, PE, PhD, Esq.

I don't like to think of myself as old but I am. I have been surveying for close to 50 years. The difference between how I used to survey and how surveying is done now is different.

This difference was brought to the forefront of my thinking one day when I was surveying with a young surveyor. As we compared the distance we measured between two corner monuments to the distance set forth in the original survey performed in 1968, the young surveyor was appalled that the original surveyor was off six-tenths of a foot between the two monuments. Until this young surveyor spoke I was thinking that the 1968 surveyor had done some exceedingly good measuring given the fact that the distance between the monuments was almost 2,000 feet across uneven landscape filled with puckerbrush. My young associate had never used a tape to measure a long distance. Had he done so, I think that he too would have marveled at the accuracy of the 1968 surveyor.

I would be surprised to hear that any surveying firm operating at this time still tapes long distances. If there is some firm that still practices this ancient art, surely they cannot compete on a fee basis with another firm.

So my young colleagues in the profession will better understand how the boundary they are now retracing was measured, I will reminisce about the lost art of taping a long distance.



A surveyor's case from the early 1900s holds a tension handle and 100-foot steel tape. (Photo provided by Kenneth Stigner, PLS, Principal, Control Point Associates, New York)

### About the Author

Knud E. Hermansen, retired professor of Surveying Engineering Technology at the University of Maine, began his surveying career in the Marine Corps more than 30 years ago and later served in the U.S. Army Corps of Engineers, Army Reserve. During the last 40 years he has provided consulting services in land surveying, civil engineering and law. Much of his present consulting activities involve boundary disputes, easements, land development, liability, title and contract issues.



Taping required at least two people in the survey crew. Three were ideal, with a person on each end of the tape and one person on the instrument to keep the two people on a straight line between the end points.

My employers at the time were somewhat tight-fisted with expenses so most of my taping was done with one other person.

With the direction to be measured selected, a distant object was chosen to use as a point of reference to guide us while taping. I suppose when taping across open land, a pole was included as part of the survey equipment. The pole was placed in the ground on line with the direction to be taped and used to guide the taping crew. Where I surveyed there was always some natural object that could be used or an appendage of a tree or bush where ribbon could be hung to serve as a guiding point.

Unless we were in farmland or urban land there followed some physical labor as brush and other vegetation was cut and removed from the direction to be taped. Of course if

the distance to be taped was part of a traverse, the direction of the traverse was often selected so as to avoid the denser portions of vegetation thereby saving a great deal of physical labor involved with cutting a traverse line. If memory serves me, I seem to remember more time spent cutting a clear a line in preparation to taping the distance than actually measuring the line.

My employer favored a 200-foot steel tape. Most surveyors employed the standard 100-foot steel tape. I heard of a few surveyors that employed a 300-foot steel tape. The longer tape meant fewer markings on the ground that I shall explain later. However, the longer tape made a wicked sag unless extra tension could be exerted on the ends of the tape to reduce the sag. Of course the extra tension made plumbing the tape more difficult. Still, I came to appreciate the longer tape and used it when I first practiced on my own after becoming licensed.

Now I will say here and now that I was well familiar with tape corrections such as sag, tension, and temperature. We never made those corrections nor do I remember a surveyor that I met at this time that did so though they were common subjects in academic learning. I do not believe these calculations were omitted from ignorance. It must be remembered that calculations during these times were done without benefit of an electronic calculator. As a result, any calculations involving multiplication and division were a tedious undertaking.

Also, the errors associated with the failure to make tape corrections were often as not dwarfed by other factors present in the boundary survey. Would a temperature or sag correction to the steel tape make much of a difference when the corner monument was a 22-inch-diameter tree or a three-foot diameter stone pile?

My employer did deem it important that the taping be done on a straight line and as near to horizontal as possible unless the end of the tape could be placed at the instrument allowing a vertical angle to be read and used to reduce the slope distance to a horizontal distance. I do not remember ever employing a hand level to check to insure the tape was horizontal, the level of the tape being accomplished by a fair estimate with the eye.

Leveling the tape required a plumb bob be suspended from at least one end of the tape and usually at both ends of the tape. Even on relatively level ground it was necessary to suspend the tape above the ground and employ plumb

bobs or else the tape would weave up and down over brush we had cut, fallen trees, stones, and high grass that was normally present on the line of taping.

I don't believe a plumb bob can be found among the equipment of the modern surveyor. Perhaps it may be found buried in the equipment box on the survey truck yet. The plumb bob does not hang from the belt of the surveyor like it did decades ago. To come to the field without a plumb bob was a serious omission – akin to forgetting the tripod. Not only was the plumb bob necessary for taping but it was a necessary piece of equipment to hang under the tripod in order to place the instrument over the point, the optical plummet not being present on transits and compasses that were used to measure directions at that time.

Beginning at the instrument, the tape was laid out in the direction to be measured. Perhaps laid out is the wrong word — for the procedure was to grab the “zero” end of the tape and drag it in the direction to be measured until the rear tape person would yell “stop” or some other recognizable command. Now in doing this simple task it was important that someone watch the tape or at least be sensitive to the resistance to the drag offered by the tape to prevent the tape from looping upon itself where continued

tension would cause the loop to collapse and the steel tape to break. Careful observation was especially important when turning the tape back upon itself. Breaking a tape would cause the ire of even the most placid employer because there was no reason for this event to occur but for negligence. I am sure some survey crew members did try their best to think of some other plausible excuse that would explain a broken tape and not attach blame to themselves.

Having dragged the tape to its farthest extent without causing the tape to break, the forward tape person would be

directed to the right or left by the rear tape person so as to cause the forward tape person to be on a straight line between the two points where the distance was required. This is where the pole or point of reference spoken of earlier assists the taping crew.

More times than not it seemed this simple task would reveal that the forward tape person had passed on the wrong side of a tree or bush, requiring the forward tape person to drag the tape back to the offending tree or bush and pass on the correct side of this transgressing vegetation. Surely if the tape did not kink or break in laying the tape out, the risk of a break by kinking the tape increased with this



*A tape puller's clamping ability was furnished by off-center grips. (Photo provided by National Museum of Forest Service History)*



realignment because the forward tape person was looping the tape back upon itself and was now agitated with the extra effort necessary to make the measurement. In their frustration they would tend to pull on the tape harder than good practice should allow.

In some instances, it would be determined that rather than drag the tape back and go on the other side of the offending vegetation, the vegetation could be cut and removed. This idea was good in theory but often fraught in practice. More than once I have seen a good swing of the machete or brush hook designed to cut the offending brush not only cut the brush but go on to cut the tape as well, the tape being next to the offending brush because of the circumstances I have mentioned.

It was always a discussion among survey crew members whether the employer will think the intelligence of an employee to be less if they broke the tape with an overlooked kink or the result of a powerful stroke of a machete. Thankfully that is one conversation and confession that will no longer occur with modern survey practice.

Once satisfied the tape is aligned properly in the direction of the survey, the tape would be raised off the ground in a manner to effectuate a level line. In raising the tape, the taping party often discovers that the recent maneuvering with the tape has allowed the tape to seep under some brush that had been previously cut in clearing the line and

allowed to remain in the vicinity. The discovery of the offending vegetation occurred when an effort is made to raise the tape and one or more pieces of brush would also rise with the tape. At this discovery some vigorous attempt is made at shaking the tape to throw off the offending brush. This effort seldom worked other than to jerk the end of the tape out of a person's hand.

With the failure of shaking the brush off, it became necessary for someone to once again walk along the length of the tape and remove offending pieces of brush that had found their way to laying on the tape rather than under the tape.

If a person is following this story and is counting the trips along a particular segment of line, they will realize that the distance of the tape has probably been walked three or four times. First, a person must walk the line to cut a clear sight along the line. Second, a person will walk the line to drag the tape to set up the measurement. The third walk occurs when retracing the steps in order to come back around the correct side of a tree. Finally, the fourth walk of the line is to throw off brush and vegetation that has climbed on the tape. I know that vegetation can't move or climb on its own but if you had been there you would swear it does just that.

Finally, the tape could now be raised off the ground to effectuate as near as possible a horizontal line that could never be a straight and level line since the weight of the



Plumb bobs can be found in a variety of shapes and sizes, as shown in this display case. Those pictured are part of a large collection assembled by David Allen Files, LS, a retired surveyor from New York state. (Photo provided by Kenneth Stigner, PLS)

steel tape always caused a sag. To remove some of the offending sag, tension had to be applied to the ends of the tape. I suppose there were surveyors that employed tension handles in the field that allowed the tension, measured in pounds, to be carefully applied to the tape's length but I have never met the field crew that used them in the field doing a boundary retracement survey. Perhaps a diligent survey firm would have had at least one tension handle in their office in order to show a new employee what 15 to 20 pounds of tension felt like.

For those surveyors that have never seen a tension handle, a close similarity can be visualized by thinking of certain weight scales with a handle at one end and a hook at the other end that are sold to fisherman to weigh the trophy fish they plan to catch. I suspect that some of the survey tension handles that were purchased by surveyors were used more often for weighing fish rather than applying tension on a tape.

With the tape raised off the ground, great skill must now be employed to do several tasks at once. The tape person had to keep the tape level, at a consistent tension, and steady enough to fix a point on the ground using a suspended plumb bob.

The rendition of these tasks in print does not begin to describe the difficulty of combining these tasks in practice. First, the plumb bob string must remain fixed and immovable on a mark found on the tape. This requires one hand be employed to clamp the plumb bob string securely to a mark etched on the steel tape. The other hand is employed pulling on the end of the tape to keep a constant and desired tension. It must be remembered that the steel tape is a smooth ribbon but for some minor roughness caused by marks on the tape surface indicating feet, tenths and hundredths of a foot. The last two mentioned etchings are only present at the ends of the tape. Considering the combination of the tension, tape smoothness, and liberal sweat on the hands resulting from the physical labor involved in surveying at the time, the reader can deduce the challenge required in making a measurement while exerting tension on the tape. Usually a leather thong at the end of the tape was used rather than holding the tape itself. A consistent tension was employed by tucking the hand next to the body and leaning the body in the direction away from the other person in order to render the desired tension.

Where a leather thong was not present or "breaking the tape" required, often as not the tape person would grab hold of the tape and bend the tape down at their hand to afford a better grip – much as a person would do when pulling a rope to get a better grip. This grip often left a "jog" in the tape at the completion of the measurement. After years of usage, a tape would no longer lay flat but would have rises and dips along its length that would be coupled with a few points of extra thickness where the tape had been repaired.

Let me pause in my rendition of taping to state that when I speak of "breaking the tape" in this instance, I am not

speaking of physically breaking the tape. Rather the phrase was used to indicate the entire length of the tape was not to be employed in making the measurement required.

Long ago, some entrepreneur invented a tape clamp. The tape clamp was a handy little gadget that allowed the user to firmly secure the tape with the clamp using the two finger rings that were part of the clamp. Using the finger rings, the tape could be easily pulled without bending of the tape or permitting a slippage along the tape.

I doubt much money was made from the invention. The survey firms that had purchased this gadget were likely as not to leave it unused in the office. When brought to the field, it never seemed to be with the tape person that needed it.

Having mastered the combination of holding the tape level, keeping pressure on the tape, and keeping the plumb bob string firmly attached to a mark along the tape, the tape person could now focus their attention to the suspended plumb bob that was likely as not swinging over the ground much as a lookout does in a crow's nest over a ship in rough seas. Restraining the plumb bob from wild gyrations required the tape person to periodically tap the plumb bob into the ground until the swinging of the plumb bob settled down.

The person at the rear of the tape had a mark that the plumb bob had to be over. When he was satisfied that he had wrestled the plumb bob and by extension the appropriate part of the steel tape over this point, he would repeatedly shout some agreed upon term to the forward tape person to let that person know that a measurement could now be reliably made by the forward tape person.

I have seen the patience of the rear tape person sorely tested by the inability of the lead tape person to make a timely mark or reading. The rear tape person will make repeated statements of "good" or "mark" to indicate that he is over the point and the measurement can be made. After some repetition, the rear tape person will become agitated by his own endless repetition and may be heard to stop the repetition in order to yell: "god damn it, I'm good at this end. What is taking so damn long."

If the forward tape person was not measuring to a previously established point, they would tap the plumb bob point onto the ground to make a mark in the dirt, having previously kicked away grass, leaves, and twigs to clear a space on the ground. Once the forward tape person was satisfied the mark made by the plumb bob point represented a fair measurement, they would release the tension in the tape and put a pin into the ground at the mark. This pin would become the basis for the rear tape person to advance upon and measure over.

As I previously mentioned, my employer was a kindly man but did not feel justified in purchasing equipment that was not absolutely necessary. Rather than using chaining pins, as they were commonly known, to fix the limit of the tape measurement, we would use nails or sticks with flagging tied to the end of the stick.



Having marked the length of the tape on the ground, the forward person would drag the tape in the direction of the survey to begin again the process of making the next measurement. The rear tape person would follow with the other end of the tape. Now if the rear tape person was not paying attention, they would likely as not kick the pin or nail out of the ground before they spotted it. If the rear tape person did a good job of kicking the pin loose from the ground, the taping would have to begin anew back at the starting point with numerous expletives used against the rear tape person for not paying attention to where they placed their feet. To avoid repeating the process of taping or bringing upon themselves embarrassment and attracting the ire of the other crew members, more than one rear tape person made a best guess where the pin may have resided before they inadvertently kicked it out. If possible the misfeasance was corrected without the forward tape person realizing what was being done.

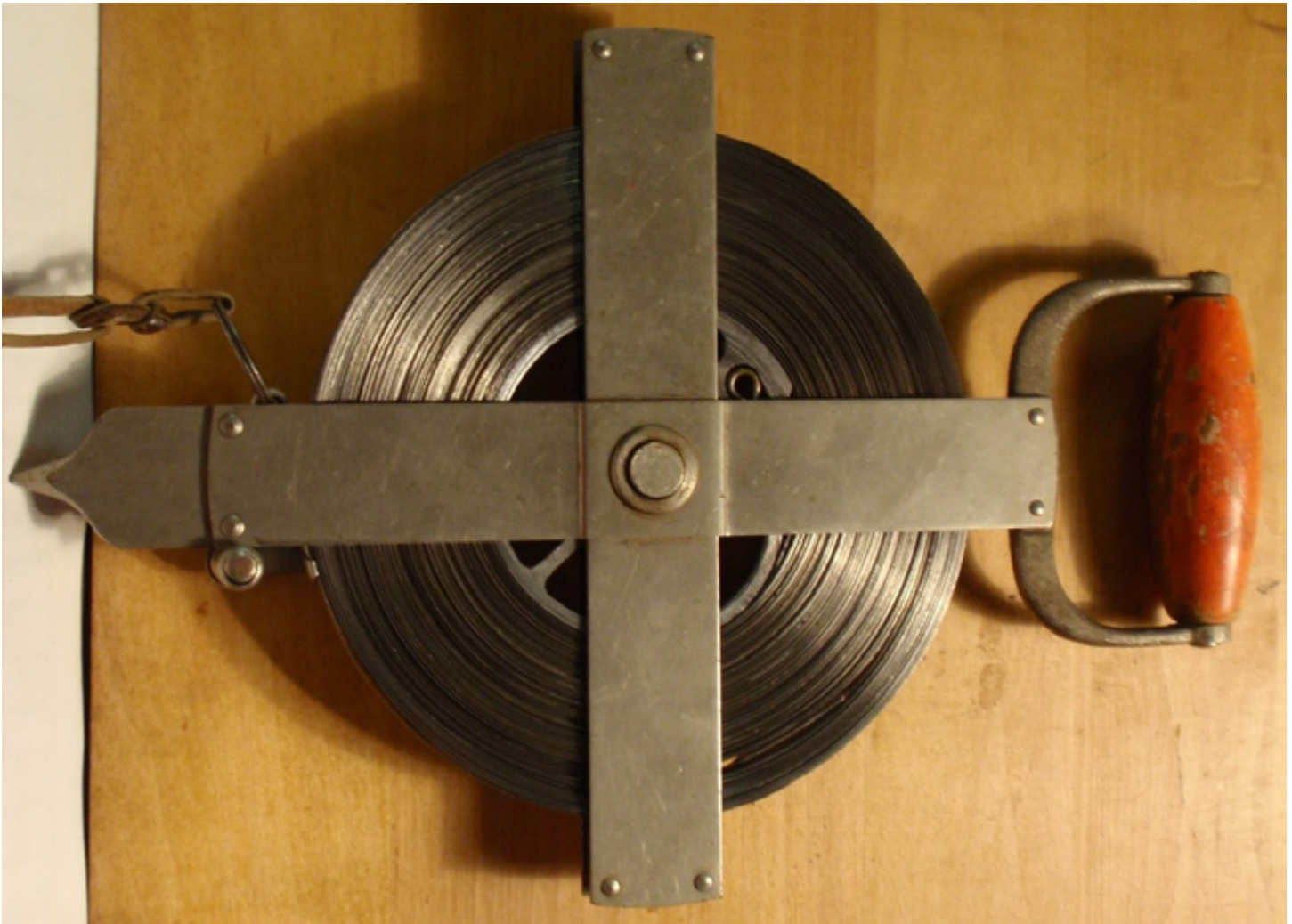
I should mention that had the forward tape person measured into a mark or corner already fixed, his job was a little more difficult. Rather than stick a pin, nail, or stick in the ground, he had to find a way to maintain the tension, keep the tape horizontal, maintain a steady plumb bob over the

point, and read the marks on the tape at the plumb bob string.

This was done by firmly clasping the plumb bob string over and on the tape using the index finger and thumb and sliding the string along the tape until the plumb bob was over the desired point. The tension was then released while still keeping a firm grasp of the string on the tape.

Once all the other distractions were eliminated, the forward tape person could peek under his thumb and see what incremental hundredths of a foot mark the string was held upon.

At this point it is worth mentioning a problem that has plagued surveyors using a tape or chain for a couple of centuries — keeping track of the whole lengths that are used when measuring between two points. When a survey crew measures long distances, it is necessary to tally the number of full tape lengths used. Now it would be wise for a crew member to make a mark in a field book each time a tape length is achieved. What is wise and what was done are two different things. If field books were not available, putting notches on a stick or moving stones or acorns from one pocket to another was employed. Despite the best



*Lufkin produced this sturdy 200-foot steel tape, or steel chain, circa 1960. The company, which was founded in 1869, introduced the first steel measuring tape produced in the United States in 1890. (Photo provided by the National Museum of Forest Service History)*

efforts, there are numerous distances where a tally was lost or added that should not have been.

I have alluded to a plumb bob suspended from the tape to the ground. The term "suspended" is only accurate after some effort is obtained to stop the plumb bob from swinging in arcs over the ground. It is not possible to get a plumb bob to hang from the tape to the ground without some swinging. The plumb bob was determined to be contrary when let loose to hang. There were times when the plumb bob was stationary but not vertical as in the case when the plumb bob had to be dropped from chest height and there was a strong wind blowing across the open field. It seems to me that the wind was usually combined with cold temperatures. To all the other problems I have alluded to in trying to keep the plumb bob steady over a mark must be added the lost sensitivity of the fingers when using gloves and the shaking of the body from the cold temperature.

Eventually, the plumb bob was finally settled into compliance by tapping the plumb bob upon the ground until finally the tip of the plumb bob was confined to a small area meeting the tolerance of the tape person. Of course before the tapping could take place, the forward tape person usually had to expose the ground by kicking away sod, sticks, leaves, and other debris using the toe of his boot. This often accounted for the delay that caused the agitation of the rear tape person that I have previously mentioned.

I must not close this reminiscence on taping before adding a

few more tidbits that provide some added insight into taping practice.

Many tapes were not marked or inscribed like a more recent steel tape or the fiberglass tape still found in the surveyor's tool kit. What I mean is the tape did not contain marks to the hundredth of a foot along the entire length of the tape. The old tapes were only marked every foot except for the very end of the tape where the tenths and hundredths of a foot marks could be found. This necessitated the rear tape person find a whole foot mark to hold to and the forward tape person use the end of the tape to measure the increments of a foot. To set this up involved the forward tape person yelling back to the rear tape person to "take a foot" or "give a foot."

While on the subject of marks on the tape, I must state that dragging a tape along the ground for days, weeks, and years often succeeded in smoothing the tape and erasing the stampings of the whole feet and making the marking of whole feet difficult to read. More than once I had to look up or down the tape to find a readable mark and work my way back to the mark I was to hold at in order to know what whole foot I was holding at.

I have about exhausted my memory of taping but for three situations often encountered in taping. One situation is the delicate taping required when taping through an electrified cow fence with a steel tape. I need say no more on that topic as the reader can well imagine what often happened. I must add that in addition to the electrified wire, once the survey

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crew has cleared the electric fence and entered the field, the reason for the electrified wire becomes obvious. Curious cows tend to congregate about the surveyor and become a hindrance in the taping process. However, I suppose a curious cow or heifer is far better than the bulls I encountered from time to time that took offense at the red often worn by the surveyor.

The second situation not fondly remembered is taping upon a concrete or asphalt surface. Since such surfaces were often flat and without obstructions, the tape was laid flat on the surface.

Tension was put on the tape ends during the measurement with knuckles touching the asphalt or concrete. In such cases one tape person usually released their tension unexpectedly with the result that the other tape person often left some skin from their fingers on the rough surface of concrete or asphalt.

The third situation that still can incite bad dreams occurred when taping across a busy road or sidewalk. You did not have to experience this situation in order to imagine the peril of a tape suspended above the road surface when a car is observed much too late traveling down the road. Dropping the tape quickly to the road surface would often preserve the tape. Yet, there is many a time the survey crew returning to the office with a broken tape that claimed this very event to be the cause of the broken tape. Of course, there was nothing they could have done to prevent this happening. At least that is what they claimed.

I will close this reminiscence by speaking about securing the equipment used in taping. The tape was coiled with atten-

tion paid to making consistent sized loops. The tape was then thrown. I don't mean heaved to the side. I mean that the tape was made into a figure eight, then into a compact circled loop using a twisting of the hands. Throwing a tape was an art that was often done at a surveyor's convention to show prowess. If a person did not know how to throw a tape, it turned into a wrestling match where the tape refused to cooperate and often as not ended in a jumble rivaling any fishing line tangle. If the person did know how to throw the tape, a person watching would have the unmistakable impression that a magic trick just occurred. One minute the tape is in a large loop and the next it is neatly coiled in a compact loop.

The other item of equipment deserving some effort at storage was the plumb bob. To see a plumb bob being stored with the string hanging loosely from the end of the plumb bob would reflect poorly on the owner. At some point, another inventor came up with a Gammon Reel that wound the string up unless the owner resisted the urge of the Gammon Reel. Before the Gammon Reel arrived at the scene, a plumb bob string would be carefully wrapped around the head of the plumb bob and a slip put into the string to hold the string in place. A careful tug on the string would unwrap the string from the plumb bob. A knot in the plumb bob string spoke of an untrained crew person. A knot in a plumb bob string was akin to a hangnail on the finger — its presence always felt and always hanging up at inopportune times.

Keep this rendition of the taping process in mind, young surveyor, before disparaging that old surveyor that taped those long distances one small segment at a time.

*This article was reprinted with permission of the author.*

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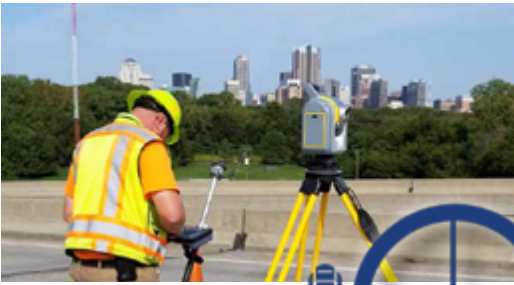
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## COMPLETED CAREERS

### Harold E. Smith

Harold E. Smith, 95, of Anderson, died peacefully of natural causes on March 14.

Harold was born July 28, 1924, in Davies County, the only son of John R. Smith and Leona M. (Taylor) Smith. Harold graduated from Jasper High School and enrolled at Indiana University. World War II intervened and Harold served as a meteorologist in the U.S. Army Air Forces (1942-1946) stationed on Iwo Jima and Guam.

He returned home to marry Genevieve Brown, a student at Anderson College, on June 20, 1948, who preceded him in death. He earned a civil engineering degree from Purdue University in 1949 and later obtained his Professional Engineers license.

Harold spent the rest of his life serving Anderson. He founded his own Land Surveying and Engineering business and designed many of the subdivisions and land development projects in Anderson from the 1960s through the 1980s. He served two terms as Madison County Surveyor (1957-1964) and Anderson City Engineer (1964-1971). He served on the City Planning Commission, Board of Zoning appeals, and as Edgewood Town Engineer for more than 30 years.

Harold was one of the earliest members of East Side Church of God and has worshipped at Park Place Church for the last 20 years. He was active in the American Society

of Professional Engineers and Anderson Noon Exchange Club.

He is survived by his daughter, Carol (Bill) Creuziger of Pendleton; son, Gary (Desma) Smith of Noblesville; three grandchildren, Jason (Christina) Creuziger, Aubrey (Craig) Snyder, and Cameron (Patricia) Smith; and seven great-grandchildren.

Private funeral services and burial took place March 19 at East Maplewood Cemetery. Due to the Center for Disease Control and Prevention's recommendations related to the COVID-19 virus, a Celebration of Life service will be planned for a later date at Rozelle-Johnson Funeral Home in Anderson. Post online condolences at [Rozelle-Johnson's website](#).

Memorial contributions may be given to Park Place Church of God.

*(Photo and obituary provided by The Herald Bulletin)*



### Daniel Thomas Flavin



Daniel Thomas Flavin, 71, of West Lafayette, passed away Saturday, April 4 at Indiana Veterans' Home, where he had been a resident since December 20, 2018.

He was born April 14, 1948, in Michigan City to the late Thomas Duggan Flavin and Viola (Lakowski) Flavin.

Daniel proudly served his country with the United States Marine Corps in Vietnam from June 1967 through July 1968, where he earned two Purple Heart medals. Daniel enjoyed attending many of his Marine Corps reunions as well as spending time with the Marine Corps League and members of the Vietnam Veterans of Mid-North Indiana. Daniel was also a member of the Military Order of the Purple Heart, Disabled American Veterans and American Legion.

After serving, Daniel worked as a draftsman/surveyor for the State Highway Department in Michigan City, and retired from John Fisher and Associates in Lafayette. He enjoyed watching TV crime shows, especially "Sherlock Holmes." He enjoyed reading and had a vast love for trains. He also enjoyed spending time with his family.

Surviving are two sons: Duggan Flavin of Concord, CA and Griffin Flavin of West Lafayette. Also surviving is his former wife, caregiver and the mother of his children, Suzanne Schilling of Lafayette; sisters: Terrie Callan of Michigan City; Fontelle Powell of Plainfield, IL; and Bridget Lepley of Yarmouth, ME. He is also survived by a good friend and cousin, Steve Pahs of West Lafayette, along with many nieces, nephews and cousins.

He is preceded in death by his parents.

Services will be held at a later date. [Share memories and condolences online](#).

*(Photo and obituary provided by Hippensteel Funeral Home)*

## John 'Jack' Richard Hoerner

**J**ohn "Jack" Richard Hoerner, 91, of Indianapolis, passed away Sunday, Jan. 26 at his son's home.

John was born on Dec. 1, 1928, in Springfield, Ohio, son of Harold and Nellie (Meranda) Hoerner. He graduated from Springfield High School in 1946, served in the U.S. Navy from 1946 to 1949, and attended Ohio State University to study civil engineering from 1953 to 1957. He married Elfleda Jane Eaton on April 25, 1959, in Beatty, Ohio. They made Greenwood, Indiana, their home since 1960.

John worked for New York Central Railroad from 1957 to 1966 in positions from Instrumentman, Chief of Party, District Assistant Engineer, to Supervisor of Track. In 1966, he joined Clyde E. Williams & Associates, later acquired by Farrar Garvey & Associates, as Project Engineer and Land Surveyor for highway, street, railroad and recreational facility design. Some of his engineering and survey projects over the years included Potato Creek State Park, the Indianapolis Zoo, and Spring Mill Inn. In 1997, he joined Sieco, Inc., later acquired by Strand Associates, working there until his retirement in 2010 at age 81. In 1994 his son, Tobin, began working alongside him at the same company. They worked together through company changes until Jack's retirement, allowing him to teach Tobin a love of the profession.



John enjoyed many years volunteering with Greenwood High School's Marching Woodmen and Irish Guard, well beyond his children's graduations. He served countless hours as a church youth leader and bus driver for Greenwood United Methodist Church, and in recent years as a deacon at Southport Presbyterian Church and devoted member of their Saturday morning men's breakfast group.

Most of John's life was spent in devotion to his wife of 54 years, raising their family and assisting with Elfleda's day care, scouting, and crafting adventures. His love for her shone brightest as her primary caregiver in the final years leading to her death in 2013.

Survivors include his daughter Adela H. (William) Dickey, of Fort Wayne, IN; son Tobin A. (Amy) Hoerner, of Greenwood, IN; grandchildren Joshua (Lindsay) Dickey of Franklin, TN; Andrew Dickey of Ossian, IN; Jordan (Rachel) Dickey of Scottsdale, AZ; Ashton and Jeremy Hoerner, Joel and Aaron DeWitt, and Jessica Cuzick, all of Greenwood, IN; great-grandsons Benjamin and Noah Dickey of Franklin, TN; and brother Robert Hoerner, of Mesa, AZ. He is preceded in death by his wife and parents.

Memorial donations may be directed to the Southport Presbyterian Church Deacon Benevolence Fund.

*(Photo and obituary provided by Daily Journal)*

## Free Resource: Land Surveying Career Brochure



ISPLS has produced an educational brochure that raises awareness to the profession and encourages students to join the field. Help us spread the word by requesting print copies or sharing the digital version of the brochure in your office, at events and seminars and with any student who may be interested in joining the field.

**To request physical copies of the brochure, send an email with the quantity to [Evan Hoffmeyer](mailto:Evan.Hoffmeyer@ispls.org). Want to share it online? [Download a digital copy here.](#)**



## LEGAL SURVEYS

By Bryan F. Catlin, PS, ISPLS Past President

The goal of this column is to provide brief summaries of recent Indiana Court of Appeals and Supreme Court cases involving topics related to surveying practice, certainly not to provide legal advice. Information is gathered from the courts website at [www.in.gov/judiciary](http://www.in.gov/judiciary). Comments or suggestions for future columns are welcome by email to: [Bryan.Catlin@indy.gov](mailto:Bryan.Catlin@indy.gov).



To lead off this time, I'd like to mention a case we won't be seeing a summarized opinion of in this column. At the January conference in Fort Wayne, I was approached by an ISPLS member who related that a case they were involved in had been dismissed at the trial level due to not being filed timely per the statute of repose. News like this shows that the efforts of ISPLS members and the money we invest in a lobbyist to promote such changes in legislation are well spent. Thanks to all who have participated in the legislative process on behalf of the profession.

**Daniel L. Hess and Leanna S. Hess v. Sheryll (Durbin) Novicki and The Board of Directors of the Cordry-Sweetwater Conservancy District, Indiana Court of Appeals Case No. 19A-CT-1416, January 31, 2020**

Cordry Lake is a private lake owned and governed by the Cordry-Sweetwater Conservancy District ("CSCD"), through its board of directors ("the Board"). The Board has the authority to regulate the use of the lake and the construction of any structures in the inlets. Daniel L. Hess and Leanna S. Hess own a lakefront tract adjacent to the lakefront tract owned by Sheryll (Durbin) Novicki. A narrow inlet lies between their tracts.

Per CSCD rules, each tract owner is entitled to unobstructed use of their half of the inlet, as determined by the use of a midpoint. In 2009, CSCD rules measured the midpoint of each inlet by using an imaginary line extending from the shore.

At that time, Novicki sought to construct a dock/lift in the inlet. The Hesses filed an action against Novicki, seeking relief concerning her construction of her dock and use of the inlet in a manner that allegedly encroached on their half of the inlet. They also named the Board as a defendant in their complaint. In 2015, Novicki and the Hesses entered mediation. In 2016, they executed an agreed permanent injunction that reads, in relevant part, "Neither party shall encroach by improvement or the regular parking of watercraft across an imaginary line that represents one-half of

the width of the inlet on which their properties are located. However, this shall not be construed to be a grant of permission by either party to allow the other to encroach up to this imaginary line if the same is not permitted by CSCD rules in effect at the time." The Board was not a party to the agreement. In March 2017, the trial court approved the agreed permanent injunction and issued an order to that effect.

In November 2017, the Board amended the CSCD rules to include a new formula for determining the midpoints of all inlets based on property lines, not on shorelines. As a result, Novicki filed a motion to supplement/modify the permanent injunction to reflect the CSCD's amended rules concerning these boundaries. The Board reentered the action as an intervenor.

The Brown Circuit Court heard oral argument and, as a first step, limited its determination to resolving the issue of "whether the Court may modify or supplement an injunction issued pursuant to the agreement of the parties due to an allegation by one party that the agreed injunction is not [sic] longer equitable." At the hearing, the Board explained its rule change and argued the importance of applying its amended rule even where the parties have entered the injunction by agreement:

*[T]he agreed injunction is flawed, incomplete and unenforceable. The injunction acknowledges the existence of an imaginary line but does not describe its location at all....[T]he old method of determining where the center line was, was to measure from the water's edge and find a midpoint and a point equal distance from the shoreline, that was deemed to be the centerline of the cove. However, and this would work great if the shoreline and property line always precisely coincided....The new method uses the property line as the beginning measuring point....The use of any other method in our opinion would result in a functional repeal of CSCD's rules and two freeholders can't agree that the rules don't apply to them. And also keep in mind, that d[ue] to changing circumstances CSCD could in the future again change the method of determining the centerline. And any judicial or agreed judgment that purports to establish the centerline must always acknowledge CSCD's continuing authority to relocate that line. That's our position.*

Following the hearing, the trial court issued an interlocutory order concluding that "when a judgment, including an agreed judgment, has prospective application or effect, the Court must have the power to act to avoid an inequitable result that is caused by a change in circumstances that was not reasonably foreseeable at the time the judgment was entered." Having thus concluded, the court ruled that Novicki was not precluded from pursuing relief. The Hesses

filed a motion to reconsider, which the trial court denied. This appeal followed.

The Hesses assert that because the injunction was entered as an agreed judgment, it is a matter of contract, not subject to modification by the trial court. The dispute between Novicki and the Hesses is not limited to remedial matters. The agreed injunction concerns prospective matters such as the positioning of the parties' docks/lifts and the continued navigation of their respective watercrafts within the inlet, all of which must be considered in conjunction with the rules and regulations promulgated by the CSCD.

Even when viewed from a purely contractual standpoint, the agreement's terms suggest that the parties may have anticipated potential future judicial intervention....“if the same is not permitted by CSCD rules in effect at the time.” This injunction, though entered by consent, is subject to the trial court's continuing equitable authority. If there is sufficient evidence establishing that the agreed injunction has become an instrument of wrong due to changed circumstances and thus is no longer equitable, the trial court, in its discretion, may grant relief. Even if Novicki fails to meet her burden of proving an unforeseeable change in circumstances rendering the injunction inequitable, the trial court will nevertheless retain the authority to interpret and apply the language of the agreed judgment according to contract principles to determine whether an ambiguity exists and to ascertain the intent of the parties. The judgment of the trial court was affirmed.

**Duke Energy Indiana, LLC v. J&J Development Company, LLC, Indiana Court of Appeals Case No. 19A-PL-735, February 5, 2020**

The current result of this appeal is dramatic for this development, so I have included more details from the appeals court reasoning than I usually do.

As a reminder, my earlier summary of the Appeals Court opinion on a part of this case follows in italics.

Duke Energy Indiana, LLC v. J&J Development Company, LLC, Indiana Court of Appeals Case No. 10A04-1605-PL-1084, March 29, 2018 MEMORANDUM DECISION

*Finally, I will briefly note a case from the Clark Circuit Court. Public Service of Indiana, Inc. (PSI) obtained two transmission line easements in 1956 which included the standard language about the grantors reserving the use of the land not inconsistent with the grant. Now, J&J is developing a residential subdivision and has constructed a graded roadway, underground utilities, a fire hydrant, a few electric termination boxes, five concrete stormwater culverts and two stormwater detention basins wholly or partly within the easement. As part of the sanitary sewer service, J&J needed to install a small diameter pressure main, and the Town of Sellersburg issued a construction permit which required notification of Duke Energy, PSI's successor. When Duke was contacted, an asset protection specialist there expressed concerns about*

*the infrastructure and improvements, alleging they were in violation of Duke's easement rights and a Duke-generated document entitled “Electric Transmission Right-Of-Way Guidelines/Restrictions Valid for Ohio, Indiana and Kentucky.” The document declared the authority to change the list of restrictions at any time, and Duke took the position that all activity by others in a Duke easement required prior review and approval by Duke. Duke insisted that J&J remove the infrastructure and improvements built in the easement.*

*This has gone to court and showed up in the Court of Appeals to answer procedural issues about the trial.*

J&J Development Company, LLC (“J&J”) purchased a piece of land along State Road 60 near Sellersburg to develop a residential subdivision called “The Plains of Millan.” Duke Energy Indiana, LLC (“Duke”) owns a 300-foot electric transmission line easement over the land, and J&J has constructed certain improvements within the easement. Duke acknowledged that J&J is allowed to make some use of the land within the easement but contends that the improvements at issue unreasonably interfere with Duke's use of the easement. J&J filed suit against Duke, seeking a declaration that its improvements do not unreasonably interfere with Duke's use of the easement, among other relief. Duke filed a counterclaim, requesting a declaration that J&J's improvements are impermissible and an injunction requiring J&J to remove them and to refrain from constructing additional encroachments. On a motion for partial summary judgment by J&J, the trial court ruled that the improvements are permissible and granted declaratory relief in J&J's favor. Duke appealed, and the appeals court reversed, concluding that the trial court “made credibility determinations involving issues that were in dispute,” which is improper at the summary-judgment stage.

Now back at the trial court, evidence was heard and again the trial court granted summary judgment in favor of J&J and again Duke appealed.

Duke contends that the trial court should have granted summary judgment to it instead of J&J. The parties agree on two key points: (1) the language of the easement instrument is unambiguous; and (2) the claims for declaratory and injunctive relief should be resolved on summary judgment, not in a trial. They ask for a review of the facts in light of the easement language and Indiana easement law and a decision as to which party is entitled to summary judgment. Another matter is not in dispute: J&J is entitled to make some use of the land within the easement. The only issue here, then, is whether J&J's improvements unreasonably interfere with Duke's use of the easement. Many points were outlined in this opinion, a few of which follow:

In 2013 and 2014, J&J hired a surveyor to prepare a plat for The Plains of Millan, sought and received plat approval from the Clark County Plan Commission, and then purchased the land — all without contacting Duke. Then, in 2015, J&J constructed certain improvements within the



easement: an entrance from State Road 60 (the only entrance to the planned neighborhood); a road with curbs (Palermo Street) running parallel to and largely within the easement; detention basins; a fire hydrant; and buried utility lines.

The transmission corridor contains two parallel lines of steel towers. One set of towers contains a six-wire uninsulated 138,000-volt (138 kV) circuit, while the other contains one 345,000-volt (345 kV) circuit.

Duke provided the following background, with no dispute from J&J: [Duke] acquires easements at the request of its transmission planning and engineering groups to secure the land rights needed to operate, maintain, repair, and replace electric transmission facilities. [Duke] obtains enough easement space to allow it to bring in large and multiple pieces of equipment to either install, replace, or repair its lines, locate the electric facilities and to enter and stage the equipment in the easement with minimal interference with surrounding property owners.

Duke noted that the sole entrance to The Plains of Millan neighborhood lies within the easement and that, as such, it will be blocked, possibly entirely and for a lengthy period, when Duke does work in that area. Homeowners would be prevented from entering or leaving the neighborhood, and emergency vehicles would be delayed getting in and out of the neighborhood. Duke's work would be substantially

more difficult if residents require access at the same place Duke is working or staging its work, requiring Duke to rearrange its equipment and personnel. If Duke needs to block the intersection, it will not be possible to reroute traffic to permit access to the neighborhood without disrupting Duke's work. While it is possible for Duke to stop and move equipment, it is not possible to do so repeatedly or, sometimes, quickly. Stopping and moving cannot be done until work can be safely suspended and equipment and workers safely moved. Moreover, buried utilities, roads, and detention basins within the Easement can impede, and in some cases prevent, Duke from accessing part of its transmission corridor and facilities. Utilities should be run through easements as close to a perpendicular angle as possible, rather than in parallel, to prevent crushing them or creating water or gas emergencies. Repairs to the transmission facilities near The Plains of Millan would require the use of equipment weighing thousands of pounds. Repairs to the 138 kV circuits require bucket trucks, line trucks, and track equipment for off-road use. Repairs to the 345 kV circuits and towers typically require use of a boom truck, bulldozer, 125-foot track bucket truck, 100-foot bucket truck, two 93-foot bucket trucks, and a 4065 digger derrick. Duke may also need pressure-digger equipment and tri-axle dump trucks to perform excavation work. While the possibility of damaging utilities cannot be avoided entirely, utilities that cross easements at angles greater than thirty degrees are less invasive than if they run in parallel through the easements. Underground gas lines



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that run in parallel down an electric-transmission easement are more likely to suffer damage and, if not turned off, can create a dangerous situation. Likewise, where a road runs across an easement, rather than parallel to it, Duke has more flexibility in placing replacement poles and appurtenances and staging vehicles.

Among other things, easements are meant to ensure sufficient space to do repair work and install temporary facilities to restore electric service. Outages necessitate repairs and sometimes replacements, which may require temporary facilities that are spaced and placed differently from towers. Likewise, maintenance and replacement of aged facilities require substantial equipment and materials. The towers supporting the 138 kV circuit were installed in 1957, and the towers supporting the 345 kV lines were installed in 1978. When Duke needs to replace the tower closest to State Road 60, temporary wooden replacement structures will probably need to be placed in one of the detention basins J&J built or on Palermo Street. The presence of the road and the detention basins within the easement can impair Duke's ability to place temporary structures at appropriate places. The equipment needed to do replacement work and upgrades typically comes in from both sides of an easement, so the ability to use the full easement is imperative. Even a simpler repair, such as a middle splice, is more complicated, dangerous, and costly if the equipment cannot reach the lines effectively because of obstructions. Obstructions force Duke to work across a live set of lines and, therefore, require that those lines are taken out of service. Obstructions can make a simple splice of a line impossible (if, for example, a detention basin is directly under the splice area), necessitating a line replacement, which is costlier and takes more time. Finally, fire hydrants located within easements create safety hazards. Because Duke uses very large equipment to build and maintain electric transmission facilities there is a significant risk that fire hydrants will be damaged or ruptured during such work. If a fire hydrant is damaged near work on electric transmission facilities, water can be released in a high-pressure arc and create an energized water flow.

J&J offered a variety of responses to Duke's claim of unreasonable interference, but they did not overcome Duke's designated evidence. J&J also contended that its improvements do not unreasonably interfere with Duke's use of the easement because "the transmission of electricity through the easement has not been obstructed." The problem with this argument is that, as Duke puts it, the easement was obtained "not just to send electrons down conductors (wires) but to allow much more." Specifically, the easement instrument grants "the perpetual right, privilege, easement and authority to enter upon the real estate hereinafter described and, now or in the future, there to construct, erect, maintain, operate, inspect, patrol, repair, replace, extend, renew and/or remove" the wires, towers, poles, and attachments thereto. In short, the purpose of the easement extends far beyond the simple transmission of electricity. Duke must also be able to move freely within the easement

to build and maintain the infrastructure that is necessary for the transmission of electricity.

Regarding Duke's need to do maintenance work, J&J pointed out that Duke's "ability to maintain its facilities within the easement" has not, to date, been obstructed by J&J's improvements. The fact that J&J's improvements have not yet hindered any of Duke's work by no means establishes that they will not do so in the future. Duke designated extensive evidence that J&J's improvements could seriously impair Duke's ability to perform maintenance and repairs in the future.

The appeals court finally concluded that J&J failed to meaningfully rebut Duke's designated evidence that the challenged improvements, taken together — the sole entrance to the subdivision, the road and the buried utilities running parallel within the easement, the detention basins, and the fire hydrant — unreasonably interfere with Duke's use of the easement. They therefore reversed the trial court's grant of summary judgment in favor of J&J and remanded the case for the entry of summary judgment in favor of Duke, including an injunction requiring J&J to remove the challenged improvements. They recognize that this may strike some as a harsh result. But as they have said, a landowner who constructs improvements on an easement — especially without consulting the easement holder — does so "at their peril."

[The online opinion](#) includes a drawing showing the area at issue, the boundaries of the Easement and the locations of the electric towers and wires.

**Saurabh Bagchi and Somali Chaterji, v. Amberleigh Village Homeowners Association, Inc., Indiana Court of Appeals Case No. 19A-PL-2070, March 13, 2020 MEMORANDUM DECISION**

In this case from the Tippecanoe Circuit Court, property owners submitted a plan for a fence not meeting the subdivision covenants to the Amberleigh Village Homeowners Association, Inc. ("the HOA"), which was not approved. The property owners had a fence constructed anyway and eventually this case came forward where the court directed property owners to submit a plan to modify their fence such that it would be acceptable to the HOA. The court further ordered that if an agreement as to an acceptable fence could not be reached, the property owners were required to remove the fence.

On appeal, the property owners presented two issues for review, restated as:

Did the trial court err when it determined that the HOA rejected the property owners' proposed plan for installation of a fence around their front and back yards, and did the trial court err in concluding that the HOA, which waited over three years to provide the property owners with notice of the noncompliance of their fence with the restrictive covenants, did not acquiesce in the existence of the noncomplying fence?



The court found that the HOA did in fact deny the proposed plans and that because the HOA did not notice the fence promptly, there was no acquiescence. In addition, the covenants stated that a delay in enforcement does not constitute a waiver of the right to do so, which has generally been upheld as a contract term in Indiana. The judgment of the court was affirmed.

**Darrin Lincoln, Sherri Lincoln, and Raymond Lincoln v. Carlos Rico and Maria Guadalupe Rico, Indiana Court of Appeals Case No. 19A-PL-1476, March 31, 2020  
MEMORANDUM DECISION**

Here the Ricos bought a house on Van Buren Street in Leesburg in 1989. Their deed had the historic description as well as a new description prepared by a surveyor in that same year based on his 1989 survey (holding monuments, posts and a fence line). The new description was preceded by, "The above described tract also being more particularly described as follows." Hartman bought the property east of the Rico property in 1961 and sold his property to the Lincolns in 2016, subject to a life estate. There is a driveway near the east line of the Rico property that they used to access the rear of the property which they used to run a landscape and lawn care business. In 2017, the Lincolns constructed a fence down the middle of this driveway, preventing the Ricos from accessing the rear of their property by an improved access route. The Ricos filed suit and a preliminary injunction was issued on April 20, 2017, ordering the Lincolns to remove the fence.

The Kosciusko Circuit Court held a bench trial and eventually issued a permanent order enjoining the Lincolns from placing any obstructions on the Rico property as described

in the top legal description in the Rico deed. The trial court found that the first survey and the subsequent description placed the southeast corner of the Rico property 13.7 feet west of the true location. A second survey relied on the Lincoln deed, the first survey and the Val map for the railroad east of the Lincoln property and showed a 1.5-foot discrepancy with the first survey. A third survey showed the proper location of the Lincoln property. Photographs, apparent historical use and a tree line are consistent with the property line determined by the court. The Lincolns appealed, arguing among other things that the second Rico description should control, as that would mean the fence was not on the Rico property.

The appeals court consolidated the Lincolns' four issues into one — whether the trial court improperly granted the Ricos' motion for permanent injunction. Since the first and second Rico descriptions do not describe identical pieces of land as they were meant to, the court upheld the use of the first. The appeals court also quoted from a Maine Supreme Court opinion: "a true and certain description of the grant is never invalidated by the addition of a falsity, when the intentions of the parties can be subserved, and the conveyance upheld, by sustaining the true and rejecting the false description." Since the Ricos have no other adequate remedy under the law and would suffer clear, irreparable harm in the absence of an injunction because the Lincoln's fence trespassed on their property, the judgment of the trial court was affirmed.

*Bryan F. Catlin, PS has been registered as a Land Surveyor in Indiana since 1991. He holds BS Land Surveying Engineering and MS Engineering (Geodesy) degrees from Purdue University.*

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## GETTING THE MOST FROM YOUR INSURANCE PROGRAM

By Holly Gill-Gaither, CIC, WalkerHughes Insurance

**W**hether it is insuring your surveying equipment, your company-owned autos, or insuring your firm against possible errors or omissions, the fact is land surveying firms can end up spending a fair amount of their annual budget on insurance expenses. With this in mind, how can land surveying firms get the most value from their insurance program and how can they impact their own premiums? Let's take a look.

First, let's start with the professional liability application process. There are a few key questions on the professional liability application in which underwriters can apply premium credit:

- Did members of your firm attend a risk management seminar during the last year?
- Do any members of your firm belong to a Design Professional Association such as the Indiana Society of Professional Land Surveyors, National Society of Professional Surveyors, American Institute of Architects, or American Society of Civil Engineers?

A response of "yes" to either of the above will allow the underwriter to include premium credits.

Another key question on the Professional Liability application pertains to contracts: What percentage of your contracts include a Limitation of Liability provision of \$250,000 or less?

Some carriers will provide premium credits of 10% or more for proactive use of this contractual provision. If you are not familiar with the provision and its potential benefits, please feel free to contact our office at (317) 353-8000 or send an email message to [h.gillgaither@walkerhughes.com](mailto:h.gillgaither@walkerhughes.com).

The subject of contracts will lead us into an area of the application that can adversely affect the premium quoted. The typical Professional Liability application will ask for a percentage breakdown of the types of contracts a firm uses:

- Firm-drafted agreement
- Client-drafted agreement
- Association-drafted agreement (like those from the American Land Title Association, American Institute of Architects, or Engineers Joint Contract Documents Committee)
- Purchase Order-only
- Master Services Agreement (followed by corresponding purchase/work order)
- Letter of Agreement
- Verbal

Since insurance companies spend significant resources reviewing and analyzing claim data, over time, they have identified those types of contracts that are problematic to successful claim outcomes. Of the list above, the red flags to underwriters are Verbal and Purchase Order-only contractual situations. If your firm has a higher percentage in these categories, your availability of markets willing to quote your firm could be reduced and your insurance premium will likely be higher. Not only could you be paying more on the front end for the annual insurance premium, it is also important to consider how your expenses could be impacted on the back end should a claim occur. Consider trying to defend a claim on a he-said/she-said strategy or defending against a poorly written purchase order filled with warranty and guarantee language or incorrect standard of care language. The odds of a successful outcome go down, while the odds of your deductible being triggered go up.

Let's shift gears to the Property & Casualty part of a land surveyor's insurance program. For those firms working on commercial projects or working for the developer or contractor directly, reviewing and understanding the list of insurance requirements can be a daunting task. It can also be an expensive task if your insurance program is not set up on the front end with the appropriate endorsements for contract compliance. Adding endorsements such as Additional Insured or Waiver of Subrogation, if not set up properly on the front end, could require hundreds of dollars per policy to add mid-term. Additionally, adding value to this part of your insurance program is to have an insurance agent resource that can review, evaluate, and consult with you on that vast list of insurance requirements.

Last, let's consider the value of the partnership of your insurance agent. Partnering with an agent who can bring his or her resources directly to your firm can add value to your overall insurance program and what you are getting out of those premium dollars. Those resources may include free continuing education offerings via webinars or seminars, up-to-date claim articles or industry trends, contract review assistance, or direct availability to discuss coverage questions to name a few.

As the saying goes, "control what you can control." I believe a land surveying firm can take control in some important areas to impact their insurance costs and to choose to bring more value to their insurance program.



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