

The Tarheel

FALL 2017 | No. 17.2

SURVEYOR



**A SURVEYOR'S
"STATE" OF MIND
P. 16**

**THE 4 P'S OF RUNNING A
SUCCESSFUL BUSINESS
P. 24**

**A SUCCESSFUL
LEGISLATIVE YEAR
P. 20**

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The Tarheel SURVEYOR Fall 2017

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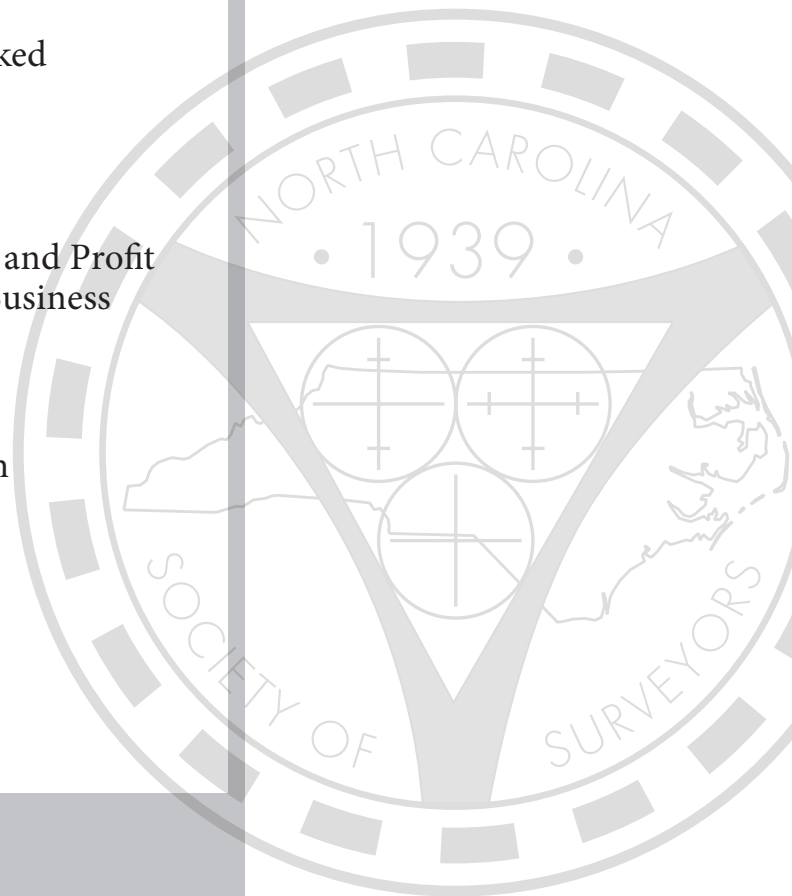
ABOUT NCSS:

- Founded January 31, 1939
- Second oldest professional surveying organization in the United States
- Only professional surveying organization in NC
- Affiliated with the National Society of Professional Surveyors and, therefore, all Professional Members are also accounted as members of NSPS as of July 1, 2013

OUR MISSION:

"A society of professional surveyors and their associates dedicated to enhancing professionalism, improving legislative awareness and promoting the profession of surveying."

Cover Image: Carter-Finley Stadium by Chad T. Howard



WHO WE ARE

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YADKIN VALLEY CHAPTER PRESIDENT

Marion L. Sandlin Jr.
marionsandlin@cesicgs.com

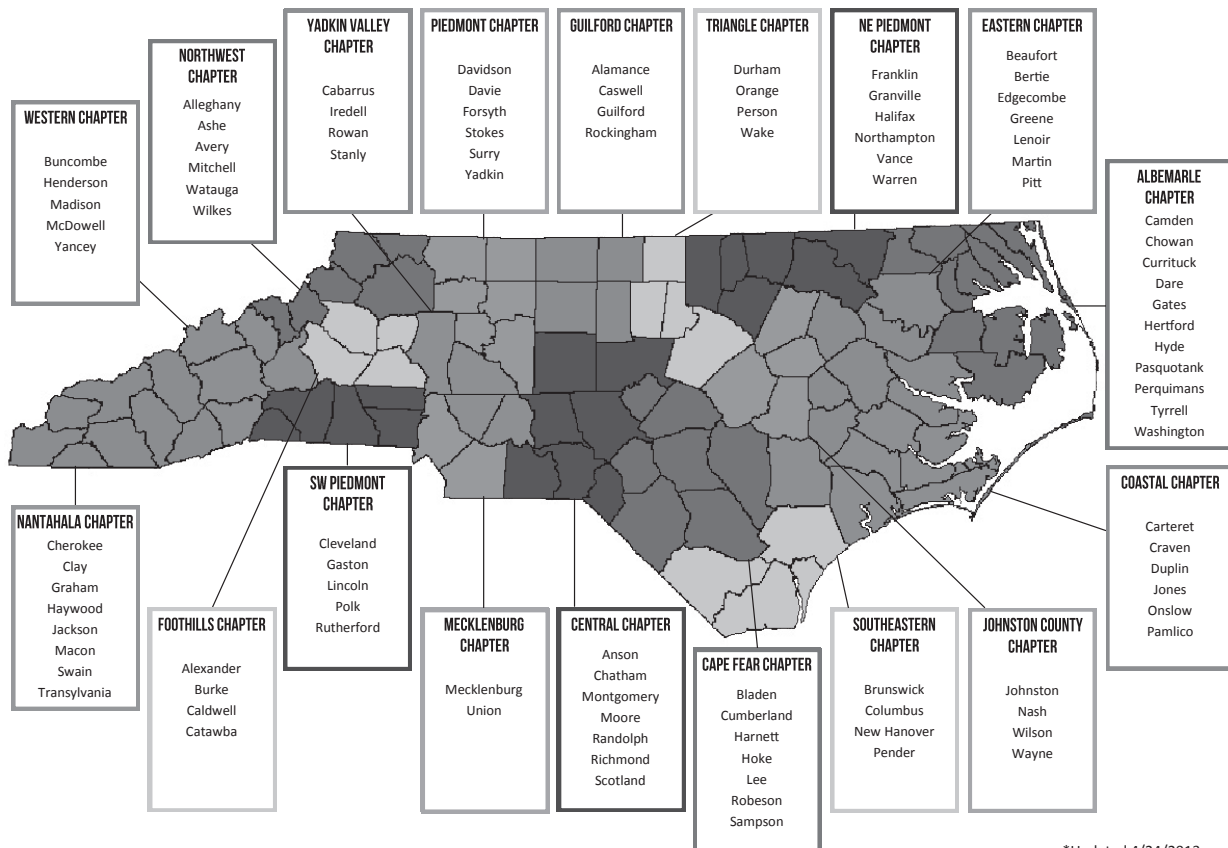
MARKETING & MEMBERSHIP DEVELOPMENT

Sherri L. Barron
sbarron@ncsurveyors.com

CHAPTER MEETINGS

CHAPTER	DATE & TIME	LOCATION
Albemarle	3rd Tuesday 6:30 pm	Cypress Creek Grill, Elizabeth City
Cape Fear	Last Tuesday 6:30 pm	Various Locations, Fayetteville
Central	Last Tuesday 7:00 pm	Pumpkin Creek Cafe, Seven Lakes
Coastal	Last Monday 6:30 pm	Texas Steakhouse, Morehead City
Eastern	2nd Monday 6:30 pm	Parker's BBQ, Greenville
Foothills	2nd Tuesday, 7:00 pm	Timberwoods, Morganton
Guilford	3rd Wednesday 6:00 pm	Various Locations in Greensboro
Johnston County	2nd Tuesday 6:00 pm *no meeting Jun-Aug	Holt Lake BBQ, Smithfield
Mecklenburg	1st Monday 6:00 pm *no meeting Jul-Aug	Dilworth Grille, Charlotte
Nantahala	3rd Tuesday 6:30 pm *no meeting Jun-Aug	Ryan's Steakhouse, Sylva
NE Piedmont	Last Tuesday 7:00 pm	Various Locations, Louisburg
Northwest	3rd Tuesday 6:00 pm	Various Locations, Boone & Wilksboro
Piedmont	4th Tuesday 6:00 pm	Various Locations, Winston-Salem
Southeastern	Last Wednesday 7:00 pm	Carolina BBQ, Wilmington
SW Piedmont	2nd Thursday 6:30 pm	Ichiban Sushi & Hibachi, Shelby
Triangle	3rd Tuesday 6:30 pm	Peddler Steakhouse, Raleigh
Western	2nd Tuesday 6:30 pm	Cornerstone Restaurant, Asheville
Yadkin Valley	2nd Wednesday 6:30 pm	Various Locations, Salisbury

NCSS Local Chapter Areas



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DIRECTOR'S NOTES



We have recently had an uptick in conversations indicating that the organizational structure of the North Carolina Society of Surveyors (NCSS) is often confusing for members. I wanted to take the opportunity of this edition to explain the mission of our Society and its financial structure.

Our mission statement charges NCSS with three goals: enhancing professionalism; increasing legislative awareness; and promoting the profession. Our financial structure reflects these goals.

The general operating budget addresses all three elements of the mission statement. We host many educational seminars around the state to fulfill the first charge of enhancing professionalism. The second charge to increase legislative awareness is fulfilled by spending approximately 8% of our total budget on lobbying supported by my efforts in the political arena accounting for 30% of my time, and therefore, my salary. Obviously, our events such as the Annual Conference and Trade Show, the annual golf tournament, and other statewide appearances, such as November's participation in the NC High School Counselors Association Conference, are for the purpose of promoting the profession in its totality.

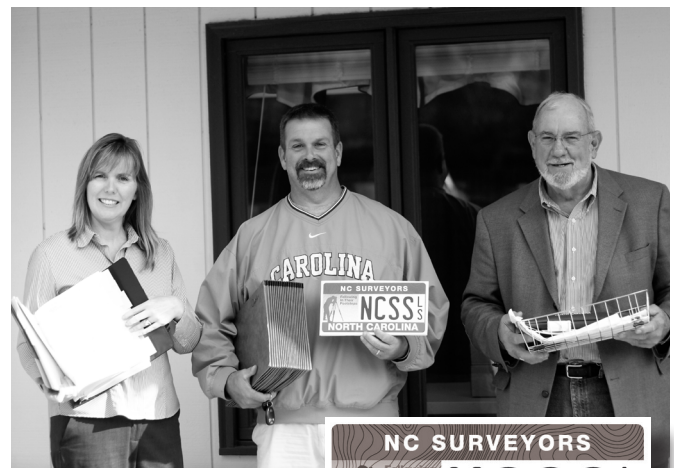


The North Carolina Society of Surveyors, Inc. is a 501(c)(6) organization. The purpose of this type of tax-exempt status, according to Chron.com, is to "help small businesses advance their industry or geographic area. These organizations differ from 501(c)(3) charities, which must advance a charitable purpose such as religion, education or public assistance. To qualify for tax exemption under Internal Revenue Code Section 501(c)(6), all of a nonprofit's earnings must be reinvested into the organization and may not benefit any individual member or shareholder." This explains why NCSS has a volunteer Board of Directors, for which I am very grateful, and why there are no shareholders. This also explains why we have a balanced budget each year. The income we receive is expensed directly for the benefit of our organization. We are held accountable as good stewards of your money by the outside CPA firm, Mitchell & Nemitz, PA.

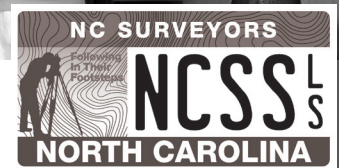


The Education Foundation, Inc. is a separate entity from NCSS whose sole purpose is to promote the education of surveyors. They have a separate Board of Directors, a separate bank account and a separate tax structure. The Foundation is a 501(c)(3) organization which means any contribution you make to them is tax-deductible. Remember those specialty license

plates? The Foundation is the organization that receives \$15 of every license plate purchase or renewal. This money will grow their endowment and provide scholarships to those taking classes towards a degree in the geomatics field. NCSS supports their mission wholeheartedly, but our funds are never co-mingled for any purpose. Your generous donations to the Foundation do not support any programs or budget needs of NCSS. Their primary funding comes from license plates, the annual cash raffle and donations. Jim Davis is currently the Director of the Education Foundation.



Michelle Kenny, Chris Witherspoon & John Fumage holding 500+ applications.





MAPS, Inc. is another organization under the NCSS umbrella. The Museum of Archives and Preservation of Surveying, Inc. was incorporated on January 5, 1998. It, too, is a

501(c)(3) organization whose purpose is to operate solely for charity. The goal of MAPS is to preserve the history of surveying including scanning unrecorded maps of those who are no longer surveying because of retirement or death. During the past 3 years, interns paid by MAPS, Inc. have scanned over 5,000 maps available to current members on the NCSS website, which can be used for research purposes. Your donation to MAPS is tax-deductible. The mission of MAPS, Inc. promotes the third element of our mission statement by promoting the profession's historical roots. It, too, has a separate governing body and separate bank account. NCSS helps the organization by hosting the museum in our Wake Forest office and hosting the MAPS database on our website. The primary financial resource for MAPS is the sale of the book, *Following in Their Footsteps*, the annual golf tournament in Morganton, and the Mix and Mingle hosted the first night of the Annual Conference and Trade Show. David Alley is currently President of MAPS, Inc.



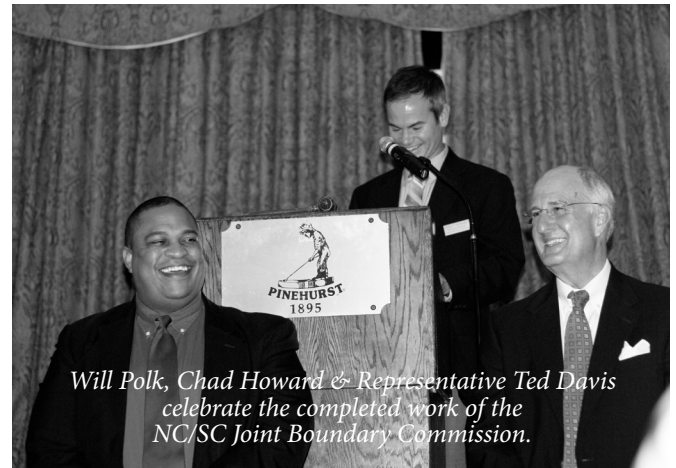
Annual MAPS Golf Tournament



Finally, NCSS has a **Political Action Committee (PAC)** that is governed by the laws of the North Carolina Board of Elections, which falls under the purview of the Secretary of State's Office. Our PAC operates

as a committee within NCSS, but because of strict guidelines provided by the state, it has its own president, treasurer and checking account. Monies donated to our PAC must come through an individual rather than a company or chapter, and all contributions must be reported quarterly

by the PAC Treasurer to the State Board of Elections. The purpose of our PAC is to contribute to the campaigns of legislators that help NCSS accomplish our overall goals through legislation, thus fulfilling the second component of our mission statement. The PAC's primary fundraising event is the annual PAC Raffle hosted in the fall. Currently, you can purchase raffle tickets for a 50" TV that will be awarded during lunch on December 8th at NCSS's final education class of the season. Jamie Watkins is Chair of the NCSS Political Action Committee.



*Will Polk, Chad Howard & Representative Ted Davis
celebrate the completed work of the
NC/SC Joint Boundary Commission.*

All of these organizations are critical to the overall success of surveyors in North Carolina. They each have a beneficial role for the surveying profession. We appreciate the support you have provided through the years and look forward to the continuation of that support in the years ahead. Perhaps this information will help everyone to understand where your contributions are directed and how they are managed. Please continue to support our mission statement as we make a difference.

Christy C. Davis

Christy C. Davis, Executive Director



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LETTER FROM THE PRESIDENT



To say this has been an exciting year for NCSS is an understatement. I would like to give a huge thank you to all of you that have contributed so much of your time and energy to NCSS this year. I am confident this has been the busiest and most successful year, legislatively, that we have ever experienced. We still have a lot to do. I am confident in our ability to accomplish our goals. Keep up the good work.

In keeping with the suggested football theme for this issue of Tarheel Surveyor, I am going to share one of my favorite survey projects. This has nothing to do with boundary retracement, finding a corner that has not been seen in 100+ years or dramatically fending off snakes or alligators while chest deep in a swamp. However, it was a unique experience that may interest you.

I was contacted several years ago by my high school alma mater, Hoke County High to mark the track around the football field. The job sounded simple, knowing that it had to have been marked before, and that there are templates available for your typical track. I should be able to punch in the numbers, find the established control and stake out the track.

At the initial meeting with the athletic director (AD) it came to my attention that the track was not originally laid out exactly as it should have been—close, but not perfect. The AD, William Colston, also just happened to be the track coach and one of my high school football coaches in 1970-71. He was the current track coach and Advanced Calculus teacher at the high school, as well. Coach Colston wanted to make sure this stakeout was correct because, if there was a state high school record set, he wanted to have documentation on file signed and sealed by a PLS that the track was the correct length. As a side note, the official rule book states “... distances should be determined by a competent engineer.” Yes, I did have a teachable moment there with Coach Colston.

The track had been recently repaved and the pavement “slightly” exceeded the original track. Our task was to locate the newly paved area, which extended to an existing perimeter chain-link fence and fit a track within that area that met all the track dimensional requirements.

After locating and fitting the track to the existing conditions, we had to mark the location of all starting blocks, exchange zones for relay events, and the placement for all hurdle events. All of these points had specific colored icons placed at the correct points along the lane markings or within the lanes. Here is where the fun began.

Fitting the track to existing conditions was not too difficult. We then delved into the markings for the individual events. Keep in mind all events had to end at the same finish line. All of the locations of starting blocks, exchange zones and icons had to be recalculated based on the new geometry of the track for all events to be completed at the finish line. The lanes were required to be 42 inches wide, stripes 2 inches and the measurement line for each event was 8 inches off of the striping of each lane with the exception of lane one; that measurement line was one foot from the lane striping. This had to be done for every high school track event that was in the current rule book. To add to the mix, some of the events required the runners to stay in their respective lanes for at least one lap and then transition into lane one for the completion of the event. If I wasn't before, I was afterwards, an expert on curve calculations. I thank the Lord that they did not require spiral curves on this track. I made sure there were multiple control points set in and around the stadium to facilitate this the next time.

After several days and multiple meetings with Coach Colston, sometimes interrupting his calculus class, we completed the project on time and within budget

A handwritten signature in black ink that reads "Leland D. Strother". The signature is fluid and cursive.

Leland D. Strother, NCSS President

Building Community Through Disaster Relief

by Joe Dolan, PLS, NSPS Foundation Chair

The NSPS Foundation has been extremely busy! To date, we have received and processed 15 applications for disaster relief. The lion's share is from Texas, but Florida is starting to respond. The claims have included a home burning down when the electricity was restored, a total loss by flooding and a home being literally blown apart.

We have awarded over \$50,000.00 so far and the grant requests are really just starting to come in. People affected by these storms are still trying to provide basic needs for their families. Many are not yet aware that "**Their Foundation**" is available to help them. But in the days ahead, the State Affiliates will be making them aware. I am asking you to make sure that I do not have to deny one of those applications! I firmly believe that we will be receiving applications for the next year and they will total well into the six figure range before this is over.

My point is that **Your Foundation needs donations!** We need money to replenish our Disaster Relief Fund! Please be as generous as possible with your donations. I don't like asking for money, but I must. Please send whatever you can afford. We will gratefully accept any donation you can make.

Send your donations to headquarters: Please mark Disaster Relief on your checks and remember we are a tax deductible 501(c)(3) organization.

National Society of Professional Surveyors Foundation, Inc.

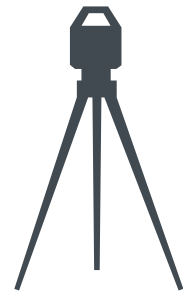
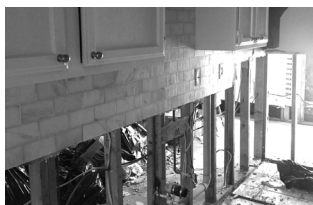
5119 Pegasus Drive, Suite Q

Frederick, MD 21704

Remember that the next check we send could be to you!

Thank you for your anticipated generosity.

NCSS would like to extend a special thank you to the Central Chapter for their \$300 donation. All together, NCSS donated \$800 to the NSPS Disaster Relief Foundation.



Schedule at a GLANCE

NOVEMBER 10, 2017

UAS & NGS 2022

with Yadkin Valley Chapter

8:00am-4:30pm

7.5 PDHs

Gold Hill Mines Historic Park

Gold Hill, NC

NOVEMBER 17, 2017

Construction Staking &

3D Modeling

with Foothills Chapter

8:00am-4:30pm

7.5 PDHs

The Rock Barn

Conover, NC

NOVEMBER 17, 2017

Surveyor Workshop

8:30am-4:45pm

7.5 PDHs

College of The Albemarle

Elizabeth City, NC

DECEMBER 1, 2017

Colonial Period Surveying

UAVs for Mapping/Surveying

with SW Piedmont Chapter

8:00am-4:30pm

7.5 PDHs

Rankin Lake Baptist Church

Dallas, NC

DECEMBER 8, 2017

Top 20 Q&A: Surveyor to

Lawyer | eRecording

ALTA Surveys

8:00am-4:30pm

7.5 PDHs

The Forks Cafeteria

Wake Forest, NC

Milestones in Education

by Peggy Fersner, PE

A lot of the members of NCSS who know me would say that I am a little OCD, definitely devoted to this organization, a bit crazy, goal oriented, and even a nervous Nelly when it comes to some things. I worry. I fret. I check and recheck. I don't sleep. So getting the Geomatics program accredited has consumed me (remember I'm goal oriented) for a very long time. Starting 20 years ago when the Geomatics program was a gleam in some members' eyes, I have been involved in some fashion.

To refresh some memories, the curriculum was critiqued, designed, and approved by members of the surveying profession. We brought professionals in from all areas of Geomatics – boundary, GNSS, photogrammetry, remote sensing, GIS, construction, etc. to offer their expertise regarding course content. NCSS worked tirelessly to modify 89C while we created all of the documentation to implement a new program in the UNC system. Miraculously, both came to fruition within a month of each other and by fall of 2006, the program was officially the only 4-year Geomatics program in the state. There was one major shortfall and that was the gaping hole in the ability to offer our boundary and legal courses. Most of us involved at the time would tackle math related courses, but were definitely smart enough to know that we didn't dare touch this area. That's when we hired Jerry Nave from East Tennessee State University, and as you all know, anything legal is his passion. There was still one major item that needed to be accomplished and that was accreditation. One major benefit of our program is that it allows graduates to sit for their PLS license in other states that require a

4-year degree. Most of these states also require that the program be ABET (Accreditation Board for Engineering and Technology) accredited. Accreditation was always our chief goal for the program. We overcame some obstacles and, as reported last spring, we had our initial accreditation visit in November 2016. Drumroll please...



8/2/2017

Applied Science Accreditation Commission

Summary of Accreditation Actions
for the
2016-2017 Accreditation Cycle

North Carolina Agricultural and Technical State University
Greensboro, NC

Geomatics (B.S.)

Accredit to September 30, 2023. A request to ABET by January 31, 2022 will be required to initiate a reaccreditation evaluation visit. In preparation for the visit, a Self-Study Report must be submitted to ABET by July 01, 2022. The reaccreditation evaluation will be a comprehensive general review.

This is a newly accredited program. Please note that this accreditation action extends retroactively from October 01, 2015.

The very lengthy document that we received from ABET on August 2, 2017 is summed up on the image attached. The Geomatics program is accredited! Jerry, Leila, and I want to thank each and every one of you who have taken this journey with us. It truly is one of the proudest moments in our respective careers. Without the proctors for our students, NCSS's ongoing support, our tireless Geomatics Advisory Committee, the administrators and faculty that believed in the value of this program and most of all our students, this would not have happened – we give you our heartfelt thanks! Goal achieved!



Peggy Fersner is the Geomatics Coordinator at NC A&T State University in Greensboro. She has been on staff since 1993, teaching surveying, GIS, and hydrology courses. She has earned both her BS and MS in Civil Engineering.

Welcome New Licensees

Dwight Ashley	David Kinsaul
Glenn Ayala	Mark Luke
Thomas Brooks, Jr.	Jose Martinez, III
Roger Burns	Douglas Rowe
Adam Canoy	Stephen Seay
Robert Chrismon	Kenneth Silverthorn
Ryan Dreelin	Alex Ward
Jason Gasperson	James Whitacre
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rgurliit@avioimage.com

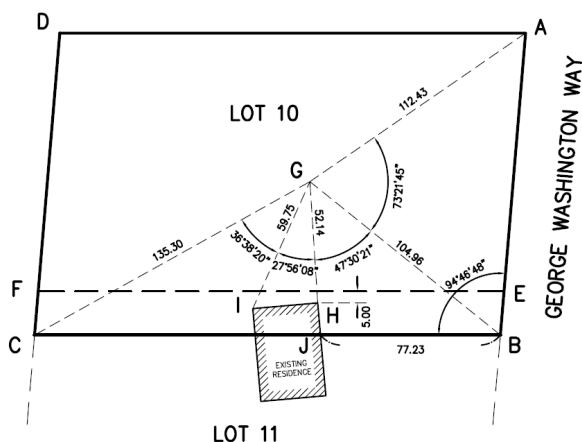
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TRIG—STAR PROBLEM LOCAL CONTEST

THE OWNER OF LOT 10 IS PREPARING TO HAVE A HOUSE BUILT ON THE LOT. THE RESULTS OF A LAND SURVEY OF LOT 10 SHOWS THAT A PORTION OF THE EXISTING RESIDENCE THAT WAS BUILT FOR THE OWNER OF LOT 11 IS OVER THE LOT LINE. IT IS NECESSARY THAT A PORTION OF LOT 10 BE SOLD TO THE OWNER OF LOT 11. THE CITY REQUIRES THAT THE NEW LINE IS TO BE 5.00 FEET (BY PERPENDICULAR MEASUREMENT) FROM THE CLOSEST CORNER OF THE EXISTING RESIDENCE, AND THAT THE NEW LINE IS TO BE PARALLEL WITH THE SOUTH LINE OF LOT 10. THE SURVEYOR'S MEASURED ANGLES AND DISTANCES ARE SHOWN BELOW. (NOTE: LINE AD IS PARALLEL TO AND EQUAL IN DISTANCE TO LINE BC.)



DISTANCE GA = 112.43 DISTANCE GB = 104.96 DISTANCE GH = 52.14
DISTANCE GI = 59.75 DISTANCE GC = 135.30 DISTANCE BJ = 77.23
ANGLE ABC = 94°46'48" ANGLE BGA = 73°21'45" ANGLE HGB = 47°30'21"
ANGLE IGH = 27°56'08" ANGLE CGI = 36°38'20"

DISTANCE AB = _____ (6 POINTS)
DISTANCE BC = _____ (6 POINTS)
DISTANCE HI = _____ (6 POINTS)
DISTANCE BE = _____ (6 POINTS)
AREA BCFE = _____ (6 POINTS)

REQUIRED ANSWER FORMAT

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EDUCATION FOUNDATION

A NEW HOPE

by James E. Davis, PLS
Education Foundation President



A New Hope (for surveying in North Carolina). This August, the North Carolina Agriculture & Technology (NCA&T) Geomatics Program received its official notification of accreditation. The program will be officially accredited

through September 30, 2023. There are only about twenty other ABET accredited 4-year surveying/geomatics programs in the United States. The accreditation is the result of a long process started by the North Carolina Society of Surveyors (NCSS) and continued by the Education Foundation many years ago to provide a 4-year surveying program in North Carolina. As your representative, I was honored to meet with the Accreditation Review Board during their evaluation of the program. One thing that impressed the Review Board was the level of support from NCSS. The membership has contributed approximately \$100,000 over the years in support of in-state education. Additionally, members serve on the NCA&T Geomatics Advisory Board to ensure that the program produces graduates that meet the requirements of the profession and the public.

Last spring, I participated in the review of the senior project presentation for three NCA&T graduates. They worked collaboratively starting in the fall to perform an ALTA/NSPS Survey and topographic survey for a proposed development project. In the spring, they produced a subdivision plat and construction documents including grading, water, sewer and stormwater plans. Needless to say, the staff at NCA&T is doing a great job developing these students for a great future in surveying, and also preparing the future leaders for our profession.

With all that in mind, I am happy to report that the revenue from our specialty license plate over the last year was \$9,695. The revenue includes regular renewals plus the initial license tag purchases for the 500 plus members who put their money down to get it started. We now receive quarterly distributions from the North Carolina Department of Transportation (NCDOT) of approximately of \$1,800 for

license tag renewals. However, with almost 1,000 members, plus many companies with fleets of trucks, we have plenty of room to grow.

Given the new source of revenue, the Foundation decided to increase the amount of scholarship money that could be awarded per student. The board voted to increase the maximum amount for a 2-year student from \$1,000 to \$2,000 and for a 4-year student from \$2,500 to \$5,000. The board is also considering options to provide supplemental funding to encourage Engineering Technology students at 2-year colleges to take surveying classes.

The annual "Cash Raffle" will be held again this year and will consist of 100 tickets sold for \$100 each. There will be a reverse drawing to determine the winners held at the NCSS Conference on February 8-10, at the Crowne Plaza in Asheville to determine the winners. The holder of the first ticket drawn will win \$500, the holder of the next to last ticket drawn will win \$500. The owner of the last ticket drawn will be the grand prize winner and will win \$2,000. See your local chapter president if you would like to purchase a ticket.

The Education Foundation will once again participate in the NC Math Teachers Conference on October 27 and 28 in Greensboro. The conference is a good way to spread the word about the surveying profession and to promote the 4-year and 2-year programs in the state.

We continue to support and carry out the purposes of NCSS. As your Education Foundation, we focus on the areas where we believe we can have the most impact:

1. Growing the endowment
2. Providing a funding mechanism to support a 4-year program
3. Providing a funding mechanism for scholarships

If you have any ideas for the Foundation to consider or would like to attend a meeting, please let me know.

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Raleigh's Memory Lane is Well Marked

by Richard Homovec, PLS

Monuments and memories may coincide in unusual ways. The monument at the corner of Pullen Road and Memorial Circle at North Carolina State University (NCSU) restored some monumental memories of Raleigh, NC in the 1960's for me (See Figure 1).

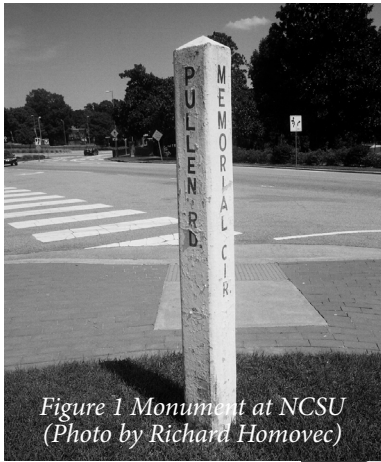


Figure 1 Monument at NCSU
(Photo by Richard Homovec)

North Hills and other subdivisions in Raleigh in the late 1950's & 1960's had large monuments at the right-of-way (ROW) of the point of intersection (PI) in at least one corner of an intersection. Said monuments also functioned as street signs and were very "unpopular" with motorists who had chosen to meander off of the travel way. Apparently after the monuments were removed, some were replaced with iron pipes. Iron pipes are functional but street signs or concrete monuments are a little more memorable for a young child.

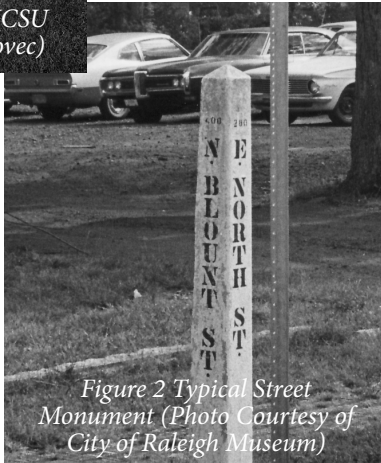


Figure 2 Typical Street Monument
(Photo Courtesy of City of Raleigh Museum)



Figure 3 From the Record.

It is coincidental that an iron pipe and a concrete monument were in the same location on one of the original subdivision maps for North Hills, (Book of

Maps 1958 Page 258, Wake County Registry). This was found at the intersection of Yadkin Drive and Currituck Drive, but had no call for a PI Monument (See Figure 3).

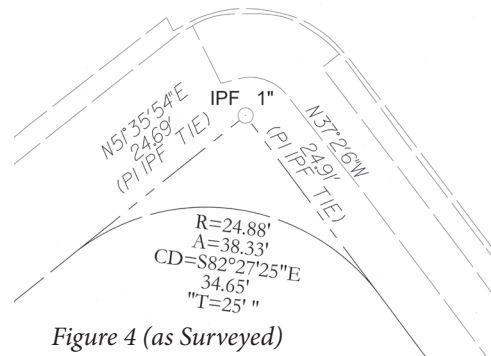


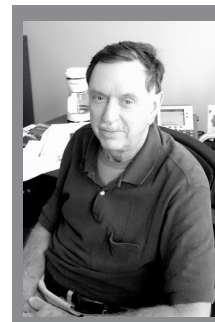
Figure 4 (as Surveyed)

map. (Some municipal codes stipulated 25' Radius). When one considers significant digits and tools of the time, the numbers are very close, proving the meticulous attention to detail found in some 1950's and '60's surveys. Setting small concrete monuments can be challenging with modern tools. The mass of the original monuments was great and they were set with chains held high.

The original monuments were not called for in any original record which could be found. Through the years, someone replaced these PI monuments with iron pipes. These are the facts on the ground.

Today, the property owner may be led to believe that the iron pipe monument is the corner and not a witness to the point of curvature (PC) & point of tangency (PT) of the ROW if poorly trained field crew were instructed to mark the ROW.

Raleigh's old street monuments were memorable and accurate. I remember looking up to them as a young child with my father. Today, I still look up to them, but rather from a professional appreciation for accuracy.



Richard J. Homovec returned to surveying after careers as professional photographer, and US Merchant Mariner. He has worked aboard NOAA and US Navy Special Projects and Survey ships conducting Hydrographic Surveys. Other employment including Photogrammetry and conventional Land Surveying in both public and private sectors. He is currently employed as Staff Surveyor with the City of Raleigh.

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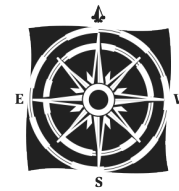
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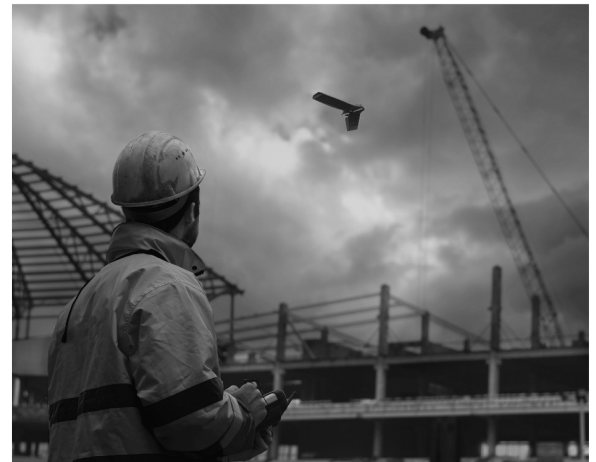
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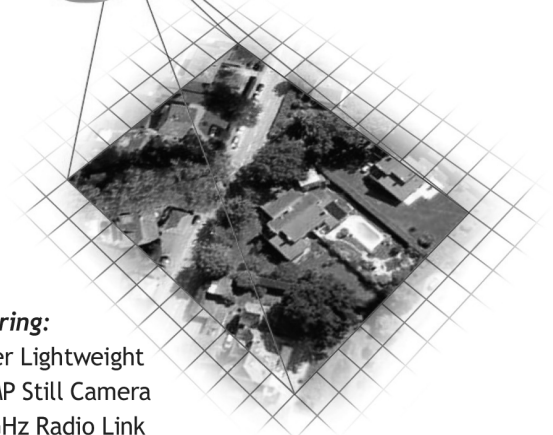


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A Surveyor's "State" of Mind

by Chad T. Howard, PLS



I think it is safe to say that most surveyors became surveyors so that they could work in the great outdoors. We are a breed of mankind that tend to feel trapped like a rabbit in a cage when we are confined to a desk, which is most often found within at least three walls.

We love to feel the sun on our skin, especially when there is a nice breeze helping to reduce the sweat on our brow. We are the kind of people who are not afraid of a hard day's work, even when that means we are cutting our way through a tick-infested briar patch all day. Surveyors are pioneers and explorers. We relish the thought of putting our boots onto patches of ground that haven't felt human footsteps in decades. Where many look at the forest as a place filled with critters that are crouching in the shadows, just waiting to bite you, we see a place of tranquility – a place away from the hustle and bustle of society. We find solace among the wild places of this Earth.

After receiving my associates degree in land surveying and civil engineering from Wake Technical Community College, I went to work as a surveyor for a firm in Garner, NC that specialized in municipal engineering projects. We routinely performed surveys for water, wastewater and storm drainage design projects, but we spent a great deal of time dealing with solid waste projects. Although working with garbage may not seem all that glamorous, it worked out nicely

for a young man who decided to be a surveyor so that he could work in the great outdoors. So before you create a picture in your mind of this surveyor standing on a pile of trash wearing a sheepish grin, please allow me to explain why I use the term "great outdoors" in the same sentence as "garbage."

Landfills are rarely built in urban settings. Municipalities tend to seek out undeveloped lands to lessen the impact that their solid waste facilities will have on the taxpayers. As such, being a surveyor for the development of new landfills meant that I was going to get to survey tracts of land in remote areas. During the five years that I worked for the Garner firm, I had the privilege of surveying rural farm and forest lands across the State of North Carolina and even into South Carolina. I would spend a week or two in eastern North Carolina surveying in the scrub pines along tea-colored creeks and then spend the next two weeks surveying old farm lands in Surry County, within view of Pilot Mountain. I spent weeks on a beautiful tract of land in Stanly County, near the Uwharrie Mountains, and I spent nearly an entire summer working on a boundary survey for almost a thousand acres of hunting club lands in Chester, South Carolina. I will never forget the way that the chills ran down my spine when I nearly stepped on a tom turkey in the early morning light while walking through the woods of that hunting club. When that bird took flight, it sounded like a helicopter taking off! But of all the places that I was sent to perform land surveying

services, my favorite site was an old burley tobacco farm nestled along the boundary of the Great Smoky Mountains National Park near Maggie Valley, NC. The boundary survey for this tract of land felt more like hiking than working and since hotels were quite a drive from the site, we spent a few nights camping along the Cataloochee Creek. Taking a dip in the pristine, frigid waters of the Cataloochee after a hard day's work is something else that will chill the spine!

So as you can see, working for an engineering company that specialized in solid waste was truly a blessing for this outdoorsman. For five years, I received a paycheck for exploring the wild places of the Carolinas. I could not have picked a better company to work for.

In 2000, I became a licensed land surveyor in the State of North Carolina. Opening that letter from the Board and seeing that you have met all the requirements of the State to become licensed in your profession is an amazing feeling. It rates right up there with your first kiss, getting the keys to your first car and scoring the buzzer beating 3-pointer that carries your team to victory. Looking back, I realize that receiving my surveying license was the impetus for one of the hardest decisions that I would ever have to make. At the age of 26, I was going to have to decide whether to remain a party chief so that I could continue working in the great outdoors or to make the career move into the

decision to make. But I had no doubt that it was the right decision to make if I wanted to become a well-rounded land surveyor.

In October of 2000, I accepted a project management position at Taylor Wiseman & Taylor (TWT). In a short time, I was promoted to Survey Department Manager. I have been working in the office environment now for 17 years. It surprises people when I say it, but this land surveyor is pretty much confined to his desk. When people ask me what I do for a living, I often joke that I “push a mouse”. My hands are pretty much strapped to a keyboard and mouse all day, every day that I spend working as a land surveyor. I spend the majority of my time sending and receiving email correspondence from clients, preparing proposals/quotes, scheduling crews, and overseeing technicians that are getting the work done. I analyze and adjust field survey data, perform records research, perform boundary resolution and get finalized surveys out the door so we can bill the jobs.

I simply cannot justify leaving my desk and going out to the field to perform party chief duties. We have two licensed party chiefs that have been with TWT for over 20 years. These two professional land surveyors are responsible for training all members of our field staff and they are among the best at what they do. During my career, I have seen other project managers, that were skilled with the current



office in order to learn the other side of the profession – making maps.

People that know me well would attest that there are few people who want to be outdoors more than I do. My wife and children would tell you that it is obvious to them when I have been confined to my office all day. I need to get outside every day. I would truly prefer to walk in the woods during a light rain than to sit inside my home on a couch watching the television. So making the decision to transition from the field to the office was not an easy



technology, take the “fun” jobs from the senior party chiefs. The manager gets to decide who will be scheduled for the jobs, so the manager can essentially go to the field whenever the exciting jobs happen. This typically leaves the senior party chiefs to perform all of the difficult jobs and that is not my style. It is our senior party chiefs that have made my job in the office go smoothly for 17 years. They make our firm look good to the clients. They deserve to work on the cool jobs whenever they come up.

I have sat in the office coordinating and scheduling jobs

while our senior party chiefs have performed awesome field surveys like this:

1. Over 7 miles of boundary & topographic surveying for the American Tobacco Trail.
2. Boundary surveying of over 500 acres for the historic Dorothea Dix property in downtown Raleigh.
3. Harnett-Wake County Boundary Line Survey for NC Geodetic Survey.
4. Height Modernization for Caldwell County – where we recovered and surveyed over 170 control monuments for NC Geodetic Survey, some of which were on mountains like the Blowing Rock.
5. Marine Corps Air Station New River – where our crews performed a topographic survey on the tarmac for a jet fuel line replacement project. Imagine watching the Ospreys take off, land and perform maneuvers over your head all day and getting paid for it.
6. Hydrographic surveys (boats and sonar devices) on the Cape Fear, Haw, Dan, Neuse and Mayo Rivers.



requests from our clients. I have a wife and two daughters. My oldest daughter is currently a freshman, running on the varsity cross country team. I lead a men's Bible study on Wednesday nights. I can only work late one or two nights a week, if other responsibilities allow for it. Escaping the office comes at a cost, so this outdoorsman tends to remain at his desk so that he can keep up with his workload and spend quality time with his family and friends.

But let's be realistic. You can't keep a nature lover indoors forever. Every once in a while, an exceptional project is going to come along that will encourage the office-strapped outdoorsman to put aside his mouse, dust off his work boots and venture back out into the field. It's the kind of job that you're going to be talking about for the rest of your career.

In April of 2009, I received a call from one of my long-time clients to see if I would like to team with his firm for the renovation of the Wayne Day Family Field at North Carolina State University's (NCSU) Carter-Finley Stadium.



Let's face it, someone has to be in the office managing current projects and procuring future projects in order for the business to survive. I receive at least five proposal requests each week and I am typically expected to respond within three days. For me to escape the office is to accept the responsibility for working evening hours to respond to

I went to State for a year and a half before transferring to Wake Technical Community College to pursue my land surveying degree. My father and both of my brothers graduated from NCSU. I've got numerous cousins who graduated from State. It is safe to say that the Howard family loves the Wolfpack, so I was super excited about

Continued on page 23



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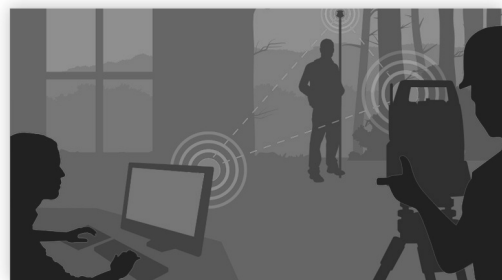


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A Successful Legislative Year

by Kerri Burke, Senior Vice President, McGuire Woods Consulting
& Sarah Wolfe, Assistant Vice President, McGuire Woods Consulting

The North Carolina General Assembly adjourned the 2017 long session on June 30, right before the new state fiscal year began on July 1. By the end of the session, 199 bills had become law, which is significantly less than the average of 460 bills that become law each long session year, since 2001. Since a significantly less number of bills became law this year, this makes NCSS' long session that much more successful. Both bills that NCSS set out to pass, passed both the House and Senate unanimously before being signed into law by the Governor.

By the end of the session, 199 bills had become law, which is significantly less than the average of 460 bills that become law each long session year, since 2001. Since a significantly less number of bills became law this year, this makes NCSS' long session that much more successful.

The General Assembly is holding several "special sessions" this fall to address specific issues such as legislative redistricting. The General Assembly will reconvene for the 2018 short session on May 14.

HB 454: Surveying and Plat Recording Changes, sponsored by Rep. Dean Arp of Union County, updates various parts of G.S. 47-30 by:

- Allowing for landscape orientation of a map to be submitted to the register of deeds.
- Allowing for the submission of black line on white maps, instead of maps printed on Mylar, in counties in which the register of deeds is making a security copy of the map.
- Amending the information that must be included in the title of the plat to include the surveyor firm and license number, if applicable, and the dates and details of revisions made after the original signing. The information must be prominently on the plat, not just in the information in the notes.
- Requiring certificates from the surveyor to state the reference source for the boundary information of the surveyed property shown (previously, the origin of the information shown), the ratio of precision or positional accuracy (previously, just ratio of precision), and a required seal and signature. States that the required seal and signature of a PLS shall constitute a certification that the map conforms to the standards of practice for land

surveying, as defined by the North Carolina Board of Examiners for Engineers and Surveyors.

- Updating outdated references of "registered land surveyors" to "professional land surveyors" and references to notarized maps, which has not been required since 1997.
- Stating that an accurate method of computation to determine the acreage and either the ratio of precision or the positional accuracy (previously, just ratio of precision) on the plat.

- Revising nine of the eleven pieces of specific information that the plat must contain, including allowing for use of future datum without changing the law each

time a new datum is developed, clarifying the definition of a "control survey," and requiring a map legend.

- Stating that these laws do not apply to boundary plats of State or county lines, in addition to municipalities, which are already exempt.
- Providing that maps attached to deeds or other instruments and submitted for recording in that form must be either (1) an original map that meets specified requirements and bears the signature and seal of the PLS or (2) a certified copy of a previously recorded map.
- Repealing the use of control corners in the preparation of plats and subdivisions within Article 5A (Control Corners in Real Estate Development) of Chapter 39 of the General Statutes.

HB 454 became law on June 8 and became effective on July 1, 2017, applying to all plats and subdivisions submitted for recording on or after July 1. Sen. Wesley Meredith of Cumberland County also filed an identical companion Senate bill, SB 372.

HB 501: DOT/Surveying Information in Plans, sponsored by Rep. Mark Brody of Union County, sets out to make NC DOT plans simpler and easier to use and to eliminate confusion about property rights.

Specifically, HB 501 adds a new statute, G.S. 136-19.4A, which:

- Directs NC DOT to include in any plan prepared for the purpose of acquiring property for a right-of-way and/or a permanent easement, which depict property lines, right-of-way lines, or permanent easements, a set of drawings that clearly identify: (1) design alignments, (2) baseline control points, (3) found property-related corner markers, and (4) new right-of-way and permanent easement corner markers.

- Requires plans subject to this statute to document the localized coordinates for each major control point aligned the design plans.

- Mandates the coordinates and associated localized metadata to be based upon and tied to the NC State Plane Coordinate System, and to be clearly identified within the plans.

- Requires all property and corner markers found and surveyed to be clearly identified within the plans in accordance with general surveying standards and procedures.

- Requires each property corner marker to be accurately tied to the design alignment or the NC State Plane Coordinate System by either a system of bearings and distances or by station and offset.

NCSS worked on this legislation with the North Carolina Board of Examiners for Engineers and Surveyors and NC DOT. All parties were in agreement about the bill. HB 501 was signed into law on July 20, 2017, and became effective on October 1, 2017 and applies to plans prepared for acquisitions on or after October 1.

Other bills that NCSS actively worked on or monitored this year include:

- **HB 128: Prohibit UAS Use Over Prison/Jail**
Prohibits the use of an unmanned aircraft system (UAS) within either a horizontal distance of 500 feet or a vertical distance of 250 feet from any local confinement facility or State or federal correctional facility, with some exceptions. The bill becomes effective on December 1, 2017 and applies to offenses committed on or after that date.

- **HB 337: Unmanned Aircraft Systems Law Revisions**
Clarifies that state laws applicable to unmanned aircraft systems also apply to model aircrafts, repeals a limitation on use of special imaging technology on unmanned aircraft systems, exempts unmanned aircraft systems used by emergency management agencies for emergency management purposes from state law restrictions, aligns State law permitting requirements for commercial operation of unmanned aircraft systems with federal law, and exempts model aircraft used for hobby or recreational purposes from State testing and permitting requirements for unmanned aircraft system operation. The bill became

effective upon signature into law on July 21, 2017.

- **HB 740: Search & Rescue Rename/Disputed County Boundaries/Mapping**

Modernizes G.S. 153A-18, which establishes the process by which counties can alter their boundary lines if those lines are uncertain or disputed, to comply with the current practices of using the North Carolina Geodetic Survey to assist in locating and reestablishing county boundary lines. Under the new law, counties with uncertain or disputed boundary lines must request help from the Geodetic Survey. The Geodetic Survey reestablishing the boundary line would be given to the impacted counties, and if those counties fail to adopt the reestablished boundary line within one year of receiving the survey plat, the plat would become conclusive and would be recorded in each impacted county's register of deeds offices and the Secretary of State's office.

Additionally, HB 740 mandates that maps, drawings, or documents identifying the protected mountain ridges be housed in Raleigh with the North Carolina Geodetic Survey. These two sections of HB 740 became effective immediately upon signature into law on July 21, 2017.

- **SB 131: Regulatory Reform Act of 2016-2017**

Effective July 1, 2017, Section 2.5 (1) codifies a statutory exception from subdivision regulation if the division of a tract into parcels is done in accordance with the provisions of a will or intestate succession and (2) provides that a plat may be required, but nothing else, for the division of a single tract of land at least five acres in size, no part of which has been divided in the past 10 years, into no more than three lots that comply with the lot use and dimension size requirements of the applicable land use regulations, and a permanent means of ingress and egress is recorded for each lot.



Kerri Burke is Senior Vice President in the State Government Relations group for McGuireWoods Consulting in Raleigh, NC. She received a BS in Political Science from Old Dominion University, and attended the Indiana University School of Law. She has served as communications director for the NC Chamber, and has worked as a registered lobbyist and legislative intern.



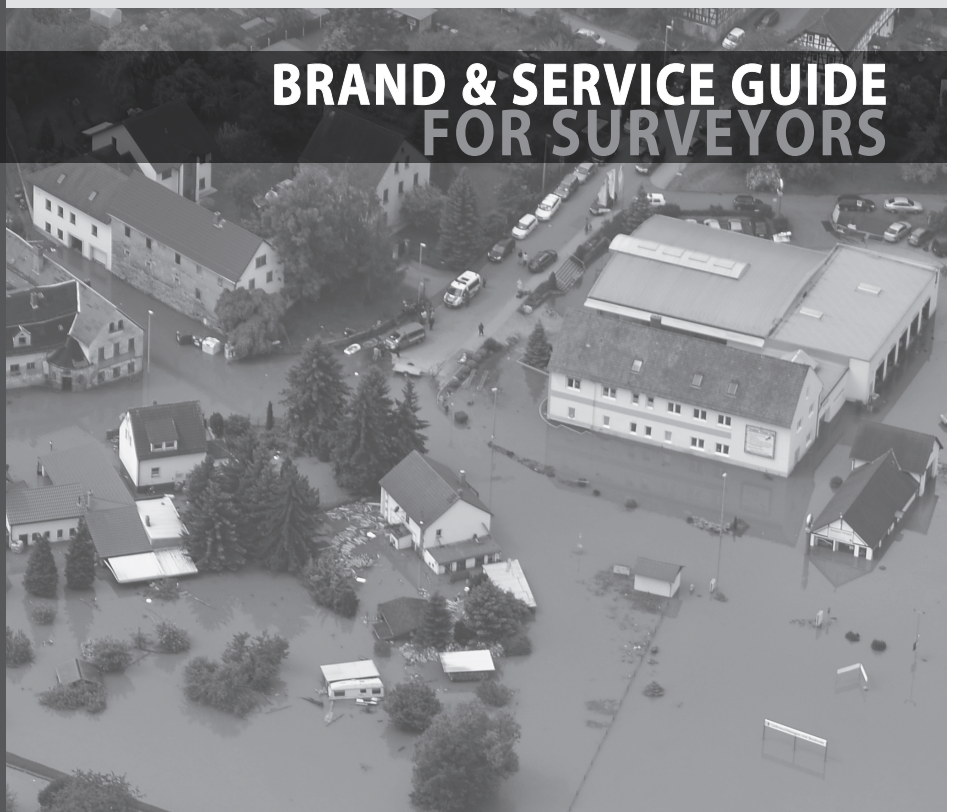
Sarah Wolfe, a Winston-Salem native, is an Assistant Vice President with McGuireWoods where she has worked since 2012. She has extensive experience with coalitions and trade associations. Sarah also provides in-depth policy analysis and research to clients including NCSS.

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Continued from page 18

the opportunity to perform surveys within Carter Finley Stadium.

Apparently, the University had decided to transform the football field from its original crowned or elliptical shape to an almost “level playing field.” To achieve this, the 1.7-acre stadium floor was going to be reconstructed in the same manner as a state-of-the-art golf green. The field would be graded at 0.5% from the centerline to the sidelines using a sand-based subgrade and an innovative field drainage and storm water retention system that would allow for 100 percent reuse of collected storm water for irrigation.

TWT’s first task was to establish control based upon the existing field control monuments. I assisted Rex Bohn, one of our senior party chiefs, as we set control within the stadium seating area, so that it would not be disturbed by construction. The contractor had already started the removal of the existing turf at this time and it was sad to see all that fine sod being cut and rolled for removal. With the permission of the contractor and the NCSU turf manager, I simply had to load up one nice roll of the Carter-Finley Stadium floor, which I took home and transplanted into my front yard!

Over the next few weeks, TWT made several visits to the stadium to place grading stakes and provide as-built verification for the contractor. To share the experience with our staff, I sent three other party chiefs and two other members of our office staff to the site for the performance of field surveying activities. One of the two office staff members that I sent to the stadium was an NCSU graduate and season ticket holder. Needless to say, we couldn’t remove the smile from his face for weeks after he participated in the surveying for the football field.

When the artificial turf was in place, I returned to the site with Rex to install the eight new field control corners, which were rebars placed at the four corners of the field, two rebars at the 50-yard line and two rebars behind the goal posts. This brought our field surveying at Carter-Finley Stadium and one of my most memorable projects to a close.

I am happy to report that our team was able to meet the University’s uncompromising and tight schedule. The project was delivered on time and under the owner’s budget. The engineering firm on our team that was responsible for testing and inspections was awarded a 2011 Engineering Excellence Award by the American Council

of Engineering Companies of North Carolina (ACEC) for the project. It would be a stretch for me to say that our office made its budget for the project, but I firmly believe that I provided a nice bonus to six hard-working members of our staff by letting them share in the experience. It is pretty awesome when your career affords the opportunity to help renovate the stadium where the Wolfpack have played football for over 50 years.

There are plenty of days when I look out my window at perfect Carolina skies and think to myself that I despise my job... that I wish I was still a party chief... but ultimately, I do not regret the decision that I made when I was 26 years old. Extraordinary projects like the this have come my way due to the relationships that I have formed during my 17-year office career. Had I remained a party chief, it is safe to say that I would never have worked on the football field at Carter-Finley Stadium. Had I not decided to move into the office, I would not have prepared the boundary survey for perhaps the largest land acquisition in the City of Raleigh’s history i.e., Dorothea Dix.

I am an outdoorsman with an office job, but I have so much to be thankful for. I praise God for the opportunities to work on exceptional projects and for placing me within a corporation that allows me to take long lunch breaks to enjoy mountain biking. My office job has enabled my wife to be a stay-at-home mom for our beautiful daughters and I firmly believe they are amazing daughters because my wife has always been there for them. I am an office-strapped outdoorsman, but life is good!

On Saturday, September 16, 2017, a friend of mine gave me tickets to the NCSU vs. Furman football game. I took my daughters, Sydney and Aubrynn, to the game and we got to enjoy beautiful weather and a Wolfpack victory. During a timeout, I shared my experience with the stadium renovation with them. It’s a story that I love to tell. My girls both love the Wolfpack and it was music to my ears to hear them shouting: “We’re the Red and White from N.C. State – GO STATE!”



Chad Howard is a licensed professional land surveyor in NC, SC and VA. Howard has worked in the surveying field since he graduated from Wake Technical Community College in August 1995. In 2000, he earned his NC surveying license and joined Taylor Wiseman & Taylor. After seven months with the firm, he was promoted to Survey Department Manager. He is currently the Past President of NCSS.

Professionalism, Public Perception and Profit

The 4 P's of Running a Successful Business

by Dean D. Exline, PLS

Professionalism, Public Perception and Profit. These 4 P's are explicitly intertwined in running a successful professional land surveying business, and are shown here in their order of importance.

Similar to the hierarchy of evidence when determining the importance of found evidence, there is an order of importance in these P words in being successful in business. In order to advance from a just a "business" to a Profession, you MUST not only be cognizant of and recognize each of these P words and a couple more, but you must also recognize the importance of their hierarchy.

We have all heard the old adage "actions speak louder than words." Our actions say much about us and there is a fine line between being perceived as professional or non-professional. Our clients usually do not understand what we do or what it takes to perform even a simple lot survey any more than they understand the mechanics of why an airplane takes flight and stays aloft. Enhancing our professional image by helping a client understand some of what is behind what we do will go a long way toward strengthening our professional stature.

James R. Ball in *Professionalism is for Everyone: Five Keys to Being A True Professional* probably sums up **PROFESSIONALISM** the best in a very few words. He gives Five Keys for being a Professional, which are as follows:

1. Character – Who we are and what we stand for.
2. Attitude – Your mental outlook.
3. Excellence – Your commitment to quality.
4. Competency – Your degree of expertise.
5. Conduct – How you deal with others.

There are many groups of people that call themselves or are referred to as professionals. We have professional truck drivers, professional wrestlers, professional this and professional that. However, many of those individuals that are labeled as professionals do not require any special training or continuing education to be referred to as such. That label has been applied simply by reference over time and it has become synonymous with their title. As professional land surveyors, we are somewhat different in that we earn the title of Professional by virtue of taking a comprehensive exam, following rules established by the North Carolina Board of Examiners for Engineers

and Surveyors (NCBEES), and participating in annual requirements for continuing education. A requirement for a four-year degree will only strengthen that professional status and help maintain and grow the profession.

Land surveyors operate at the interface of several other professions. We address legal, architectural, engineering and geodetic science issues while performing our duties. These other professionals understand the part of what we do that is in their sphere of expertise, but not our other activities. It is our responsibility as a professional to provide consultation, expert advice and counsel utilizing our specialized body of knowledge to help bring any given project to fruition.

Before we move on to the next set of P's on the list, let's look at attorneys and how they compare to surveyors from an income and professional development standpoint.

The surveying profession and those that practice it, have similar requirements to the legal profession in that we are required to obtain professional development hours in order to keep our license(s) current. There is, however a disparity in annual income for the legal profession compared to that of the surveying profession.

We, as professional land surveyors, are required to obtain 15 professional development hours each year (state specific) and keep up with an ever changing landscape of technology like GPS, robotics, high definition scanning, CAD, etc., as well as techniques, laws, regulations, recording requirements, etc. This list could go on and on.

As a professional land surveyor, we are required to have a nearly equal number of professional development hours (state specific) as an attorney. The average annual salary for an attorney is north of \$135,000.

However, the average salary for all surveyor classifications is less than \$60,000 per year. Why is it that the average salary for a surveyor is less than half of that of an attorney? We simply are not held in the same regard in the eyes of the public as attorneys. This is the same public that for whatever reason may need a surveyor only once in their lifetime, but may need an attorney a several times. When someone is in need of an attorney, they look for the most qualified person and generally do not discuss fees for that service.

Unfortunately, potential clients will likely call a number of surveyors from the Yellow Pages to ask, "How much is a survey?" They will likely get fee quotes that are all over the map. This is where **PUBLIC PERCEPTION** matters.

To begin, we must first recognize OURSELVES as professionals, from a continuing education standpoint we are on par with attorneys. Professional surveyors should not compete based upon price, but rather qualifications. The fee should be secondary.

As John Steiber indicated in *Profit is not a four-letter word: the real truth about what it is, where it comes from & how it improves the quality of life for everyone*, **PROFIT** really is NOT a four-letter word. In order to make a profit, you must plan for it or it will not happen. In order to make a profit, you must know what it costs to do business. If you do not know what it costs to put gasoline in the truck, perform field work, drive to the job, insure the vehicles, make and print the maps, etc., you will never make any profit.

There is no "profit" in getting paid for your labor. You are merely renting your body, equipment, and expertise to someone else so that they can make a profit. To be a profitable business, you must plan

for a profit beyond your costs of doing business.

That is where this additional P is very important in the context of running a successful business. This P differentiates your business from other businesses in a number of ways. What is this mysterious fifth P? That dreaded and often times misunderstood word – **PRICING**.

Hold the phone, we can get into deep trouble by even discussing pricing. It is true, we can get into trouble by agreeing to fix prices, and colluding to stifle competition, but what we are talking about here is making sure that your fees include all of the expenses of doing business. Learning to price your services is not the same as setting your fees in collusion with other surveyors.

In order to make the determination of what it costs to do business, whether that business is making widgets, building cars or surveying the world's infrastructure, you must sit down and list every cost item – including profit. This includes the paper clips in your desk drawer, the desk the drawer is in, the electricity that powers your computers and lights, gas and wipers for the surveying chariots, equipment, labor, rent, profit, etc.

Continued on page 26

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Continued from page 26

This list is quite extensive and is unique to every business. However extensive, you must include everything.

While on the subject of costs, keep this in mind, if you base your fees on using the same equipment forever because it is paid for, you will not last in business. What happens when the equipment breaks – which is inevitable because everything is mechanical in some fashion and wears out? Do you go to your clients and tell them that you need to raise fees because you need to buy another piece of equipment, or do you plan for that inevitability now and be more prepared when it happens?

CONTRACT – Although this is not an actual P word, it can be, a pain in the neck comes. In simplistic terms, a contract is a list of expectations. Most importantly, what is the scope of services and fees? If you, as the professional in charge expected to do one thing and your client expected you to do something completely different, problems (another P word) will arise. What is the fee going to be? When do you expect to be paid? What is the deliverable? Get expectations in writing and save the pain.

Having a contract is one more item that helps us as

professional land surveyors be perceived by the public as a Professional.

Whether we like it or not, we, as professional land surveyors, market ourselves constantly through our actions. How we carry ourselves in the office with a client, in the field with our employees, at the courthouse interacting with the clerk and even at your child's soccer game or tennis match plays into your professional image and stature. Those actions speak volumes toward the public's perception of each of us individually and ultimately our noble profession.

How you conduct yourself will be the determinant of whether you are perceived as a professional or not. You are not the determiner – your client is.

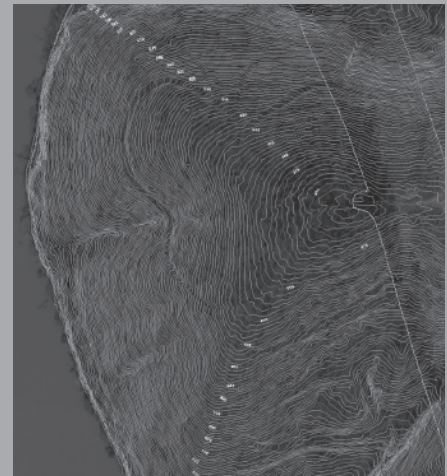


Dean Exline is the founder and President of GeoInnovation, PC. He has over 30 years experience as a land surveyor. His background includes extensive experience in boundary, construction staking, GPS and conventional survey control, dam deformation measurements, topographic surveys, small hydrographic surveys, coal pile quantity surveys, and powerline surveys. In addition, Dean is a national speaker and has authored numerous technical papers.

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Identification by the Senses

by Kristopher M. Kline, PLS

The following article is an adaptation drawn from Section One, "How to Fix a Boundary Line," released in December 2016. © Copyright Kristopher M. Kline, all rights reserved.

Land use professionals generally are familiar with the phrase "retrace the footsteps of the original surveyor." There is good reason for the enduring nature of this guiding principle; actual monuments and marks placed by the original surveyor usually are considered the most reliable evidence of actual intent. Underlying this important concept is another that has received little attention.

In **Martin v. Green: 117 Me. 138; 102 A. 977 (1918)**, the Maine court includes the original Latin phrasing and a translation: "*Presentia corporis tollit errorem nominis.*" *Identification by the senses overrides description.* The specific language from this ruling only appears in a handful of other decisions, but this principle can affect the application of rules of construction, adverse possession and practical location. As previously discussed in this section, this principle appears to be a holdover from the ancient concept of "livery of seisin."

Land use professionals seldom consider that their own detailed understanding of surveying principles and property rights stands in stark contrast to the layman's perspective generally held by their clients. The technical approach applied by professionals is predicated on a detailed understanding of many subjects including rules of retracement, measurements, and an understanding of unwritten rights. These technicalities often are lost on the actual parties to the transaction. The grantor and grantee see a tract of land and a piece of paper.

The ultimate challenge before the courts when resolving a discrepancy in any document is to establish what meeting of minds occurred between the contracting individuals. Given the parties' lack of technical knowledge in most situations, the perceptions of the grantor and grantee may play a major role in determining intent.

The U.S. Supreme court applied this concept in **Smoot v. United States: 237 U.S. 38; 35 S. Ct. 540; 59 L. Ed. 829 (1915)**. A dispute arose over a contract for a quantity of sand to be included in a contract of sale. The court concluded that the measure of sand intended by the parties was that amount needed to construct the filters

which were the ultimate goal of the contracting parties. This case was basically a contract dispute, but the court uses the rules of construction for property boundaries and the significance of acreage calculations as analogies: *The obviously dominant measure of the sand to be furnished was what was needed for the filters, and the figures in the letter on their face were the engineer's estimate of what would be needed, not an order for those amounts whether needed or not. ... In that case Mr. Justice Bradley refers to the control of monuments over distances and estimates of quantity, as an analogy. In general, specific or individual marks prevail over generic ones. Praesentia corporis tollit errorem nominis.*

An early Iowa ruling describes the classic problem of vendors attempting to sell something they do not actually have title to. **Glenn v. Malony: 4 Iowa 314 (1856)** the land to be sold was described as: *"town lot 72, on Main street, in the city of Dubuque, the undivided half of said lot, the whole being owned by Lawrence Malony and David Sleator."* The problem was that Malony and Sleator never held title to lot 72, but they did in fact own lot 73. At first glance, the obvious intent of the document is to convey lot 72. However, the court questions this literal interpretation of the document, despite its apparently unequivocal description: *Are we justified, then, in rejecting the number 72, as being false, and upholding the proceedings, upon the ground that a sufficient description will still remain to ascertain their application? Or, to change the phraseology of the proposition, shall the respondent be deprived of this property, because the lot, otherwise accurately and correctly described, has been misnamed and called lot 72, instead of lot 73?*

But there is a higher, broader, and more satisfactory ground, upon which the cause truly stands. Let us look away from the papers a moment, and from the verbal description, and regard the matters of fact,

The true lot was offered for sale, the sale took place upon it, the bidders saw it, they bid upon it at the spot; they knew the lot really intended, and bid upon it accordingly; they bid upon the lot they intended to bid upon and to buy, but the number in the papers was wrong--it was a mistake.

The actions described here are analogous to ancient principle of "livery of seisin" (transfer of title by the individuals present on the land). This process was typical of land transfers prior to the enactment of the statute of

frauds in 1677. This case also emphasizes that mistakes should be corrected at the source when the source can be determined.

Other courts have applied similar reasoning where the relevant documents include names of parties that are incomplete or incorrect. When two individuals can be proven to actually have met in person to complete a transaction, arguments over the intended parties to the contract will generally fail. **Martin v. Green: 117 Me. 138; 102 A. 977 (1918)**

Adverse Possession

“Identification by the senses” can have a significant effect on adverse possession claims, particularly on those based on a color document. In **Harrison v. Dolan: 172 Mass. 395; 52 N.E. 513 (1899)**, the Massachusetts court considered the possibility that the limits of a claim based on color of title might be extended beyond the technical limits described. Where the claimants have a mistaken belief regarding the location of their boundary line and treat an area of the adjoining parcel as if it were a contiguous part of their land, some courts will consider a strip of land to be included within the effect of the color document: *The tenant manifested her intent to maintain possession of the locus, even if she did it under a mistaken description. Proesentia corporis tollit errorem nominis, identification by the senses overrides description, as in many other cases in the law.*

This principle is reinforced in a District of Columbia ruling, where an uneducated property owner was unable to understand the discrepancy between the 11 acres that she possessed and the 8 acres in her deed. Despite repeated explanations by surveyors and attorneys, her belief in her rightful possession of the 11-acre tract was unshakeable and resulted in a successful adverse claim of the three acres not included in her deed. **Johnson v. Thomas: 23 App. D.C. 141 (1904)**

Practical Location

Many states recognize some variation of practical location as applied to property boundaries. In North Carolina, the courts have at times recognized the controlling influence of lines marked concurrently with the original state grant, even where those lines are completely at variance with the measurements and monuments called for in the original grant description.

This could certainly be considered a case of “following the original footsteps.” Notably, the North Carolina court has expanded this principle to include original divisions of land by private individuals: *Where the grantor and grantee*

actually go upon the land and agree upon well-marked corners and a definite, marked line as the boundary of a tract to be conveyed the same rule applies.

These disputes will be considered on a case-by-case basis, and the outcome will hinge on whether the claimant can produce sufficient evidence that the line was marked. The court poses this question: *Was there then sufficient evidence ... that contemporaneously with, and as a part of the contract of bargain and sale, the plaintiff and the defendant went upon the premises and agreed upon the boundary line of the tract being conveyed to the plaintiff, so as to override the description contained in the deed actually executed and to show that it was the true intent of the parties that the deed should be so drawn as to set out and describe the line agreed upon as the boundary line between the French tract and the Dixon tract? If so, the judgment below must be affirmed.* **Yopp v. Aman: 212 N.C. 479; 193 S.E. 822 (1937)**

An Arkansas ruling admirably summarizes the conditions in which identification by the senses will control the intent in defiance of more technical terms of the original grant:

It is a well-established rule in the construction of grants, which has an appropriate application in this case, that if there are certain particulars, once sufficiently ascertained, which designate the corpus or thing intended to be granted, the addition of a circumstance, false or mistaken, will not defeat the description and frustrate the grant: Proesentia corporis tollit errorem nominis; et veritas nominis tollit errorem demonstrationis. **Montgomery v. Johnson: 31 Ark. 74 (1876)**

Professionals encountering situations where the apparent intent is contrary to the wording of the controlling documents should take pains to carefully document all relevant information. The examples cited above clearly indicate that problems of this nature will be dealt with on a case-by-case basis.

The statute of frauds remains a major factor, and judges generally apply a high evidentiary standard before enforcing legal presumptions to supersede the documents of record.



Kristopher Kline is a writer, educator, consultant, and land surveyor living in Alexander, North Carolina. Kris has published three books relating to legal aspects of boundary retracement, and writes the “Unmistakable Marks” column for Point of Beginning Magazine. He will be presenting classes with his friend and mentor Donald A. Wilson beginning this fall through Surveyors Educational Seminars (www.surveyorsed.com). Kris can be reached through www.2Point.net

Gary W. Thompson

SURVEYOR, GENTLEMAN, AND FRIEND

by Jerry Carter, NCEES Chief Executive Officer



I was honored when I was asked to provide an article about Gary Thompson, PLS, and his many contributions to the surveying profession. My dilemma was where to start.

I first met Gary when I was hired

as a member of the staff with the North Carolina Board of Examiners for Engineers and Surveyors (NCBEES). Gary had just been employed to work for Larry Akers with the North Carolina Geodetic Survey (NCGS). I distinctly remember our first meeting in 1984 when representatives of the North Carolina Society of Surveyors (NCSS) attended a meeting of NCBEES to discuss issues of concern. It was easy to discern that Gary was someone who was respected by his fellow professionals and someone who was destined to lead. Gary and I developed a close professional relationship, and I called on him for his advice on surveying matters whenever I needed guidance. After several years, I became Executive Director of NCBEES and Gary became the Chief of NCGS. Our relationship continued, and I constantly called on Gary for assistance on issues that varied from state-specific exam questions to how proposed legislation would impact the surveying profession in North Carolina. During this period, Gary was instrumental in helping draft legislation and regulations that would allow for the licensure of photogrammetrists in North Carolina and attended several meetings that included representatives from the National Society of Professional Surveyors (NSPS) and the American Society for Photogrammetry and Remote Sensing (ASPRS). Gary was also dedicated to the success of NCSS; he served as president and was later recognized by the organization as Surveyor of the Year.

I left the North Carolina board in 2001 when I was hired by the National Council of Examiners for Engineering and

Surveying (NCEES). I was delighted to learn in 2004 that Gary had been appointed as a member of NCBEES, which was a well-deserved honor. Gary served two five-year terms on the board and served two terms as board chair and two terms as vice-chair. During his tenure on the North Carolina board, Gary became active in various NCEES committees. Describing Gary's participation as "active" does not adequately describe his participation. His service to NCEES includes serving as a member on the Committee on Examinations for Professional Surveyors and on the Committee on Examination Audit; volunteering on the NCEES Surveying Exam Development Committee; and serving as a member of the Committee on Examination Policy and Procedures Committee, which he chaired for two years. In 2013, Gary was elected as treasurer of NCEES and served two-terms. In this role, Gary was responsible for the oversight of the Council's finances and served as a voting member of the NCEES Board of Directors. Gary was also responsible for working with the NCEES staff in developing annual budgets in excess of 25 million dollars and overseeing annual audits of NCEES's financial records. It was a tremendous pleasure to have Gary serve on the NCEES Board of Directors because it allowed me to continue to call on him for advice and guidance. In 2013, Gary received the NCEES Distinguished Service Award for his dedicated service to the engineering and surveying professions. At the recent 2017 NCEES Annual Meeting, Gary Thompson completed his term of service on the NCEES Board.

In his "spare" time, Gary chaired the North Carolina Boundary Commission and has served multiple terms as a member of the National Geospatial Advisory Committee. He is also currently serving as NCEES' representative to ABET's Applied and Natural Science Accreditation Commission, which accredits all surveying and related programs in the United States.

My life as well as many others have been enriched through our association with Gary. There is no better example of what it means to be a true professional than the example Gary Thompson has provided. Any organization with which he has been associated is better because of his many contributions. Gary is a devoted husband and father, a consummate professional, and a true friend.

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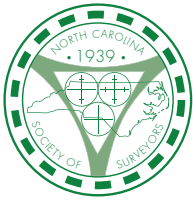
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