GEORGIA LAND SURVEYOR

SUMMER 2022

ANNUAL MEETING & SUMMER CONVENTION INFORMATION ENCLOSED!

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SUMMER CONVENTION INFO

SUMMER CONVENTION ONLINE REGISTRATION IS AVAILABLE UNTIL 7/4/22! REGISTER AT SAMSOG.ORG

NEWSLETTER
The Georgia Land Surveyor is a publication of the Surveying and Mapping Society of Georgia and published four times a year. The articles are not necessarily the position of the society. Articles may be reprinted with due credit.

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PRESIDENT'S REPORT

Grant Shepherd, PLS

In the last several months, I have met with the Presidents of three adjoining states: North Carolina, Alabama and Tennessee. I have also met with several Georgia State Chapters, as well as Chapters in Tennessee and South Carolina.

We discussed our profession, education, economic and personnel issues (or the lack of personnel issues).

We all agreed that surveyors should be educated in math, especially trigonometry, able to work indoors and outdoors, and especially work well with others. It is difficult to produce a land survey without actually seeing the site and experience the actual site conditions, therefore crew chiefs must be experienced, dependable and able to communicate with upset property owners, contractors and be able to lead their survey crew.

There are many more qualities required to be a good land surveyor and be in a responsible position with a land surveying company. Technical and educational qualifications, physical conditioning for field work and also as mentioned previously the ability to work well with others and communicate with land owners. These types of individuals are vital for the professional surveyor to produce quality surveys.

The land surveyors have been resourceful in the last few years by not only surviving the pandemic but improving our profession by being innovative during very difficult times.

We have continued to work and keep our professional standards during a very difficult period in our lifetime. All State Surveying Association Presidents and associates feel the same and are ready to move forward and continue to be a respected and vital profession in the future.

All the surrounding states are reviewing their educational requirements and attempting to adjust classes to being directed more toward the education land surveyors require.

Certified flood plain management is an example of an area that land surveyors should look to for specialization. Land surveyors are the ONLY profession that actually have the education and expertise to accurately do this type of work. We need to take advantage of that specialty.

All states agree that our professional goals can be achieved with the help of our Surveying Chapters. The Chapters are our professional "heart and soul". They communicate with all state surveyors and have more power in local governments and can easily communicate with all the area surveyors.

It is difficult for the everyday surveyor to keep up with the day-to-day events in our profession at the county, state or national level. However, area chapters working together and our state SAMSOG association, together help achieve our goals.

WELCOME NEW MEMBERS 2021-2022

Student Members

Burton Blackmar
Kennesaw State University

Stephen Wilson
Georgia Southern University

Zenan C. Merritt
Georgia Southern University - Land Surveying Certificate Program

Joseph (Joey) B. Doran, Jr.
Kennesaw State University - Civil Engineering Degree Program - 2021 SAMSEF Scholarship Recipient

Austin Ngoddy, Jr.
Kennesaw State University - Civil Engineering Technology Degree Program

Grace Johnsen Shirley
Kennesaw State University - Geospatial Degree Program with Land Surveying Certificate

Miriam M. Burnette
Kennesaw State University - Land Surveying Certificate Program

Andrew Hughes
University of North Georgia

Marcus Patterson
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Trenton L. Johnson
University of North Georgia - Environmental Geospatial Analysis Degree Program

Fred Carroll, Jr.
University of North Georgia - Geomatics Certificate Program

Gabriel Pierce
University of North Georgia - Land Surveying Certificate Program

Antonio Pizano
University of North Georgia - Surveying Certificate Program

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Gary Hoffacker, GA PLS #3388
Don Vanhook, Jr., GA PLS #3478
Zachery Wolfe, GA PLS #3018
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Brian Mitchell, GA PLS #3472
Paul Lunch, SC & FL PLS

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Matthew Ricks, P.E.

Brian Phelts
Currently employed by Travis Pruitt & Associates

Kevin Pate, LSIT #1151 Associate Member
Currently employed by Travis Pruitt & Associates

Sustaining Members

That CAD Girl

MRIC Spatial, LLC, Matthew Kneeland

SmartDrone, Al Thread

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NEWS & TIDBITS

Surveying, Drone, and Danger

The greater number and intensity of severe storms in the United States has communities rethinking their infrastructure. They're making streets and parking lots permeable to absorb excess rainfall and rebuilding natural watershed features that help prevent floods.

We are thrilled to announce that HB 476, the Professional Engineers & Land Surveyors Act, has been signed by Governor Brian Kemp.

This bill will allow the Professional Engineers and Land Surveyors Board to operate as an independent entity, with the ability to hire its own dedicated staff to address licensing issues, investigate complaints, and serve the licensed engineers and land surveyors of Georgia. See the article on page 24 by Legislative Chairman Mark Chastain.

HB 476 will allow the Professional Engineers and Land Surveyors Board to operate as an independent entity, with the ability to hire its own dedicated staff to address licensing issues, investigate complaints, and serve the licensed engineers and land surveyors of Georgia.

Huge thanks to Governor Kemp for signing HB 476, and for all he's done for Georgia's engineers and land surveyors throughout the years!

NSPS held a virtual town hall on Tuesday, May 10th regarding the proposed changes to the Davis-Bacon Act. These changes would include surveying to be considered "labor" and thus subject to prevailing wage requirements. John Palatiello and JB Byrd, NSPS Legislative Representatives, were on hand to discuss the proposed changes and answer questions. The webinar was moderated by Timothy Burch, NSPS Executive Director. For more information, please visit the website: https://www.nsps.us.com/page/DavisBacon

Another source for information on the proposed changes to the Davis-Bacon Act is our podcast episode with John Palatiello and can be heard here: https://surveyorsays.podbean.com/e/ep121-john-palatiello-and-proposed-davis-bacon-act-changes/

It can also be heard on most major streaming platforms as well.

Surveyors Historical Society

The Surveyors Historical Society is pleased to announce the unveiling of our NEW website at www.SurveyorsHistoricalSociety.com, where you will find the latest news on current areas of focus, upcoming meetings and events, current and archived copies of Backsights, and many other exclusive resources available to you as an SHS member. SAMSOG is a proud member of SHS!

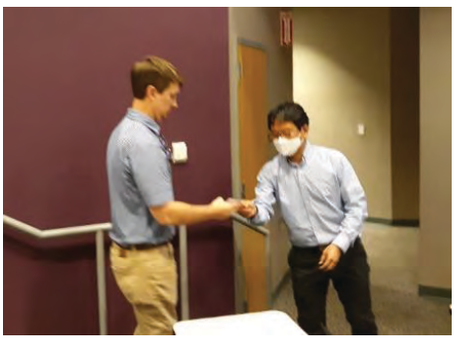
Joint Chapter Meeting

Georgia Southern University
Statesboro, GA : April 26th, 2022

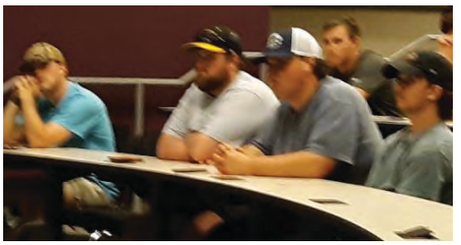
SAMSOG's Coastal, Golden Isles, and GSU Student Chapters held a joint meeting at Georgia Southern to support the next generation of Georgia Surveyors.

Feeling the need to reach out to the Traditional Students in the College of Engineering and Computing at Georgia Southern, the three chapters held a joint meeting to educate the student group about the wonderful opportunities available with a Surveying-Geomatics career. Surveying-Geomatics education opportunities at GSU and Scholarships available from SAMSEF were highlighted as well. A discussion group was assembled to answer the students' questions and to highlight emerging technologies in Surveying-Geomatics. Students (900+) from the College's Civil Engineering, Construction Engineering and Construction Management Programs (as well as graduate students) were invited to the meeting.

To highlight the meeting, a drawing for three $100 Gift Certificates (for Georgia Southern's Technology Store) were raffled off for students and the students were given Chic-Fil-A Certificates and NSPS promotional items.



Dr. Nam makes a Gift Certificate Award to a student.



Georgia Southern Students

All the presenters did an excellent job, and the program was well received by the students. The program included the following topics:

Roger London, SAMSOG Public Relations Committee, Topic: "The Things that I like most about Surveying-Geomatics." Roger did an excellent job of explaining his life experiences and what led him to become a surveyor. He also elaborated on the benefits and rewards of being a surveyor that helps people with a distinct need for these services.

Roger London talks about his journey in Surveying

Byron Freeman, SAMSEF-SAMSOG Representative, Topic: "Scholarship Opportunities with SAMSEF-SAMSOG." Byron presented remotely on Zoom and gave the students a complete description of SAMSEF-SAMSOG Scholarships. Byron emphasized how these scholarships were intended to help students from all over the state and he encouraged them to apply as soon as possible.

Roger Purcell, GSU Instructor, Topic: "Surveying-Geomatics Pathways at GSU." The other Roger (Roger Purcell) gave a complete breakdown of all the ways that a student can get the Surveying-Geomatics education at Georgia Southern to eventually become a licensed Surveyor. Roger emphasized the beginning steps to getting started on any one of the education pathways.

Discussion Panel (Dale Yawn, Wright Powers, Teeple Hill and Peter Durand) Q & A Session: Discussion Panel: Purpose: to answer questions about surveying-geomatics. The discussion panel was exceptional as they lead an initial examination of what surveying is, how surveying has evolved to what it is today and the importance of surveying in people's lives as they purchase or manage property. This initial examination opened the discussion and many of the students had questions and the Panel did an exceptional job of

Dale Yawn talks about Education and Emerging Technology

answering the students.

After the discussion panel session and the Gift Prize Drawing, the students were dismissed, and the Coastal and Golden Isles Chapter held an informal business meeting. It was discussed that the Chapters would like to consider making this meeting forum an annual event.

SAMSOG attendees

Program discussion panel

SB 581

By Spencer H. Johnson, PLS

Currently the North American Datum of 1983 is non-geocentric by about 2.2 meters (7.2 feet), and the North American Vertical Datum of 1988 is both biased by about one-half meter (1.6 feet) and tilted by about 1 meter (3.3 feet) coast to coast, relative to the best global geoid models available today. In order to overcome these shortcomings, the National Geodetic Survey (NGS) will replace the vertical and horizontal datums of the National Spatial Reference System (NSRS). SB 581 revised the language of the law to allow for the use of the most current datums as defined by NGS, and also for the appropriate use of other geodetic reference networks. SB 581 provides legislation that is accurate and relevant today (under NAD 83), and will be accurate and relevant through the new datum (in 2022) and beyond to whatever datums come after 2022. SB 581 also allows the continual use of legal descriptions based on coordinate systems prepared under previously approved acts, and does not invalidate documents based on coordinate systems prepared under previously approved acts.

The U.S. uses two versions of the foot: the U.S. survey foot, defined in the Georgia Code, and the international foot. The two versions are only about one-hundredth of a foot different over the distance of a mile but can be very problematic when merging data. To resolve the problem of nearly identical versions of the foot, collaborative action is being taken by the National Institute of Standards and Technology (NIST), National Geodetic Survey (NGS), National Ocean Service (NOS), and National Oceanic and Atmospheric Administration (NOAA) to provide national uniformity in the measurement of length. The U.S. survey foot will be phased out as part of the modernization of the National Spatial Reference System (NSRS). From this point forward, the international foot will be called the foot, and these national institutions will no longer support the survey foot. To address this, SB 581 revised the conversion factor from "Any conversion of distances between the meter and the American Survey foot will be based upon the length of the meter (exactly) equals 39.37 inches or 3.2808333333 1/3" to "Any conversion of distances between the meter and the foot shall be based upon the length of the meter (exactly) equals 3.280839895 feet."

SB 581 gives the surveyors of Georgia the most up-to-date platform for providing accurate and precise data to the public we serve.

MAPPING THE ORIGINAL STONES ALONG THE MASON-DIXON LINE

Mason and Dixon were pioneers in bringing geodetic astronomy to the American colonies. Through the efforts of the Mason and Dixon Line Preservation Partnership, we can promote this scientific contribution along with the placement of the boundary stones.

Article by Tim Burch | *Originally written for GPS World*

Ask surveyors why they became engaged in the profession and why they had continued with it, most will centralize on one aspect: working outside. A career that allowed them to work outside in various environments, solving problems, and being part of a solution is typically the main answer they give.

Depending on the task at hand, a day in the field surveying can take one to several places, including urban/suburban neighborhoods, construction sites, and agricultural/wooded farmland.

My entry into surveying was no different. From residential sites, condominium surveys, boundary and topographic surveys, and construction layout, my early years in surveying covered a lot of territory. While my career eventually took me out of the field and into an office managerial role, and now into leading a professional association, it does not erase the roots of one's surveying knowledge and experience. Opportunities to be part of the field exercises of a survey, especially a boundary survey, are typically rare and subject to time constraints.

View from Mason Dixon Stone #95 looking toward Maryland. (Image: Tim Burch)

Having spent all my life in the flat topography of Illinois and surrounded by farm fields and urban sprawl, the ability to see for miles over the various horizons was the norm. Coupling these conditions with the Public Land Survey System (PLSS) and use of GNSS technology, it makes for a great environment for the professional surveyor to go about his or her work.

However, the United States covers many areas and contains distinct types of terrain, ecosystems and demographic groups that provide challenges to the surveyor. While I assumed moving from Illinois to the mid-Atlantic region would require adaptation, an opportunity to help retrace and inventory a significant part of American history provided me with an eye-opening experience. It also helped me appreciate the legacy of our surveying forefathers.

A Small Title Dispute

Even in the 17th and 18th centuries, disagreeing title descriptions to common lands was an issue. Reviewing two conflicting legal descriptions describing adjacent land boundaries is the basis of this survey exercise, and thus began a symbolic establishment of a famous boundary line that would

lead to political and demographic ramifications in later years.

Here is the situation:

1632: King Charles I grants to Cecilius Calvert (second Lord Baltimore), a royal charter for establishing a new colony north of Virginia to a point "which lieth under the Fortieth degree of north latitude" and westward to the source of the Potomac.

1681: King Charles II (eldest son of Charles I) grants William Penn a royal charter of land between 43° N and a line extending westward from "a Circle drawn at twelve miles distance from New Castle…" to "the beginning of the fortieth degree…."

1682: King Charles II grants to William Penn an additional grant in the Delaware peninsula, which Lord Baltimore claimed.

1685: King Charles II directed his Board of Trade and Plantations to issue an edict ordering that territory to be divide equally, the western half going to Baltimore. This order endorsed Calvert's claim of a boundary line being 19 miles to the north and providing him claim to Philadelphia. Part of the edict placed a burden on Calvert of providing a survey to authenticate the claim, but the survey was not completed. The boundary would eventually be established 19 miles to the south.

1731-1732: Charles Calvert, the fifth Lord Baltimore, petitioned King George II for help in demarcating the final boundary. He agreed on the final boundaries; however, a commission created to study the legal claims failed to deliver instructions in which a survey would be based upon. Calvert disputed its interpretation and refused to implement the arrangements.

1730s: Ongoing conflict over the disputed land claimed by both people from Pennsylvania and Maryland resulted in Cresap's War, named after the land agent, Thomas Cresap, hired by Calvert to settle new development. In 1736, Cresap was accused of murder, arrested by Pennsylvania officials and his housed burned was burned down.

Penn-Calvert Land Grant Agreement. (Image: National Archives)

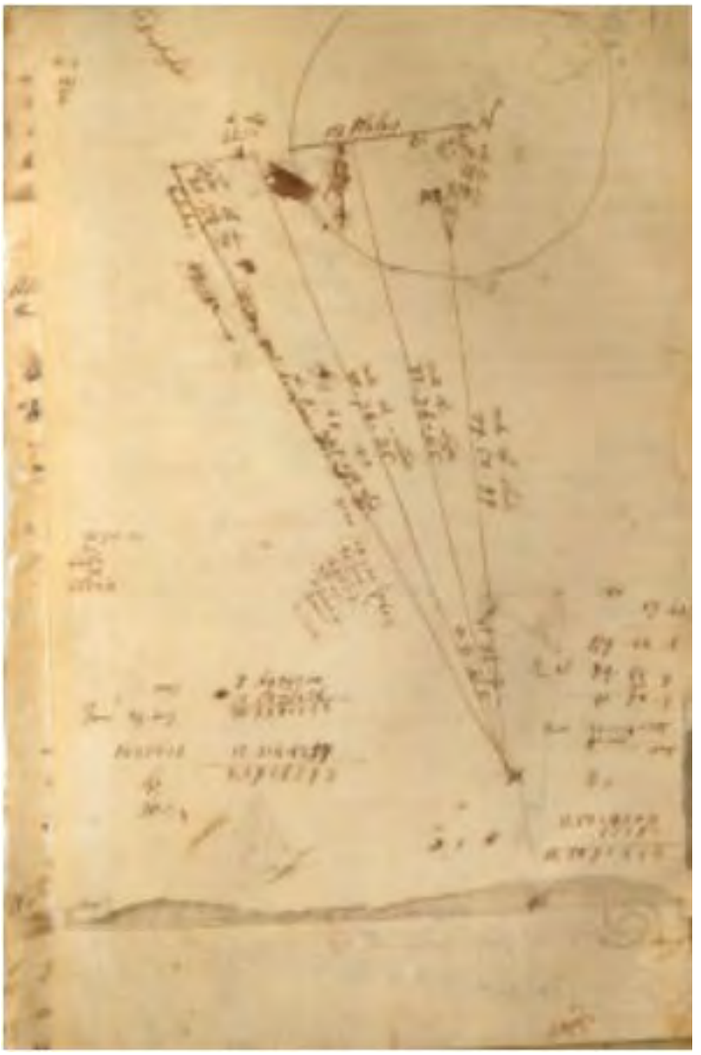
1750: After years of bitter controversy, British Lord Chancellor Hardwicke ruled that the southern boundary of Pennsylvania should be a line running westward from the point at which the line dividing the Delaware peninsula was tangential to a circle with a radius of 12 miles from the center of Newcastle.

After 100+ years of boundary disputes and deadly confrontations, in 1760 Frederick Calvert was directed by the English monarch to accept the terms of the 1732 treaty.

The unfilled challenge, however, was to commission a survey to establish the terms of the agreed-upon boundary. Given that the final location of the Pennsylvania/Maryland border was geographically based (approximate latitude of N 39°43'20"), the surveyors chosen to establish this line would have to be knowledgeable in such calculations.

Finding qualified surveyors in the colonies turned into a bigger challenge than first considered, so the monarchy assigned two surveyors from the Royal Society (full name: Royal Society of London for Improving Natural Knowledge). Enter Jeremiah Dixon (surveyor) and Charles Mason (astronomer) — the field party charged with tackling this monumental deed.

We know them by name for the lines they established in fulfilling the requirements of the



The survey calculations of Charles Mason. (Image: National Archives)

boundary agreement, but how they accomplished their task remains a mystery to most. Previous exercises using geographical position determination was used in the sailing and shipping industries with lesser degrees of accuracy. This assignment would require higher levels of accuracy and precision, hence the reason for calling upon Dixon and Mason for the task.

By using geodetic astronomy, they were able to determine accurate (for the period) geographical positions of latitude. Geodetic astronomy is the art and science for determining, by astronomical observations, the positions of points on the earth and the azimuths of the geodetic lines connecting such points. It relies on spherical astronomy, using calculations and techniques developed by the Greeks in the second century A.D.

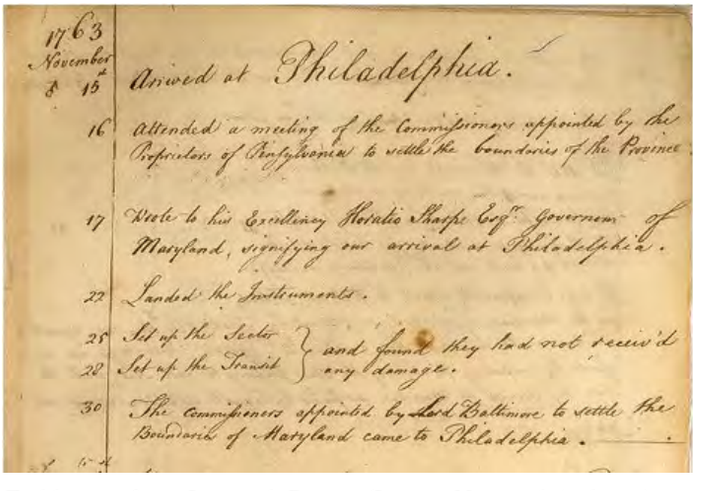
Besides the knowledge of performing the necessary calculations, the duo would also need to possess instruments to gather the accurate astronomical information. The survey of the agreed-upon line was to be established upon a constant line of latitude. The survey procedures would require turning angles (azimuths) from their meridian westwardly with accuracy not yet utilized in the New World.

Both instruments used for the project were built by John Bird, a well-respected instrument maker in London. The equipment consisted of a zenith sector, capable of measuring to two arc seconds. No field azimuth instrument of this accuracy existed in that era. They also brought a converted telescope/level set up for surveying purposes. This transit has no divided horizontal "plate," only a tangent screw for slow azimuth motion.

In addition to the instruments and astronomical tables from Greenwich and Paris, the duo relied on a highly precise clock for marking time by the second, which was quite advanced for the period.

Dixon and Mason spent the better part of 1766-67 establishing the agreed-upon line using astronomy via the Bird instruments and taking copious notes documenting their calculations and survey conditions.

The markers set along the way —stone monuments chiseled back in England with demarcations — were quite accurately established despite the primitive nature of equipment and methodology for the survey. Mason and Dixon laid out the 233-mile long "West Line" in short segments,


1763
November
15 Arrived at Philadelphia.
16 Attended a meeting of the Commissioners appointed by the Proprietors of Pensylvania to settle the Boundaries of the Province
17 Wrote to his Excellency Horatio Sharpe Esq. Governour of Maryland, signifying our arrival at Philadelphia.
22 Landed the Instruments.
25 Set up the Sector } and found they had not receiv'd
28 Set up the Transit } any damage.
30 The Commissioners appointed by Lord Baltimore to settle the Boundaries of Maryland came to Philadelphia.

Field notes from Jeremiah Dixon. (Image: National Archives)

following the latitude arc of approximately N39°43’20” for 233 miles westward.

Old Line Versus New Technology

In 2020, the Maryland Geological Survey (MGS) and the Pennsylvania Historical & Museum Commission (PHMC), members of the Mason and Dixon Line Preservation Partnership, began a new initiative to inventory these historic markers and submit them for inclusion into the National Registry. If accepted, the monuments will be part of a program established to help protect and preserve these physical boundary markers that define the boundary between the two states.

Part of the inventory has been the recovery and position confirmation by volunteer surveyors from the Maryland Society of Surveyors (MSS) and the Pennsylvania Society of Land Surveyors (PSLS). Using a geographic information system (GIS) app designed and implemented by the Maryland Geological Survey (MGS), volunteer retracers capture significant attributes about each monument.

While reestablishing the latitude/longitude of the recovered monuments with a smartphone or handheld GPS receiver is sufficient, several volunteers have used high-accuracy surveying equipment to determine a monument’s position.

Incredibly, the variation in the location of a given monument is well within reasonable tolerances from the originally intended installation. Also, because of GNSS technology, we now know more about continental drift. Because of this additional knowledge, 250+ years of tectonic plate movement should be considered when making these positional comparisons.

It should be noted that these monuments are a critical component of the boundary between states, and therefore must be considered senior to many other survey corners set after them. We cannot get lost in the sentimental aspect of recovering the monuments and not acknowledge the fact these points are the gospel when it comes to defining these state boundaries.

A Midwesterner in a ‘Foreign’ Land

My surveying career, as noted above, was solely in a state that is 200 years old, based upon the PLSS, and does not carry the history of the Mason-Dixon era of line establishment. So, when I was presented with the opportunity to join fellow surveying professionals from Maryland and Pennsylvania in recovering Mason-Dixon monuments for the inventory, I found it an easy event to join.

Planning a day of stone monument recovery along the Mason-Dixon line. (Photo: Tim Burch)

The planned meeting spot was a local fast food place at 8 a.m. on a sunny Saturday. Being it was in a small town, there were several groups meeting for their normal Saturday coffee klatches. Hearing a group mention “surveying,” I found my opening to identify myself as a fellow surveyor. After opening pleasantries, we settled into a game plan for recovering the targeted monuments for the day.

We settled on our assignments and enthusiastically went about our way. My partner for the day was Eric Gladhill, a Pennsylvania professional surveyor and veteran of Mason-Dixon monument retracement. In addition to his volunteer work, he has also authored several articles and a book on his surveying experiences, so it was quickly evident that we were in for a good day.

The first monument was not difficult to get to, and seeing it nearly brought a tear to my eye. Here before me was my first sighting of a Mason-Dixon

monument stone, and it was simply amazing. Standing there admiring this 250+ year old stone, hand cut and carved in England and brought here by ship to be specifically placed on this line, I could not help but realize the importance of this monument.

This line, and these stones, were the culmination of two land grants that disagreed with each other more than 400 years ago. We were standing in the same location as a large survey party once did, where they observed the stars to determine an accurate position and directed axmen to clear the untamed forest to establish this important line. While it was a warm and sunny day, it gave me a chill to know we were following in the footsteps of our surveying forefathers.

We continued our way and recovered six more

Mason Dixon Stone #98 – My first recovery! (Photo: Tim Burch)

monuments, including a crown stone. Crown stones were placed at 5-mile intervals. The detail in the carvings for most of the monuments was noticeably clear, and is a testament to the craftsmanship of the era's stonecutters.

While locating these historic monuments, were felt we were standing on hallowed ground. The location of this line was important enough that people, both indigenous and settlers, fought for the right to build their lives there.

This was also a line that would be the site of many battles during the Civil War. Observing these monuments drove home the fact that surveyors play important roles in establishing land ownership both today as well as almost 300 years ago.

Mason and Dixon were pioneers in bringing

Mason Dixon Stone #95, a crown stone. (Photo: Tim Burch)

geodetic astronomy to the American colonies. Their work has provided inspiration for future generations of geospatial professionals, yet most of the public does not know about that portion of their contribution. Hopefully, through the efforts of the "Mason and Dixon Line Preservation Partnership," we can promote this scientific contribution of Mason and Dixon along with the placement of the boundary stones.

My heartfelt thanks go out to Eric along with Wayne Aubertin and Rob Kundrick (Appalachian Chapter of the Maryland Society of Surveyors) for allowing me to join them for this task. They gave me a chance to be a true surveyor again and connect the past with the future.

Mason Dixon Stone #93, a Maryland side marking. (Photo: Tim Burch)

2022 ANNUAL MEETING & SUMMER CONVENTION AGENDA

Thursday, July 21, 2022

7:00 am – 1:30 pm	Check-in/Registration & Continental Breakfast/Exhibits
7:45 am – 8:00 am	Welcome and Introductions – President Grant Shepherd
8:00 am – 10:00 am	SurvNET Least Squares Adjustmemts (2.0 PDH) Presented by Doug Aaberg, Carlson Software
10:00 am – 10:30 am	Break & Exhibits
10:30 am – 12:30 pm	UAS Best Practices (2.0 PDH) Presented by Ross Kenney, AirWorks)
12:30 pm – 1:30 pm	Lunch on your own
12:30 am – 1:30 pm	Golfe**r's** Box Lunch at Southbridge Golf Club Sponsored by Allen Precision & Leica Geosystems
1:30 pm – 3:30 pm	Artificial Intelligence combined with remote sensing (2 PDH) Presented by Adam Kersnowski, AirWorks
1:30 pm - Tee off	22nd Annual Ski Bashinski Golf Outing - *Southbridge Golf Club* *415 Southbridge Blvd.* *Savannah (9.5 miles from the Hyatt)* *Transportation on your own- separate Registration and Fee*
7:00 pm – 10:00 pm	Welcome Dinner at the Hyatt Regency Harborside Ballroom East

Friday, July 22, 2022

7:00 am – 11:00 am	Check-in/Registration & Continental Breakfast/Exhibits
7:45 am – 8:00 am	Welcome and Introductions – President Grant Shepherd
8:00 am – 10:00 am	Freshwater & Tidal Wetlands (2 PDH) Presented by Dan Bucey & Alton Brown, Resource + Land Consultants)
10:00 am – 10:30 am	Break sponsored by eGPS Solutions & Exhibits *In Memory of Travis Pruitt, Sr.*
10:30 am – 12:30 pm	Auxiliary Lunch and Program – details to be announced
10:30 am – 12:30 pm	State & Federal Permitting and Threatened & Endangered Species (2 PDH) Presented by Dan Bucey & Alton Brown, Resource + Land Consultants
12:30 pm –1:30 pm	Surveyor**'s Lunch**
1:30 pm – 3:30 pm	Minimum Technical Standards (2 PDH) Presented by Mario Forte, PLS NOT YOUR AVERAGE PRESENTATION: Interactive Quiz format using an app on your Smart device
3:30 pm – 4:00 pm	Break & Exhibits
	Dinner on your own

Saturday, July 23, 2022

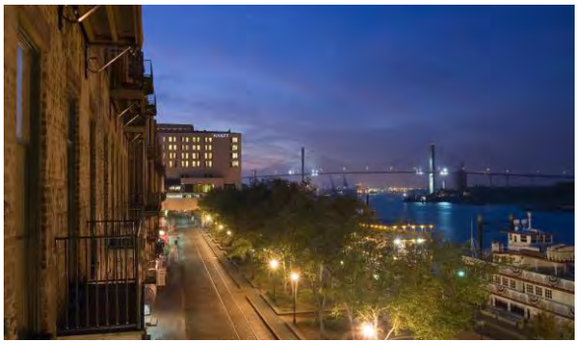
7:30 am – 9:00 am	SAMSOG Past Preside**nt's B**reakfast - *Invitation Only*
9:00 am – 10:30 am	SAMSOG Board & General Membership Meeting (2 PDH)
11:30 am -	Sporting Clays - *Forest City Gun Club* *9203 Ferguson Avenue, Savannah* *Transportation on your own- separate Registration and Fee*
6:00 pm – 6:30 pm	Banquet Beer & Wine Social – *sponsored by eGPS Solutions*
6:30 pm – until	SAMSOG Awards Banquet/Installation of Officers/Not-so-Silent Auction

MAKE PLANS NOW!

The SAMSOG Annual Meeting and Summer Convention will be held Thursday through Saturday, July 21st – 23rd, 2022, at the Hyatt Regency Savannah, 2 West Bay Street. Attendees can choose to stay at the Hyatt Regency or Hotel Indigo, 201 W. Bay Street (.2 miles and a 4-minute walk from the Hyatt). The program includes SurvNET Adjustments, UAS Best Practices, AI Combined with Remote Sensing, MTS and more. Education Chairman Teeple Hill has allowed plenty of time for fun and exploring! On behalf of the entire Society, Grant Shepherd, SAMSOG President, Teeple Hill, Vice President & Education Chairman, and Wright Powers, Annual Meeting Committee Chairman; Welcome to the 2022 Surveying Convention of Georgia!

HOTEL ACCOMMODATIONS

The **Hyatt Regency** is the host hotel where meetings and events will take place however, the block of rooms at the Group rate filled up quickly therefore a block of rooms have been reserved for meeting attendees at the Hotel Indigo (.2 miles and 4-minute walk to the Hyatt).
Option 1: Rooms are available at the **Hyatt Regency** for $215+tax+parking WEDNESDAY ONLY. Thursday - Saturday rooms are available at $345+parking+tax. This rate is more than the rates available on budget sites however, the Hyatt will not reduce or match that rate. Please feel free to book on the budget site of your choice. **Option 2**: A block of rooms have been reserved at **The Hotel Indigo** Wednesday thru Saturday at $189+tax+parking. Call 912-236-4440 directly to reserve your room and use "SAMSOG" to receive the group rate. Reserved rooms rates at the Hyatt Regency and Hotel Indigo will expire WEDNESDAY, JUNE 29, 2022. After 6/29/2022, the group rates at the Hyatt and Indigo will increase. Check in time is 4:00 PM and check out time is 11:00 AM.



REGISTRATION

Registration is required to attend the events planned and seminars. Please complete the Meeting Registration Form and mail if paying by check or register on-line at **www.samsog.org** if using a VISA, MasterCard, Discover or American Express. **Registrations must be received by Monday, July 4, 2022** to receive the $50 EARLY BIRD discount (discount is reflected on the registration form). Late and/or on-site registrations will be accepted after this date as space allows. All attendees must check in upon arrival and are requested to wear nametags at all times during the meeting. SAMSOG makes every effort to have adequate program material available at the meeting; however, late registrants and/or on-site registrants may not have materials available at the meetings, in which case such materials can be emailed following the meeting, upon request. Registration packets will be available for pickup at the registration desk in the

Hyatt Regency Lobby from 7:00 AM – 1:30 PM Thursday, July 21st and 7:00 AM – 11:00 AM Friday, July 22nd. Admission to events is by ticket only. To attend the ticketed events and be eligible for prize drawings, you must be registered for the convention. Member employees can register at the member rate. **Members, please complete the registration form or register on-line by July 4th.**

22nd Annual Ski Bashinski GOLF Outing
Southbridge Golf Club – Thursday, July 21st
Sponsored by Allen Precision Equipment and Leica Geosystems

The Golf outing will tee off Thursday, July 21st at 1:27 PM at Southbridge Golf Club Southbridge has long been the most highly acclaimed golf course in the Savannah area. Legendary architect Rees Jones chose to design this fine masterpiece through a tract of dense woodland in South Georgia. Conveniently located within a few minutes of Savannah, Georgia's historic district, Southbridge is a Savannah jewel – a treat for both the eye and the golf game. Our forgiving fairways, large undulating greens, strategically placed water, and contoured fairways winding through beautiful stands of stately live oak trees and Georgia pines provides golfers of all skill levels an enjoyable golf experience. The cost of this event is $75.00 which includes golf cart, green fees, beverage cart tickets, and lunch. All those participating must complete the golf registration form and return no later than July 11th as tee times are limited. If you have a foursome you would like to play with, please list the four names on the golf registration form. Transportation is own you own.

SATURDAY, JULY 23rd - OPTIONAL SPORTING CLAYS EVENT
Sponsored by THOMAS & HUTTON

Join your fellow surveyors and friends at the oldest continuously operated gun club in America. Formed in 1883 and chartered in 1901 as a private club, The Club's shooting facilities include 32 skeet fields, 28 trap fields, 2 lighted five stands, dove tower and 2 championship sporting clays courses. The sporting clays courses are not only golf cart accessible, but also have adequate parking for both shooters and spectators alike. Your ticket to this event will include 50 targets, ammunition to shoot a sporting clays course, and a BBQ lunch. Additional services are available for purchase (see list below). For more information on Forest City Gun Club, visit www.forestcitygunclub.com.

COST: $55 for 50 targets, ammunition to shoot the course, and BBQ.

TRANSPORTATION: Transportation is on your own, however, participants will meet in the Hyatt Regency Hotel lobby at **11:00 AM** or IMMEIDATELY FOLLOWING THE BOARD AND GENERIAL MEMBERSHIP MEETING and carpool or leave together at **11:00 AM** lunch will be served at club and at 12:30 pm club will review safety procedures, divide teams, etc. and the shoot will begin at **1:00 PM**. The club is 20 minutes from the Hyatt Regency.

Additional services available for purchase: Eye & Ear Protection $5.00/ per person, Gun Rental $40.00/ per gun, and Cart rental is $50 for a 4-seater.

CONVENTION ATTIRE

The SAMSOG Annual Meeting and Summer Convention is designed for relaxing, socializing, shopping, and education. Comfortable, casual dress is encouraged during the day.

- Dress for the Thursday night's Welcome Dinner is resort casual.
- Dress for Friday's Auxiliary Lunch and Program is resort casual.
- Dress for the Saturday evening Social **sponsored by eGPS Solutions**, Dinner and Awards Banquet is business casual attire (coat & tie optional).

AUXILIARY & COMPANION PROGRAM

Auxiliary events are open to everyone — no membership or conference registration required; see the meeting registration form to purchase individual tickets to events. Thursday and Saturday enjoy direct access to the iconic River Street while taking in the views of the Savannah River. Indulge in regionally inspired food & drink steps from the hotel.

Thursday evening beginning at 7 PM, join us for the Welcome Dinner, dancing to the music of local band **Highland Drive**, networking, and corn hole in the Harborside Ballroom East. It our convention kickoff event and fun for all ages.

Friday lunch will be held in the beautifully appointed Plimsoll Room overlooking the Savannah River. Enjoy a lunch while watching cargo containers come and go. After lunch, Auxiliary Chair, Lynne Shepherd, will lead attendees in making beverage glass charms! This event is child appropriate. All materials included and charms are yours to keep!

The final event of the convention will be the Awards Banquet (business casual attire) including a wonderful meal and socializing with other surveyors and families. The event will conclude with our annual NOT-SO-SILENT auction to raise money for SAMPAC.

REMINDER

*Please bring items for the **"Not-so-Silent Auction** to the Saturday evening Banquet. Items already donated include a 1-night stay at the Hyatt Regency Savannah Hotel*

Proceeds benefit SAMPAC

SURVEYING AND MAPPING SOCIETY OF GEORGIA
2022 Annual Meeting and Summer Convention
July 21 - 23, 2022
Hyatt Regency Hotel, Savannah, Georgia

MEETING REGISTRATION FORM

Name of Person Attending_____ **Badge Name**_____

Name(s) spouse/guest _____

Company Name _____

Address _____

City _____ **State** _____ **Zip** _____

Email _____ **Phone**_____

BOARD AND GENERAL MEMBERSHIP MEETING ATTENDANCE IS NO CHARGE

CHECK THE OPTION THAT APPLIES TO YOU BASED ON YOUR SAMSOG MEMBERSHIP

MEMBER

- ❑ **OPTION 1 - 3 Day Registration** **$400.00**
  Includes admittance for one person to THURSDAY Seminars, Exhibits, Breakfast, Welcome Dinner;
  FRIDAY Seminars, Exhibits, Breakfast and Surveyors Lunch; SATURDAY Board & General Membership Meeting and Banquet.
  Less than $35 PER PDH
- ❑ **OPTION 2 – 2 Day Registration Thursday & Friday** **$350.00**
  Includes admittance for one person to THURSDAY Seminars, Exhibits, Welcome Dinner;
  FRIDAY Seminars and Surveyors Lunch.
- ❑ **OPTION 3 – 2 Day Registration Friday & Saturday** **$350.00**
  Includes admittance for one person to THURSDAY Welcome Reception, FRIDAY
  Seminars and Surveyors Lunch, SATURDAY Seminars, Board & General Membership Meeting and Banquet.
- ❑ **OPTION 4 – Thursday OR Friday** **$200.00**
  Includes admittance to Thursday **OR** Friday Breakfasts, Breaks, Lunch included. ***PLEASE CIRCLE ONE DAY ONLY***.
- ❑ **Spouse / Companion Package + Auxiliary Program and Luncheon** **$175.00**
  Includes admittance to Friday's Ladies Program and Luncheon and ALL other meals and banquet.

(Member employees can attend any function at the member rate. Spouse / Companion rates do not apply to a second employee from a company.)

NON-MEMBER

- ❑ **OPTION 1 - 3 Day Registration** **$500.00**
  Includes admittance for one person to THURSDAY Seminars, Exhibits, Breakfast, Welcome Dinner;
  FRIDAY Seminars, Exhibits, Breakfast and Surveyors Lunch; SATURDAY Board & General Membership Meeting and Banquet.
- ❑ **OPTION 2 – 2 Day Registration Thursday & Friday** **$450.00**
  Includes admittance for one person to THURSDAY Seminars, Exhibits, Welcome Dinner;
  FRIDAY Seminars and Surveyors Lunch.
- ❑ **OPTION 3 – 2 Day Registration Friday & Saturday** **$450.00**
  Includes, admittance for one person to THURSDAY Welcome Reception, FRIDAY
  Seminars and Surveyors Lunch; SATURDAY Board & General Membership Meeting and Banquet.
- ❑ **OPTION 4 – Thursday / Friday / Saturday Seminar** **$300.00**
  Includes admittance to Thursday **OR** Friday Breakfasts, Breaks, Lunch included. ***PLEASE CIRCLE ONE DAY ONLY***.
- ❑ **Spouse / Companion Package + Auxiliary Program and Luncheon** **$175.00**
  Includes admittance to Friday's Ladies Program and Luncheon and ALL other meals and banquet.

ADDITIONAL TICKETS

Tickets for the functions below are included in the full registration fee and/or the spouse registration fee Seminar Package. Additional tickets for those wishing to attend these functions but not holding one of the above registrations should be purchased separately:

❑	Golf Thursday, 7/21/2022 (please complete Golf form)	_____ tickets at $75.00 each	**$** _____
❑	Welcome Dinner Thursday, 7/21/2022	_____ tickets at $75.00 each	**$** _____
❑	Surveyors Lunch Friday, 7/22/2022	_____ tickets at $50.00 each	**$** _____
❑	Auxiliary Lunch & Program Friday, 7/22/2022	_____ tickets at $25.00 each	**$** _____
❑	Clay Sporting Outing	_____ tickets at $65 each	$ _____
❑	Banquet Saturday, 7/23/2022	_____ tickets at $75.00 each	**$** _____
❑	Children 12 & under Saturday banquet, 7/23/2022	_____ tickets at $30.00 each	**$** _____

TOTAL FROM ABOVE: **$**

❑ **Payment by check**	❑ **Payment by**
Check number: _____ *Please forward check and completed form for total amount to:* **SAMSOG** **P.O. Box 1113** **LaGrange, GA 30241**	*VISA / MASTERCARD / AMX / DISCOVER* *Please call Ginger Jones at* *770-947-1767* For your protection, credit payments are no longer accepted by mail, fax, or email.

DEADLINE

Registrations must be received by Monday, July 4, 2022. ***Late and/or on-site registrations will be accepted after this date as space allows and will be charged a $50 processing fee***. All attendees must check in upon arrival and are requested to wear nametags at all times during the meeting. SAMSOG makes every effort to have adequate program material available at the meeting; however, late registrants and/or on-site registrants may not have materials available at the meetings, in which case such materials can be shipped following the meeting, upon request.

CANCELLATION / REFUND POLICY

Cancellations received by SAMSOG by 5:00 pm on Monday, July 4, 2022 will receive a registration fee refund, less a $50 administrative fee. Cancellations received after 5:00 pm on July 4, 2022 will be considered "no shows" and will not receive a registration fee refund. Program materials will be shipped after the meeting to every paid "no show" upon request. Designated substitutes may replace registrants unable to attend.

FOR ADDITIONAL FORMS OR TO **REGISTER ON-LINE**, VISIT ***www.SAMSOG.org***

Surveying and Mapping Society of Georgia
P.O. Box 1113
LaGrange, GA 30241

Phone: 770.947.1767 ~ Email: ginger_samsog@att.net

It $AVES to be a SAMSOG Member! Call Ginger at 770-947-1767 to join TODAY.

Registration Form

22nd Annual Ski Bashinski Golf Tournament Thursday, July 21st, 2022
1:30 p.m. Tee off and Box lunch

SAMSOG 2022 Annual Meeting & Summer Conference
Southbridge Golf Club
415 Southbridge Blvd.
Savannah, Georgia
southbridgesavannah.com

PLEASE COMPLETE PLAYER INFORMATION AND RETURN:

Name: _____
Company: _____
Phone Number: _____ Email: _____
Approximate Handicap: _____

If you wish to play with someone else (up to 3 people) please list their name(s) below. Please be sure the other person(s) includes you on their form as well. Every attempt will be made to accommodate your requests however, if pairings necessitate, we reserve the right to make foursomes. ***You do not have to have a team to participate!*** **Singles, Twosome, or Threesomes are welcome!**

I would like to play with the following individuals if possible:
1. _____
2. _____
3. _____

Registration to play: $80 per player
Mulligans: $10 each - limit two per player (Proceeds to benefit SAMPAC)
Can be used anywhere on the course from tee to green
Tee Blasters: $20 each - limit one per player (Proceeds to benefit SAMPAC)
A Tee Blaster entitles the individual to tee off on one hole from the Red tees – only the player that purchased the Tee Blaster may tee off from the Red tees (not the entire team).

TOTAL AMOUNT ENCLOSED: $_____

Please return Golf Registration Form with Meeting Registration Form.
Golf and Registration Fees may be paid in one payment.

MAKE CHECKS PAYABLE TO: SAMSOG and mail to: P. O. Box 1113, LaGrange, GA. 30241
OR pay by Credit Card and call Ginger Walker at 770-947-1767. **IF REGISTERING ONLINE GO TO samsog.org and select EVENTS.**

DEADLINE TO REGISTER IN ADVANCE TO PLAY IS: Monday, July 18, 2022, 5:00 P.M. If you have not registered by that date and still wish to play, please call Ginger Jones directly at 770-947-1767.

Cancellations accepted up to July 18, 2020, 5:00pm, otherwise no refunds. We play in all weather conditions except lightning.

ANNUAL RAFFLE FUNDRAISER

Carlson Software Package
donated by Carlson Equipment & Software

Laptop
donated by Platinum Geospatial

TOTAL VALUE $5,000 | TICKETS $50 EACH

Tickets available online at **samsog.org**. Click Store.

Drawing will be held Friday, July 22, 2022 at the SAMSOG Annual Meeting and Summer Convention at the Hyatt Regency Hotel, Savannah, Georgia.
Need not be present to win.

All proceeds benefit the foundation's endowment of the Ben Fortson, Jr. Scholarship, SAMSEF Technical Scholarship, and operating expenses.

April 27, 2022

SURVEYING AND MAPPING SOCIETY EDUCATION FOUNDATION
P.O. BOX 1113
Lagrange, Georgia 30241

Dear SURVEYING AND MAPPING SOCIETY EDUCATION FOUNDATION Committee,

Please accept my most sincere appreciation for acceptance of my application for the Technical Scholarship for Spring 2022. I look forward to pursuing my licensure through the Pathways Program at Georgia Southern University and this scholarship will go a long way to making that a reality. Thank you for the work you do and for selecting me as a recipient.

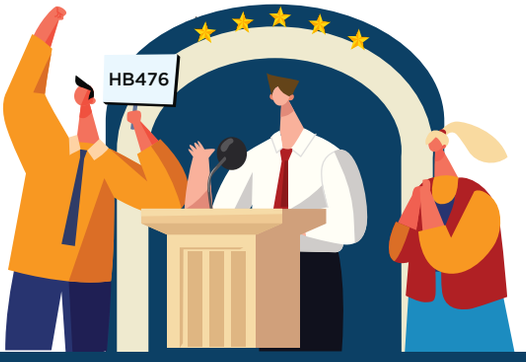
Sincerely,

John Lariscy

John Lariscy

Upcoming Changes To Regulating The Surveying Profession In Georgia

By Mark E. Chastain, PLS



After many attempts for many years, the effort to improve the functionality of the Georgia Board of Registration for Professional Engineers and Land Surveyors ("PELS") has finally found success! HB476 was signed into law by Governor Kemp on May 9, 2022. Special thanks to lobbying efforts by Sully Sullivan with ACEC for the engineers, and Russ Pennington with Impact Public Affairs for SAMSOG. There were only 2 no votes in the house, and it was unanimous in the senate.

To understand where the PELS board is going, it's important to understand where it is now. Currently PELS is one of dozens of licensing boards under the Secretary of State's office (SOS), within the Professional Licensing Boards division (PLB). There are 9 members of the board: 6 engineers, 2 surveyors, and one public/consumer member. The staff is shared with a few other boards also, as well as a small pool of investigators. The Attorney General's office provides an assistant AG to cover board meetings and represent the board in any legal matters including the prosecution of disciplinary actions. The staff members answer to the PLB director and ultimately the Secretary of State. Currently the board members are not involved in selecting staff nor is the staff accountable to the board.

For at least 20 years there has been some measure of resistance by the legislature to improve the funding and structure of the board due to the politics associated with the various Secretary of States that we've had. Since 1983, with the exception of one interim SOS in 2018 and the current one, all have sought higher office. Thus, for decades the consideration of measures to help the board have seemingly been tempered with a political calculus regarding the political trajectory of the Secretary of State. Finally one of them won the governor's race and supported the bill to dramatically change the structure and all but permanently depoliticize the PELS board.

HB476, also known as the "Professional Engineers and Land Surveyors Act of 2021" now stipulates that the position of Executive Director will now be appointed by the PELS board. This would be similar to a city council appointing a city manager or a school board appointing a superintendent. This is good, and necessary, in that it creates accountability to the board members. As to funding, "the board shall be a separate and distinct budget unit" and is no longer a division of the PLB. A separate budget is to be submitted to the governor and both chambers' appropriations committees annually. The law also provides for the ability to hire investigators who "shall have a level of experience or knowledge of the area of practice needing to be investigated, including but not limited to, engineering or surveying".

The timing and transition will be implemented over the next several months. Currently, the PELS board remains budgeted as a division of PLB under SOS in

the 2023 fiscal year which runs from July 1 of 2022 through June 30 of 2023. So, the funds to implement the changes will not begin to become available until next July. In the meantime, a memorandum of understanding (MOU) is under way to allow the PELS board to continue to operate this way. A task force has been started to coordinate the transition process. This year (2022) is a renewal year. So, all registrants should be noticing an increase in this year's renewal fees. The board will be developing the budget to be submitted which will account for the new revenue and dedicated adequate staffing. If all goes well, funding should start flowing next July 1. So, I would anticipate it taking much of the rest of 2023 to get everything in place and functioning.

So what will the future of PELS look like? With adequate funding and accountability, customer service should improve drastically. No longer will simple questions or application updates take weeks or months. Similarly, complaints will no longer "die on the vine" from lack of activity over a period of years. With investigators on staff who are not only dedicated solely to the PELS board but also knowledgeable about our professions, the enforcement of rules and laws should improve immensely. Most states with this level of staffing are able to investigate complaints within 30 days and submit them to the board for consideration and action within 90 days. We can also expect to see a professional and regularly issued PELS newsletter, and hopefully have an option to get license renewal reminder notices in the mail. Continuing education audits may become more common, but should be resolved much quicker than the current 2-4 month average. In all, it will be a tremendous improvement for the public for whom we professionals work, as well as for those of us in the business and for those seeking to become licensed.

FEMA WEBINARS

Now Available on Demand!

Indirect Cost Recovery for Local Governments
On-Demand Recording

When the U.S. Office of Management and Budget (OMB) rolled out its major federal grants reforms a couple years ago, it sought to consolidate and harmonize multiple sets of diverse administrative and cost requirements applicable to different kinds of performers. In particular, policymakers wanted to balance recognition of legitimate recipient and subrecipient indirect costs while limiting the workload necessary to arrive at negotiated rates.This webinar has been designed to drill down on the details of the key sections of the OMB Uniform Guidance that address this complex subject. During this session, you'll learn about:

- Engaging cognizant and awarding agencies in indirect cost review
- Determining the flow of central services that benefit grant-funded activities
- Assigning central services costs, and screening them for allowability
- Assessing available methodologies to meet organizational needs
- Determining whether multiple indirect cost rates are warranted
- Creating a narrative "Cost Policy Statement"
- Choosing cost allocation bases that reflect "benefits received"
- Using effective display templates for indirect cost allocation
- Presenting indirect costs that are billed through internal service funds
- Understanding and executing the required certification on indirect costs
- Providing convincing documentary support for your calculations
- Using the single audit process as a resource for indirect cost recovery

Recovering Federal Grant Indirect Costs: A Tutorial for Nonprofit Organizations

On-Demand Recording

When the Office of Management and Budget launched its big grants reform initiative a few years back, they heard a lot of complaints from nonprofit organizations about indirect cost recovery — or, more accurately, the lack of it. Some federal agencies and many pass-through entities were refusing to recognize and reimburse those legitimate award costs. This webinar will provide the tools to do that and offer answers to these, and other, questions:

- What do the federal rules say about decisions to charge costs indirectly?
- What are the real requirements on federal agency indirect cost cognizance?
- How are federal agencies forced to recognize federally negotiated rates?
- What kinds of discretion do pass-through entities still have?
- What options are available for nonprofit subrecipients to recover their indirect costs?
- What are the procedural steps to develop and present defensible rate calculations?
- How does the de minimis indirect cost rate work, and what are its advantages and disadvantages?
- What federal resources are geared specifically to helping nonprofit organizations recover their indirect costs?
- What role will an organization's single audit play in indirect cost recovery?

2022 Single Audit Readiness for Auditees

On-Demand Recording

As today's single audits are being used for assurance of grant accountability and award decisionmaking, now is the critical time for grant recipients and subrecipients to understand the current federal fund accountability atmosphere. That's where this webinar will help you. We'll provide you with the information you need about the Single Audit Act and its implementing regulations, as well as recent developments affecting grant administration and audit standards and guidance. The webinar will cover:

- Federal policies for procurement of audit services
- Office of Management and Budget (OMB) authority on expenditure dollar threshold, audit scope and report submission policies
- Changes to auditing standards affecting grant recipients and subrecipients
- Using OMB's 2021 Compliance Supplement and its Addenda for audit readiness
- Important plans for OMB's 2022 Supplement
- Verifying single audit compliance by subrecipients
- The role of single audits in awarding agency risk assessments

FOR MORE INFORMATION:

Federal Fund Management | 1-888-265-0600 | service@federalfundmanagement.com

NSPS NEWS

From Trisha Milburn | National Society of Professional Surveyors

It has been brought to our attention that some members are not receiving News and Views. News and Views is generated through a third party provider and we do our best to keep the list updated.

It would be very helpful if you could email your members the information below.

• If not receiving the *NSPS News and Views* eNewsletter please subscribe with your current email address https://multibriefs.com/briefs/NSPS/ Back issues can also be found on the website.

• Please review the News Briefs Help document.

• Sign into the NSPS website to update your information including email address. You can make the information private at that time. Once signed in navigate to the right hand side of the page and click on Manage Profile under the My Profile heading.

Please direct questions to info@nsps.us.com.

Check out Surveyor Says! The NSPS Podcast on Podbean or wherever you find your podcast.

Find us on FB, Linked, Twitter, Youtube and Instagram

NSPS Lobbyist Pitches ALTA/NSPS Land Title Survey Standards to Treasury Department

NSPS Federal Lobbyist John "JB" Byrd made a presentation to the Open Data Standards Task Force, co-chaired by Bloomberg and Data Foundation, with support from the Data Coalition Initiative, at a jointly hosted a public forum on May 5 to facilitate a private-public exchange to help provide insights on federal financial regulatory data. Byrd promoted on the 2021 ALTA/NSPS Land Title Survey Standards, the Treasury Department's role per the Geospatial Data Act (GDA) of 2018 and summary thus far, and the need to populate the National Spatial Data Infrastructure (NSDI). The forum provided an opportunity for financial institutions, the data community, and oversight bodies to offer actionable and practical feedback on how to improve data management strategies across federal financial regulatory and oversight agencies. Feedback gathered during this public forum will be shared with the Financial Stability Oversight Council (FSOC), an oversight agency of the Department of the Treasury.

Department of Labor's Proposed Rule on the Davis-Bacon Act (DBA)

On March 18, 2022, the Department of Labor (DOL) published a proposed rule to update regulations implementing the Davis-Bacon Act, which applies to federal and federally-assisted construction projects. DOL has prepared an initial regulatory flexibility analysis for this rulemaking and seeks feedback on the numbers of small businesses affected and their compliance costs. The proposal revises definitions such as "site of the work" to include sites where prefabricated buildings are produced and "scope of work" to include energy infrastructure. These changes may lead to more small firms being required to comply with Davis-Bacon labor standards. The proposal also changes the methodology for determining the prevailing wage. DOL currently uses the average rate if a majority of workers do not receive the same wage rate. Under the proposed rule, if a majority of workers are not paid a particular wage, DOL will identify any wage rate that is paid to more than 30 percent of the workers as prevailing. If there is still no wage prevailing, the agency will revert to an average rate to determine prevailing wage. DOL also proposes to update non-union prevailing rates every three years to address out-of-date wage determinations.

The link below is to the Department of Labor website where they have established their proposed rule changes to modify the Davis-Bacon Act for considering surveying services to fall under prevailing wage regulations. NSPS and its Government Affairs team is crafting a strong response to these proposed changes, many of which have been proposed without any interaction with our profession at any level. Please read the proposed changes here:

https://advocacy.sba.gov/2022/03/21/dol-updates-prevailing-wage-methodology-under-davis-bacon-act/

Thoughts on Professional Practice and Education

Article 2: FS Exam as a Student Graduation Requirement

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

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

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

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

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

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

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

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

I have heard students claim they will be better able to study for the FS exam later after they are employed and without the academic burdens of course attendance, homework, and course exams. I caution

otherwise. My experience shows that the new graduate is often immersed in long hours at work and is soon distracted with marriage, home ownership, child raising, and family commitments. All too often the graduate who has not taken and passed the FS exam while in college, fails to pass the exam later or cannot commit the time to prepare and take the FS exam later.

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

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

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

The second reason, perhaps partnering with the first reason, is that program administrators do not want the FS scores to be used to judge the extent of their graduate's knowledge and ultimately the quality of the surveying program. It is no secret among the profession that many surveying programs are on tenuous grounds due to low enrollment or faculty deficiencies. Often students that should not be in college, let alone a surveying program, are admitted and moved along much as many public schools move students along to graduation. Perhaps this happenstance is the eventual outcome of a society that gives a trophy to all participants, not just the winners. I will say no more as rational arguments sometimes get lost or ambushed when placed in this arena.

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

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

EARLY AMERICAN SURVEYING EQUIPMENT

By Dr. Richard L. Elgin, PS, PE | Rolla, Missouri

The face of a Goldsmith Chandlee (1751 - 1821) vernier compass; Winchester, VA, circa 1800. Eagle holding banner with "John Orndorf" for whom the compass was made.

America's Requirements

Much of America's surveying practice descended from the English, but our early surveying equipment did not. The Old World used the delicate, expensive theodolite to divide its lands, sighting on points and measuring angles on a divided, graduated circle. American surveyors needed to establish boundaries over vast wildernesses which were difficult to traverse and they needed to do it quickly and cheaply. Enter American innovation, technology and craftsmanship to improve a device used by mariners for hundreds of years, a form of which was being made in England, the magnetic compass. The result was the rugged, inexpensive standard American compass. As one commentator said of the American compass "where accuracy can be sacrificed to speed and cheapness."

The Compass

Rugged, the compass with its body of wood or brass, two sight vanes, a leveling device and placed on a staff or tripod, required only a balanced magnetized needle resting on a sharp point. The needle aligned itself with the earth's magnetic field and pointed to magnetic north. Magnetic north was known to move and hence was a poor direction with which to reference boundaries. This movement was well known, being noted in some 1746 instructions that it "…may in time occasion much confusion in the Bounds…and, Contention." Variation, the angle between True Meridian (a line of longitude) and Magnetic North was known to differ at different locations on earth and the angle was known to change in amount over time and location. True North was a better reference direction and in 1779 Thomas Jefferson wrote that the plats of surveys were to be drawn "protracted by the true meridian" and the variation noted.

The first standard American compasses were "Plain" compasses. They used magnetic north and had no mechanism for applying the variation angle, converting magnetic direction to true direction.

David Rittenhouse (1732-1796) was an American man of science. He is generally credited with adding a vernier to the plain compass so one could "set off" the variation,

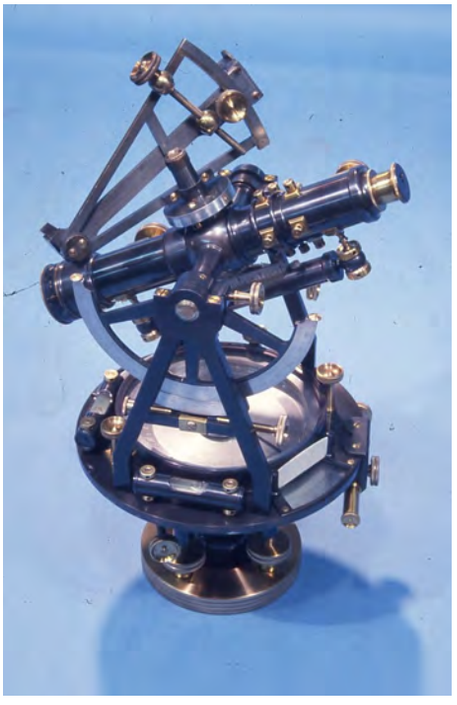
The standard American vernier compass by W. & L.E. Gurley. This form with vernier, outkeeper, sights, level vials, was made from about 1860 and remained in the Gurley catalogs into the 1930s. It attached to either a tripod of Jacobs Staff.

the needle still pointing to magnetic north, but the bearing to the object sighted read on the compass circle being the true bearing. Thus the "plain compass" became the "vernier compass," a great advancement in the American compass.

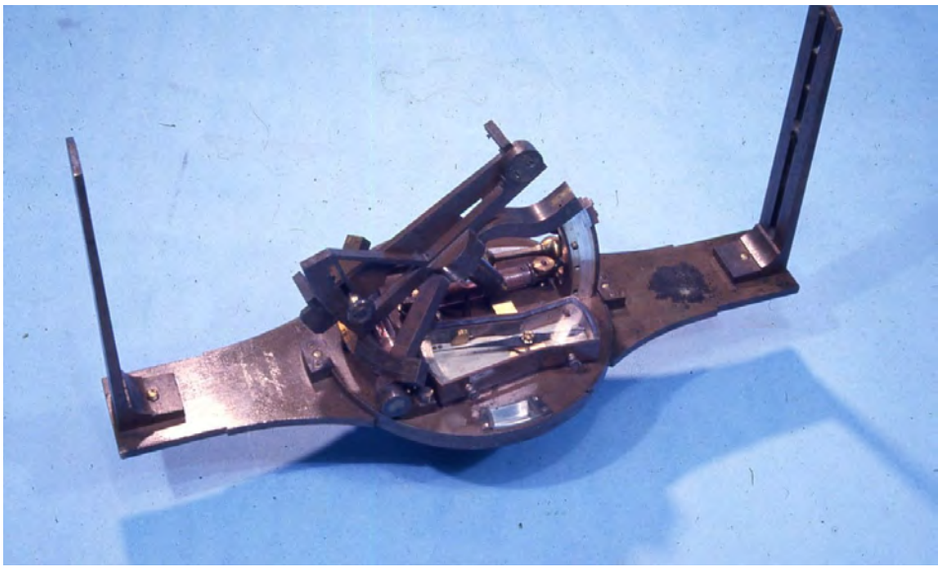
The Land Ordinance of 1785 specifies that all lines be surveyed "by the true meridian…the variation at the time of running the lines thereon noted." Tiffin's Instruction of 1815 (the first written instructions issued by the GLO to its Deputy Surveyors) specified "a good compass of Rittenhouse construction, have a nonius division…." This is a vernier compass, "nonius division" meaning a vernier. Thus, the vernier compass became the standard instrument for surveys of the USPLSS. Until……

William Austin Burt and his Solar Compass

William Austin Burt (1792-1858) was a GLO Deputy Surveyor, who, in 1835 while laying out townships in Wisconsin noted unusual deviations in the lines surveyed using his compass. He began work on a method and form of compass that would determine the direction of the true meridian independent of magnetic north. He invented an ingenious device that uses the observer's latitude, the sun's declination and local time to determine true north. The device mechanically solves the PZS (Pole-Zenith-Star) Triangle. The prominent Philadelphia maker, William J. Young (1800-1870) built the device, and Burt was awarded Patent 9428X on February 25, 1836.



Solar Transit by W. & L.E. Gurley; Troy, NY.



A rare Solar Compass by a very rare maker, John S. Hougham; Franklin, IN. Compass was made about 1861.

Burt made improvements to his solar compass and an improved version was patented in 1840. In 1850 Burt's patent expired which allowed other makers to produce the solar compass. (The circumstances of the expired patent are a sad story.) There are about 12 known post-1850 makers of solar compasses. All the solar compasses made prior to 1850 are marked "Burt's Patent" and "W.J. Young" or "Wm. J. Young," he having made them. They are not dated or numbered. Those made by Young after about 1852 are numbered.

Is it a transit or a theodolite?

Generally the theodolite refers to an instrument with divided circles to measure both horizontal and vertical angles to high precision, the telescope is relatively long and will not transit (rotate 360 degrees) about its horizontal axis. The more common term "transit" refers to an instrument with both horizontal and vertical circles (only horizontal on early transits), a 4-screw leveling head, bubbles for leveling and a telescope that will transit. William J. Young is credited with building the first dividing engine in America. That allowed him to cut circles and he is credited with building the first American transit in 1831.

The transit developed and attachments, such as a variation on Burt's solar compass, was added by many manufacturers. For mining applications, parallel telescopes were added, thus allowing sightings at large vertical angles into steep mine shafts.

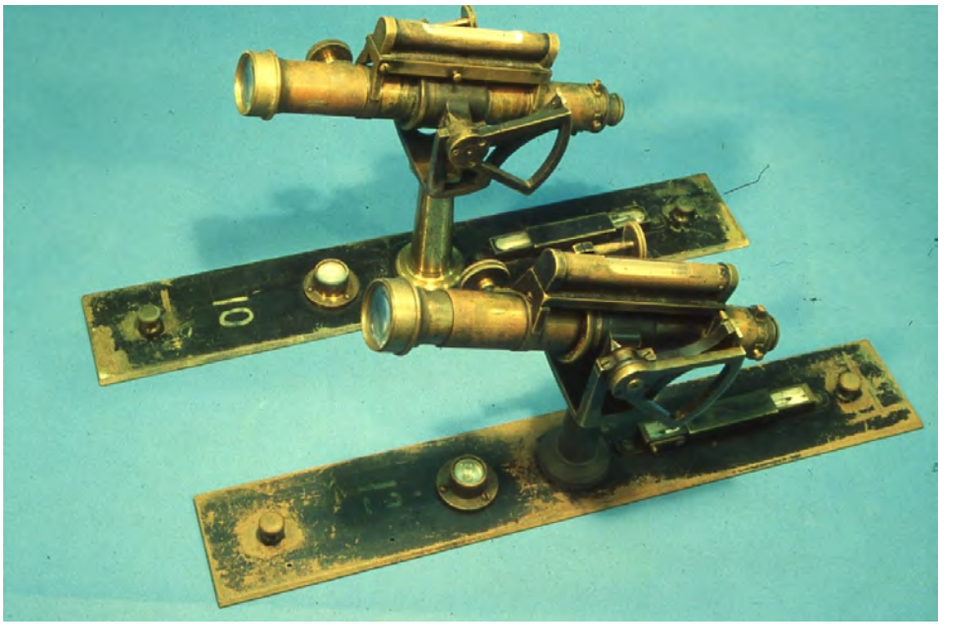
An assortment of chains: Gunter's Chain, 66 feet. A half-chain, 33 feet. Railroad or Engineer's Chain, 100 feet.

Large precise transits were constructed for control surveys and astronomical observations. Horizontal circle diameters can be as large as 18 inches.

Collecting and Values

Early and vintage surveying equipment is highly collectible. It is the surveyor's heritage, it represents about 200 years of advancing measurement technology, and some illustrate incredible craftsmanship and artistry (especially of the early makers). As with other collectibles there are highly desirable, usually rare instruments (such as the solar compass). And, there are the early Virginia and Pennsylvania makers that made compass that are works of art. But, even instruments by the prolific makers like W. & L.E. Gurley and Keuffel & Esser are desirable.

There are many collectors of early American surveying equipment, some with very large collections. Most collectors buy and sell instruments, research makers and surveying equipment, and a few offer repair and restoration services. Most collectors focus on a particular maker (or two), and others focus on the makers of a particular city (St. Louis, for example), and others are interested in a particular instrument form (transits with unusual attachments, for example). There are online resources for early surveying equipment. Some are: www.surveyhistory.org run by David Ingram. The Facebook page, "Antique Surveying Instrument & Ephemera" run by Dale Beeks. And, www.compleatsurveyor.com by Russ Uzes. Among the collector community there is broad and deep knowledge of early American surveying equipment, but that knowledge is not well documented. There are not many reference books on the makers and their equipment. A few have been covered in articles and short treatises but there are not good reference materials on the broad topic.



Two alidades by Fauth & Co., Washington, DC.

This is one of the first transits made in American. William J. Young, Philadelphia. Three-minute least count, bullseye bubble. Was made in the very early 1830s.

What are we going to do with Grandpa's surveying stuff, and what's it worth?

Regrettably, there is not a national museum or repository where surveying equipment can be donated. Beloved equipment left to families or owned by old surveyors and seeking a home have limited options. The Smithsonian will not accept any such equipment, except for historically important equipment with known provenance. Most such equipment is not highly valuable. It is likely 90 percent of such equipment would be worth less than $1000 per piece. Eight percent would likely be worth up to $10,000. One and one-half percent up to $100,000. And the last 0.5 percent over $100,000. Most collectors will have no interest in

Telescopic compass (not a transit) by Blattner & Adam; St. Louis, MO. Late 1800s.

Gimbaled compass by James Reed (1792 - 1878) of Pittsburgh. Used in the mines.

about 90 percent the equipment offered to them (they already have plenty of early to mid-1900's Gurley and K&E transits and levels). The best recipient for most low to mid-level surveying equipment may be a local museum, particularly if the equipment was used in the area by a local surveyor.

As with most collectibles, old or vintage surveying equipment is not worth what it was 10 or 20 years ago. The rare, unusual, historically important pieces have not lost their value during that time period and can easily be sold.

The Future

Boundary surveyors, being mensurators, detectives and historians have an appreciation for the equipment that laid out America. The equipment is our heritage, to be preserved, admired, studied and displayed. Every boundary surveyor needs an old compass and a chain proudly displayed on their desk.

Dr. Elgin is a surveying practitioner, educator, researcher and author. He owns a large collection of early American surveying equipment. He is expert in the Chandlee family of makers, John S. Hougham (Indiana) and the St. Louis makers. He's written several books including Riparian Boundaries for Missouri, Legal Principles of Boundary Location for Arkansas and The U.S. Public Land Survey System for Missouri. He coauthored the Sokkia (Lietz) Ephemeris. He can be reached at: elgin1682@gmail.com

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