

November 2023

SIDE SHOTS

Professional Land Surveyors of Colorado

Volume 54, Issue 4



Young Surveyor Profile

SEE PAGE 25

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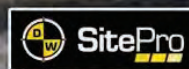
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SIDE SHOTS

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*Side Shots is the official publication of the Professional Land Surveyors of Colorado, Inc.
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Brian Dennis
President

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**Deadlines for editorials, articles, pictures and advertising are January 1, April 1,
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Hello Fellow Members

Fall is officially here..... leaves are turning, temperatures cooling, and daylight is shortening. All the weather predictions I have seen are anticipating a strong El Nino weather pattern to be on us within 1-3 months. What does that mean? In short...a wet winter, with more snow totals and frequency than we have seen in the past few years. Sounds like a typical Colorado weather forecast. No one actually knows what the weather has in store for us but it would be wise to prepare. Make sure your field trucks are current on maintenance including good tires, brakes, suspension alignment to name a few items. Remind our younger associates about winter gear and protection. Let them learn from our mistakes..... and we all made them. Winter storms can come out of nowhere and it is better to be prepared than surprised. To everyone, be careful and be safe!



I have spoken with many of you since the last Side Shot issue and no one appears to be slowing down regarding workloads. The economy has continued to fluctuate but developers and builders are moving forward at full pace after their short pause in the spring. This is great news for Colorado! Not all states have had our good fortune in this regard, and I hope it continues for all of you through the fall/winter months. There are reports that the multi-family sector will be slowing down due to recent changes in lending requirements. Time will tell if that has any measurable impacts or if the multi-family sector recalibrates as well and chugs forward with the adjacent markets.

The PLSC Board and committees have also continued moving forward with the many agenda items we are tackling this year for the membership. I named many of the agenda items in the last issue, so I won't bore you by regurgitating the list. Be patient with us, we are making progress with each item and as we hit milestones, I will make notes in upcoming Side Shot issues to keep everyone informed on our status. This is a very active year for the Board, and I want to say, Thank you, to all of the Board members, Chapter Presidents and PLSC members that are contributing. None of these items can succeed without you and all that you do! As always, there is a need for additional volunteers in these committees. If you are interested or want to know more, feel free to reach out to the committee chairs, Becky Roland or myself for more information or how to participate and help keep these committees moving forward.

I wish everyone a profitable and safe season!

Brian Dennis, PLS
PLSC President

FROM THE EDITORIAL COMMITTEE

This edition contains our last installment for the Young Surveyor series with an interview of AJ Summers. AJ was recommended to us by Brian Kelly, president of the PLSC Northwest ¼ Chapter. I think you will enjoy getting to know him as much as Heather Lassner did for the interview. It seems more important than ever to highlight the different career paths our fellow surveyors travel and for young surveyors to see other young surveyors making successful careers in this field.

Our next series of articles will be on “Trailblazers”, those surveyors in whose footsteps we follow, whose advice we seek out, and whose shoes we attempt to fill. Please send recommendations for those surveyors who influenced you and continue to shape you professionally.

Education and outreach continue to be a focus throughout the state as evidenced by the work being done at the Waldorf School. The PLSC Northern Chapter is sponsoring construction of a Virtual Sandbox with the Poudre School District Futures Lab. The sandbox will reside in the school district for use throughout the system and will be available for PLSC Northern Chapter educational events.

Professional Educational opportunities are also well represented: the 2024 Survey Summit, the 2024 Refresher class, WFPS FS (Fundamentals of Surveying) Exam Study Course, WFPS Steve Parrish Continuing Education webinars/continuing education, as well as a WFPS Editor’s Forum.

It is also evident that our community is concerned about the future and trying to anticipate the disruptors that may be coming our way, from the political (see comments in the Waldorf School article), philosophical (see News from the NW ¼), to the educational (see opinion article by Knud Hermanson regarding Common Practical Deficiencies in Student Education). Please note that all opinions are those of the respective authors, and not those of this publication and are intended to continue a tradition of loud conversation (not arguments) found in most gatherings of surveyors.

For editorial correspondence, contact: Laine Landau at sideshots@plsc.net



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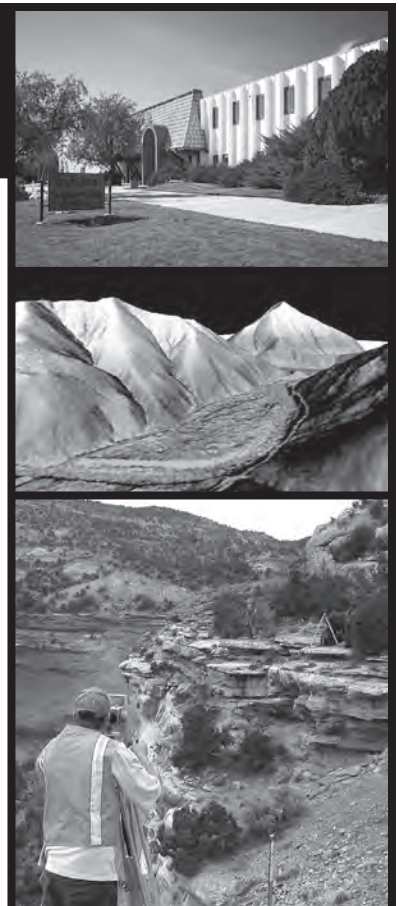
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PLSC Board of Directors

Meeting Minutes, August 31, 2023

1. Call to Order: Pettit

Name	Position	Chapter	Attending?
Brian Dennis	President	Southern	x
	Vice President		
Shaun Lee	Secretary/Treasurer	Central	x
Becky Roland	Executive Director	n/a	x
Heather Lassner	Director	Northern/TrigStar	x
Brian Bowker	Director	Western	x
Ian Cortez	Director	Central	x
Todd Johnston	Director	Southwestern	x
Steve Parker	Director	Southern	
Tom Sylvester	Director	Western	x
Scott Thompson	Director	Western, Legislative Co-Chair	x
Dennis Moulard	Director	Northern Chapter	
Ralph Pettit	Ex-Officio	Central	
Todd Beers	Non-Voting	NSPS/WFPS Delegate	x
Guests:			
John Hunter		Geo-Coordinator	
Laine Landau		Side Shots Co-Editor	
Randy Fortuin		Central Chapter	
David Berglund		Northern Chapter	x
Brian Kelly		NW ¼ Chapter	
Brian Shaw		NOAA/NGS	x
James Combs		YSN	x
Cole Conger		YSN	
Sue Weiss		CST	x

2. Determined Quorum (6 voting): Lee

3. No changes to the Agenda: Dennis

4. Approve July 2023 Minutes: Dennis
MOTION: To approve the July 2023 Minutes as amended. SL/TJ
Approved unanimously

5. Financial Report: Lee/Roland
 a. Checking: \$4,172 Savings: \$38,858 I: \$172,283
 b. Investment transfer approval
MOTION: To move \$25,000 from Investments to Checking to reimburse for a portion of the fees paid by PLSC for the Colorado Mesa University Endowment. IC/TJ
Approved unanimously
 c. Draft Budget to Review
 i. Reviewed line items
 ii. Concern on the membership income and success of enlistment campaign in 2024
 iii. Vote next BOD meeting

d. Update on equipment sales
 i. Online store now ready to populate
 1. Need volunteers to write brief descriptions
 a. Brian Bowker is reviewing list
 2. Dr. Elgin is working on pricing
 ii. Library at Assurance Risk Management

6. Reports
 a. NGS Update: Shaw
 i. Mt. Evans and Bierstadt monuments
 ii. Surveying 14'ers with Boy Scouts, etc. (Fromhertz)
 1. Anyone can assist
 iii. Emergency Response Imagery for Hurricane Idalia <https://oceanservice.noaa.gov/news/aug23/ngs-storm-imagery-idalia.html>
 iv. GPS on BM deadline end of September (likely can submit until end of year) <https://geodesy.noaa.gov/GPSonBM/index.shtml>
 v. International Comparison of Absolute Gravimeters (ICAG) currently occurring until end of September at Table Mountain Gravity Observatory <https://geodesy.noaa.gov/web/news/absolute-gravimeters-comparison.shtml>
 vi. Beta Releases
 1. CORS Time Series Tool <https://beta.ngs.noaa.gov/OPUS-Tools/cors-time-series-tool/index.html>
 vii. Coming Soon MPAGES in OPUS
 b. Legislative Committee: Thompson
 i. The Colorado Legislation is not in session at this time.
 ii. The DORA report on Sunset Review will be published in October.
 iii. Our lobbyists, Kathy Oatis and Steve Balcerovich, met for an hour this week with House Representative Judy Amabile, Chair of the Business Affairs and Labor Committee. They report that she was very open to the expressed desire of the PLSC to support mandatory continuing education for Land Surveyors. The maximum contribution from Kathy and Steve to her election campaign probably helped! Based on the reported conversation, I reminded them that CE is not only about keeping up with changing technology, but even more importantly about raising the standard higher than "minimum competence."
 iv. We do not yet have a date for the legislative coffee. In response to a request from Kathy Oatis, an email was sent advising her that the

- calendar does not open up for scheduling Senate spaces until 90 days prior to the reservation date. Meaning that to apply for our desired date near the end of January, we cannot apply until late October. Kathy has it on her calendar to make that application at the appropriate time.
- v. I encourage everyone to take advantage of any contacts you may have with State Legislators to present the case for Continuing Education (without being obnoxious of course).
- c. Education/Scholarship Committee: Sylvester
 - i. WCCC/Scholarship Report: Sylvester
 1. 2 weeks in on this semester – 123 seats
 - a. Dr. Cole Conger is part of faculty
 - b. 25% are on campus/in-person
 2. Graduates are becoming licensed
 3. YSN Camping Trip next weekend – Tom is presenting on Celestial Shot for bearings – with homework
 4. No scholarship applications
 5. Trevor Parker needs field work assistance (Loveland)
 - a. Reade Roselles (Galloway) is voluntold
 - b. Cole Conger will help coordinate
 - ii. RMSS Report: Berglund/Lassner
 1. Site visit last week
 2. Finalized Vendor fees
 - a. Member/Nonmember
 - b. Open September 15
 3. Program 60% done
 4. Need Ethics presenter
 - a. 3-hour presentation
 - i. Dennis Mouland (presented last year)
 - ii. Dr. Elgin
 - iii. PLSC Refresher Course: Roland
 1. Hosting at Galloway Denver
 2. Registration opens November 1
 3. Post on FB – send any events to HL to post
 - iv. CST Education: Dennis/Weiss
 1. CST/NSPS hosted a meet and greet for CST
 2. Sue Weiss will help coordinate program in Colorado
 - a. Will have a list of proctors in each Chapter to assist examinees and post on website
 3. Trainer Syllabus being created
 - a. Study Kit to include books/resources/calculators – sell as package and proceeds go to CST scholarship
 4. Discounts for CSTs on Education/CE Programs and for CST Exams through PLSC
 5. NSPS will have booth at RMSS and assist with CST class
 6. Consider adding a CST Scholarship (put on future BOD agenda – approve flyer/application)
 - d. Side Shots Report: Parker/Landau
 - i. NSTR
 - e. Chapter Reports
 - i. Central
 1. Summer Workshop next month
 - ii. Southern
 - iii. Northern
 - iv. Southwest
 - v. Western
 1. Seminar tomorrow with Dennis Mouland – free to WCCC students to attend (10 attending)
 - a. 43 total attendees so far
 - vi. Reminder: please report work being done by PLSC at Chapter Meetings
 - f. Outreach Committee: Dennis
 - i. Need volunteers for Girl Scout Geocaching Event – Saturday in October – contact Brian Dennis
 - ii. Adams County 8th Grade Career Fair – November 9 (only if interest from a member)
7. NSPS/WFPS Reports: Beers
 - a. WFPS Report emailed
 - i. Met June 10
 - ii. Steve Parrish CE Library (PLSC members receive discount and portion of proceeds shared with PLSC)
 1. Dan Courville will also be contributing to CE Library
 - iii. Conference March 22-26 in Las Vegas
 - iv. NCEES is revamping beasurveyor.org
 - v. Amicus brief sent on mysiteplan.com
 - b. NSPS Fall Meeting – September 20-23 in Cleveland
 - i. Not attending in person
8. New Business - tabled
 - a. New Member Benefits (Member Only?)
 - i. Document Preservation – need volunteers
9. Next Meetings
 - a. Topics
 - i. Sample Legal Documents
 1. Contracts (Keane)
 2. How to file a lien
 3. Opt. Table A Items for ALTA
 4. Right of Entry
 - ii. AI and Surveying
 - b. September 28 – BOD Meeting
10. Adjourn SL/TJ

PLSC Secretary/Treasurer Report



Shaun Lee
PLSC
Secretary/Treasurer

Secretary Report:

Don't forget to log onto PLSC.net to update your profile information! This will help you to gain access to new resources being planned by the PLSC (special record library, meeting recordings, and more). Also, to stay informed through general communications, event invitations, surveys issued by the PLSC, and much more. You can reach out to any chapter or state board member directly to discuss any survey community topic or concern or by email. You can find board members and contact information within these pages of Side Shots or on PLSC.net.

Happenings

PLSC Board Meetings: 07/27/23, 08/31/23, 09/28/23

PLSC Board Positions Open:

- o Vice President of the Professional Land Surveyors of Colorado,

PLSC Committee & Positions Open:

- o County Surveyors – not active, no members seated.
- o Education – not active, no members seated.
- o Ethics & Fair Practice – not active, no members seated.
- o GPS – not active, no members seated.
- o Membership – not active, no members seated.
- o Outreach – not active, no members seated.
- o Special (current hot topic) – not active

- o Survey Monuments & Records Standards – not active, no members seated.

Working Group:

- o Nothing Organized

Legislative:

- Previously presented, Continuing Education has been embraced by the board of PLSC and is working to submit a report to DORA by the October deadline.

pay for the PLSC's Endowment Payment to Colorado Mesa University/Colorado Community College.

- Lobbyists Paid for 4th quarter 2023 at "Active" Level Status; fee \$3,750.
- 2024 Membership first half payments were sent to all chapters except for the Northwest Chapter because of concerns with inactivity of the chapter.
- PLSC Budget Approved for 2024. There are concerns about growing inflation and what the bottom line is next year. We are working with a slim margin and plan for a membership drive to work to gain value and find support for our organization.
- The PLSC-NSPS Foundation scholarship balance as of August 31, 2023 is \$91,675.37. This is an increase of \$493.87 since its inception in November 2022.

Treasurer's Report:

Past Quarter in Review:

- Deposit sent to the Westin Hotel in Broomfield for the upcoming RMSS 2024 Conference. Contract final payment planned in December.
- Following our July board of directors (BOD) meeting the board agreed to move \$25k from the education investment account to the checking account to help pay, in advance, fees for the upcoming 2024 Rocky Mountain Survey Summit (RMSS). A meeting was held with our investment account representative and funds were transferred. These funds replace liquid money used in 2021 to

Current assets:

a. Checking:	\$5,873
b. Savings:	\$34,958
c. Investment Account	
(Education Fund):	\$141,540
	\$182,371

Investments



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CCPS

Top of the day to everyone. I am preparing this Central Chapter update from Kenmare, Ireland.

I am here with my wife on our 30-year wedding anniversary trip.

In July we held our general meeting at one of the Jefferson County libraries. Our speaker was Earl Henderson from Zenith Land Surveying. He spoke to an energetic assembly of folks on the topic of Record vs. Measured dimensions with the application of evidence. We only had an hour and of half of time for the presentation, which as you can imagine was not enough. Earl brings great knowledge and thought to our Surveying community and, of course, the evening was filled with questions and maybe a little difference of viewpoints. The conversation continued in the parking lot after the library approached closing time.

On September 15th the CCPS Summer Seminar was held at Arapahoe County Community College. The morning started with a surprise and sophisticated presentation of a Shakespeare reading by a very talented young woman. This was very pleasant, entertaining, thought provoking, and to the point. It was then, with a sense of higher-level learning, the presenter, John Stahl, headed into a full day's lesson on Boundary issues using the foundation lessons from the book by Ray Skelton. This presentation by John was a graduate level education.

Many thanks go out to our committee chairman, Eric Laburda. He and his committee spent many hours in preparing this, our first annual Summer Seminar.

At the end of September, we held our Chapter's general meeting at Hixon Manufacturing's new Denver office. Our speaker was Mike Pope. He spoke about personal safety in a dangerous world. Discussions included laws, tactics, and situational awareness. Spouses were invited, and many attended.

Our educational outreach has been very active, with multiple day presentations at local schools. Guest speakers within the Surveying community have participated, including Dr. Jan Van Sickle. As a gem to our Surveying community Dr. Van Sickle continues to support our profession and his time spent with the high school students was very much appreciated. Many thanks go out to Amara Hildebrand for her efforts in moving this education effort to whom we hope will be future Surveyors.

On November 8th (Wednesday), we will be holding a Fall Social at the Breckenridge Brewery on South Santa Fe Blvd. This will be our third annual social. Thank you, Laura Minchik, for all you have done this past year. Your future is filled with wonder.

Thank you to all who have participated this past year. We hope to see you next year filled with optimism and joy for our profession and our families.

All the best

Randy Fortuin
CCPS Board member

NW1-4

The NW1/4 is getting ready for winter in the Hih Country, all the while enjoying the glorious fall weather. It is also very much a transition time in our industry as the baby boomers have been and will be leaving active practice and the younger generations start taking over. There are a number of very evident trends that we have all observed: First and Foremost, that the generations succeeding the Baby Boomers are nearly as large and secondly that even with the advances in technology we have all witnessed, the surveying industry will be undermanned. I still joke with the Routt County Surveyor that we will end our careers in GPS wheelchairs. We actually turned that corner about two years ago when a robotic GPS was Surveyor of the Year.

So, will Artificial Intelligence (AI) replace many of the tasks of today's surveyor? Unquestionably yes, it is already starting to.

What will become of monumentation? Will future generations simply be surveying towards a state plane coordinate? The answer to this one is at least in part yes as we are already doing it in some cases where the state plane coordinate of a prior monument location is better evidence than no evidence.

What will become of a Surveyor's Professional Judgment? Will we have more "Lost" corners than "Obliterated" corners since we can than simply apply single or double proportion? This is the trickiest question of all since the 2009 BLM (Bureau of Land Management) manual, State Stature in many states, clearly calls proportion as a method of last means.

Surveying has been around some 6,000 years plus since the times of Mesopotamia. And yet it faces its greatest challenges in the next 25 years, more than ever before

due to rapidly changing technology and our society. We want the answer in a box with a neat bow on it.

The NW1/4 doesn't have the answer to all these pertinent questions, but perhaps we as a surveying society do.

Respectfully submitted
Brian T. Kelly

NORTHERN CHAPTER

Greetings from the North!

Back from our summer hiatus, the Northern Chapter was able to meet for our planning meeting and lay out the schedule for the upcoming 2023-2024 season. It is always fantastic to meet with old colleagues, see new faces and share stories over dinner and a few drinks together. We were excited to see everyone after our 3-month break and made productive progress on what we would like to cover in the upcoming season.

Our meetings are almost always the first Wednesday of the month, from 6-8PM, except for the January meeting due to busy holiday schedules. Typically, the first hour of the meeting is an educational component ranging anywhere from geology to right of way. We also always serve dinner, so if you are ever in the area, please come by and join us!

Our October 4th meeting was held at Tait and Associates just west of I-25 between Loveland and Johnstown, where Steve Varriano gave us a presentation on Intro to CFedS sharing information about the program and his experience with us.

Our November 1st meeting is going to be hosted by Lamp Rynearson in Fort Collins. Laine Landau will be sharing her knowledge on contracts, and we look forward to gaining some important insight on the topic!

December brings the promise of holiday fun! We will be having our normally scheduled meeting on December 6th. Although we are currently trying to nail down the venue, we are planning on having a presentation about setting up a Drone program. Stay tuned to the PLSC website for additional information. Then with colder temperatures comes aggressive hockey, or is that just us? We will be having our annual holiday party at the Eagles Hockey game on December 22nd where the Eagles will take on the Calgary Wranglers! We were not able to reserve a suite but booked the balcony and a block of tickets to sit together. This is always such a fun event. Space will be limited, so if you are interested

in attending, please reach out to a Northern Chapter Board member.

In January of 2024, we will be hosting our annual board meeting on January 10th. This meeting is usually low-key, but we will be covering official business, the election of new directors, and other official chapter business. If you are interested in getting more involved and live or work in the Northern Colorado area, we would love to have you attend. We are always looking for people who want to engage and strengthen the survey profession!

Respectfully Submitted,
Dave Berglund, PLS
President Elect
PLSC Northern Chapter

SWC – PLSC

On August 12th, the Southwest Chapter (SWC) held our "Surveyors Rendezvous" which was a dinner at the Durango Highway 3 Roadhouse & Oyster Bar for the surveying community. This event was open to both PLSC members and non-members. Spouses/significant others were welcome and we had a great turn out, which included a couple of members from the Northern Chapter (Thanks Heather and Zack!). There were survey stories traded back and forth and even a show and tell of survey tattoos! During the dinner a nomination was thrown out for Chapter Vice-President and Brian Boniface, PLS was elected into the position. Thanks for stepping up Brian! Special thanks goes out to Rob Trudeau, PLS, Dave Seiler, PLS and Josh Casselberry, PLS for putting in the effort to plan this event!

The SWC held an in-person/virtual meeting on September 12th at the La Plata County Fairgrounds.

Here were highlights to that meeting:

- Treasurer's Report: Chapter account balance at Alpine Bank is \$8,612.97. A \$1,000 donation on 8/16 was made to the Fort Lewis College Village Aid Project as voted by the SWC in December 2022. Payment was made on 8/14 to the Durango Highway 3 Roadhouse & Oyster Bar for the "2023 Surveyors Rendezvous" in the amount of \$4,953.96.
- UPDATE: On short notice, Daryl Crites, PLS submitted an article for the PLSC Side Shots publication on his and Steve McCormack's survey of a portion of the east boundary of La Plata County. Thanks Daryl!
- UPDATE: A six hour field medic class for Chapter members has been canceled due to change in ownership of the vendor selected to teach the class. The SWC will work to set up a similar class in 2024.

CHAPTER NEWS

• Todd Johnston (President) will serve in his officer role through 2023, then will step down. The SWC is looking to nominate and elect a President at the December 2023 meeting. Connor Mahoskey was nominated and elected to the office of Chapter Secretary. Connor will serve a two year term starting in 2024. Thanks Connor!!

Ongoing goals for the SWC are to develop/formalize the bylaws and use the SWC page on PLSC.net to archive important documents, meeting minutes and agendas.

Our next meeting is scheduled for December 19th at the La Plata County Fairgrounds.

Everyone have a great Fall!

Todd C. Johnston, PLS
President - SW Chapter PLSC

SCPLS

SCPLS Hosted the El Paso County Planning Department Surveyor, Cory Sharp during our October Members Meeting. It was well attended; we enjoyed dinner and learned about changes to the application

process, common issues and best practices. Also, don't forget the Chapter Christmas Party is at the Miramont Castle, Friday December 8th, get your tickets in November at scpls.net.

Steve Parker, Southern Chapter, President
719-641-3355

WCLS

Western Colorado Land Surveyors would like to thank Dennis Moulard again for a great Fall Seminar here in Grand Junction. We had a great time and it was good to see everyone. I would also like to thank our Vendors and Sponsors for being at the event and supporting our Surveying Profession. They were Frontier Precision, Vectors, Inc., Plaza Reprographics, and Grand Valley Reprographics. A shout out as well to Chris Ransier and Alex Lheritier for help with planning and executing the Seminar. Mark Wagner with help setting up lunch and also tearing down including Christian Stock. Much appreciated. Then at our regular Chapter meeting we were fortunate to have Aaron Clay give a condensed talk on Water Rights. A history, how water rights work, and what Surveyors should be aware of.

Brian K. Bowker
President, WCLS

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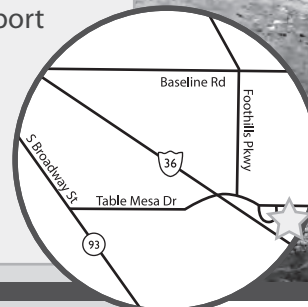
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Survey and GIS Best Practices for New Coordinate System
Interpreting Construction Plans and Machine Control
Photogrammetry
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Where is the East Boundary of La Plata County?

By Daryl Z. Crites, PLS

Does the 1876 description of the county line as written in the state statutes, being a meridian which is six miles west of the mouth of Lost Trail Creek control the location of the county's boundary, or do the monuments set in 1888 by the County Surveyor which are about 2 miles too far to the west control the location of the line?

The boundaries of La Plata County Colorado are defined by Colorado Revised Statutes CO Code § 30-5-138 (2022) as:

*The county of La Plata shall be bounded as follows: **Commencing at a point six miles west of the mouth of Lost Trail Creek, and running thence north to a point ten miles north of the thirty-eighth parallel of north latitude; thence west to the western boundary of the state; thence south along said western boundary to the southwest corner of the state; thence east along the southern boundary of the state to a point due south of the place of beginning; thence north to the place of beginning.***

On July 14, 1888, La Plata County Surveyor Blair Burwell commenced a survey to mark the east boundary of La Plata County. His crew included a rodman, two chainmen, and a packer/cook. The survey was about 57 miles in length, started at an elevation of 9,500', went up to 12,200', and ended at an elevation of 6,200', with a lot of rugged terrain, mountains, hills, and valleys in between. It took the survey crew 29 days to traverse the length of the line and set stone monuments at approximately one-mile intervals.

Eight years after completing his survey, Burwell transcribed and recorded his field notes in Book 59, Page 155 in the La Plata County Clerk and Recorder's Office. In those notes he describes the start of his survey as: "Beginning on the north bank of the Rio Grande at a point in the old channel of Lost Trail Creek which point is situate between the mouths of two streams of said creek as it at this date divides and empties into the Rio Grande... at this place of beginning was a small mound of stones. Over this mound set a squared spruce post 6x6 inches x 8 feet, set in mound of stones 8 feet wide at the base and 4 feet high..." The post was marked '0 Point Burwell' with letters cut in on the north side.

Below is a photo of what we believe is the remnants of the '0 Point' mound of stones.



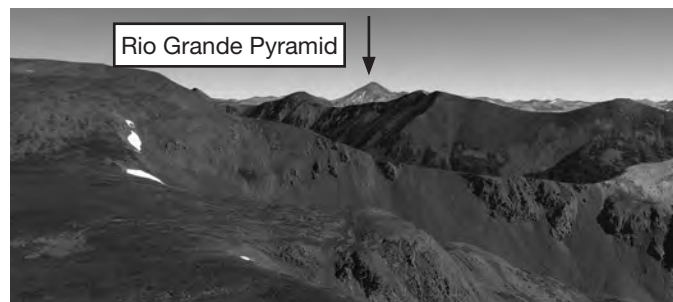
At his beginning point (Point 0) Burwell made observations on Polaris to determine bearing, and he measured a base line to triangulate to the peak of Simpsons Pyramid. His field notes describe: "From said place of beginning ran out to a base line of 5397.4 feet measured on the slope north of the Rio Grande. From this base, triangulated to Simpsons Pyramid. This pyramid is 14,055 feet high, is sharp and well defined and stands out above all others as one looks up Ute Creek from the hills on the north side of the Rio Grande. On it is one of Hayden's monuments. By triangulation found the monument on Simpsons Pyramid to be $S18^{\circ}4'W$ 24,123 feet from monument at mouth of Lost Trail Creek." Burwell's field notes continue to explain that he then packed up and traveled southwesterly about 17 miles up Ute Creek to a high ridge in the mountains where he surveyed another base line and triangulated back to the mountain peak: "Went thence to the south side of the Continental Divide to a high table mountain at the eastern base of which is Lake Fork, a tributary of Pine River. Here measured a base of 10,077 feet and triangulated back to monument on Simpsons Pyramid. Found flag station on table mountain to be from said monument $S20^{\circ}44'W$ 54,515 feet. Solar observation at flag station gave variation $14^{\circ}0' E$."

Based on his triangulation calculations, Burwell set a stone 36 x 14 x 2 at a point he calculated to be 6 miles west and $13\frac{1}{4}$ miles south of his beginning point at the mouth of Lost Trail Creek. From this Mile Marker $13\frac{1}{4}$ he ran due south on a straight line until he intersected the south state boundary line. Along the way he set stone monuments at approximately one-mile intervals with many of the monuments being on the crest of prominent ridges.

In the process of preparing to search for the Burwell stone monuments we compared his field notes to the USGS quadrangle maps and utilized google earth maps to mark search areas for the stones, and to estimate the latitude and longitude for the corners. We were aware of one stone monument about a mile north of where the county line crosses US Highway 160. After obtaining rough coordinates on this monument and by overlaying Burwell's field notes on the topographic maps we discovered the line appeared to be about two miles farther west than the described position of being 6 miles west of the mouth of Lost Trail Creek.

La Plata County Surveyor, Steve McCormack and I decided to travel to the mouth of Lost Trail Canyon to see if we could locate Burwell's 0 Point monument. We picked the date of July 14, 2018 as that day was exactly 130 years after Burwell began his survey and set his monument. On that trip and with some additional research and utilizing the ground-level feature on google earth we made some very interesting observations:

- From Burwell's '0 Point' and his base line points one can just see the tip of the peak of Simpsons Pyramid.
- However, from Burwell's flag station at his second base line, one cannot see Simpson's Pyramid, but the peak of the Rio Grande Pyramid is clearly visible.
- From a distance these two peaks look very similar.
- Burwell believed he was sighting the same mountain from both base lines, but we discovered he sighted two different peaks that are a little over 2 miles apart. The result being the mile marker monuments he set to be on the east boundary of La Plata County were placed about 2 miles farther west than where they were intended to be.



*View of Rio Grande Pyramid from flag station.
Simpsons Pyramid is not visible.*

Many of the monuments that Blair Burwell set 135 years ago are still existing today. Should they be considered to be controlling original monuments because Burwell was contracted by both La Plata and Archuleta counties? The monuments were set 12 years after the boundaries of La Plata County were defined. The monuments are fairly close to the location of the accepted county line boundary based on the USGS quadrangle maps and the GIS maps of the two counties. However, I don't believe any of the stone monuments, except for one or two in the vicinity of Highway 160, have been found, seen, or used for maybe over a hundred years. The county line sign along US Highway 160 is about 1,000 feet west of the line monumented by the Burwell stones.

Is this situation similar to the Four Corners Monument which is out of position based on the intended location being at a specific latitude and longitude, but the physical monument controls over the geodetic position?

So, where is the east boundary of La Plata County? Is it 6 miles west of the mouth of Lost Trail Creek, or is it the line marked by the Burwell stone monuments?



View of the tip of Simpsons Pyramid from 0 Point



*15 Mile + 4300
130 year old spruce post
with visible lettering.*



*Bearing Tree blaze in dead
Pine Tree*



17 Mile Stone



The stone at Mile 3.5 was almost destroyed when a firebreak was bulldozed.



Mile 5 stone in a remote dense forest.



Mile 6 stone as we found it in an area that was logged, but it appeared to be undisturbed.



Daryl at Mile 6 stone after clearing brush and rebuilding the mound.



Mile 12+250 - before



Mile 12+250 - after



Mile 12+250



Mile 15+500 - before



Mile 15+500 - after



Sandy found Mile 17+450 stone.



Mile 17+450 with rebuilt mound and showing original bearing trees.



We were fortunate to find Mile 18 Stone on this rocky hillside.



Mile 18 Stone



*Cave called for in Burwell field notes.
15 Mile + 1,945 and 125' west*



*McLloyd's cabin noted in Burwell's field notes.
15 Mile + 1,400 and 175' east*

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Education Efforts

Waldorf School - Practical Applications of Trigonometry

By Amara Hildebrand, PE

The Central Chapter of Professional Surveyors had the great pleasure of teaching at the Waldorf School in September. Ms. Sarah Meyer's 10th Grade Trigonometry Class received hands-on instruction on the practical applications of trigonometry over a two-and-a-half-week period. Randall Bloom, PLS organized several classroom lessons relating to surveying principles. He covered precision versus accuracy, trigonometric entities, and data collection techniques among other topics. I taught the students about contour maps, drainage design and general coordination between surveyors and engineers.

We took the class to the field most days to demonstrate concepts in three dimensions. Ms. Meyer's class used hand transits to take measurements within a parking lot and field south of the school. Mr. Bloom taught the students how to measure through the use of homemade clinometers, transits and 100-foot tapes. Practice also included comparing measurements with a handheld compass compared to paced or measured taped distances. We assigned the class a contour map delivery for the purposes of drainage design. The students were engaged and curious asking pertinent and thoughtful questions. We also had participation from Heath Hildebrand, PLS, Matt Eisenach, PLS, Eli Donaldson, PLS, Alan Blair, PLS and even one class by Jan Van Sickle, PLS!

We would like to continue this effort throughout our community, where we can find interest. It is imperative that we mentor and pass on our knowledge of this important profession. One topic of particular pertinence would be regarding land rights. The Biden Administration recently announced a call for 30% of land to be within governmental control by 2030, which constitutes an aggressive 18% increase from current conditions. Some states are enacting similar measures including Colorado (see SB 23-213 that died on the floor but will certainly resurface next legislative session). These initiatives indicate that the intent is to protect and conserve our land, however that much government land control makes

me nervous to say the least. Let's make sure we pass the torch to the next generation of surveyors who can help defend our land rights.

A special thanks to Randall Bloom for his tireless dedication with organizing the material and the schedule, and for attending the class every day for the duration. Thanks also to Jan Vwan Sickle, Olsson, and Eugene Lynne for providing staff and resources to support the education. Please note that we are also interested in generating some excitement around our scholarships that have been historically underutilized. Please contact Amara Hildebrand at ahildebrand@eugenelynne.com with any suggestions or feedback regarding the important task of attracting more future surveyors.

PLSC Northern Chapter Sandbox Build Pending

The PLSC Northern Chapter is partnering with the Poudre School District Futures Lab to build our first chapter Virtual Sandbox. It has been an interesting project. PLSC Northern Chapter is the "client". I was invited to present the RFP and was interviewed by the students. Lamp Rynearson donated a projector and Patrick Hartley, an interested friend with an E-Bay business, donated an Xbox Kinect. PLSC is donating a computer with a good graphics card from the CSU surplus store.

A group of five students (designers, proto-typers, project managers, computer specialist) chose to build the sandbox and designed 3 prototypes which were presented charette-style with power point, sketch-up, and 3-D models. The modifications the students added allow the sandbox to have adjustable table heights reflecting their desire to share the sandbox with the entire school district, regardless of height or disability. We selected the best idea based upon flexibility and budget, and they are prototyping it now. As a backup they are building the components to be easily reconfigured into Brian Dennis's original design.

The goal is to debut the sandbox at the Northern Colorado Construction Sector Partnership Construction Con at the Ranch October 25th. PLSC is sharing a booth with ACE Mentors. They will be hosting a bridge building competition. The sandbox was a big draw at the event last year which hosted 500+ students.

We are hopeful that outreach and collaborations like this, as well as the impact of the sandbox itself, will build interest in our profession.

Laine Landau, PLS
PLSC Northern Chapter Member



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Young Surveyor Profile - AJ Summers

The diversity of our profession is sometimes masked but when I look at the variety of experiences and perspectives of new surveyors, it is exciting to see what makes us unique and what binds us together. I had the opportunity to sit down with AJ Summers with Landmark Consultants, Inc., and once again I am encouraged by the commitment to the profession and the passion he exudes.

AJ Summers currently resides in Steamboat Springs and is a partner at Landmark Consultants, Inc. in charge of field operations. In a similar twist to Erika, he had originally looked at pursuing Engineering and completed his degree at the Colorado School of Mines in 2008. Once out of college, AJ was able to get a position with Sopris Engineering, where their first requirement is that all new engineers spend the first season with the survey crews in the field. After his mandatory service was completed, the survey manager went to the engineering team and lamented that he never gets any good hires, so he was going to keep AJ on the survey side. AJ claimed with a laugh, that he was essentially “kidnapped into surveying” but he doesn’t regret a single moment of it. So, AJ, having developed a love of surveying with his time in the field, decided to alter course and go full on into land surveying. For the next five years, AJ rapidly developed from a green hire into a project manager and was able to work through the recession.

In an effort to expand his opportunities, AJ took a position with Farnsworth Group out of the Bloomington Illinois office, but he and his wife missed Colorado, and after a few years returned in 2015.

As a Colorado native born in Aspen and raised in Basalt, AJ has developed a deep commitment to the community. Having spent most of his time living around the western slope, you can hear the pride in his voice calling this area home. He currently acts as the Treasurer of the Northwest Chapter and is a member of the Steamboat Springs planning commission. He understands that in Colorado, mountain towns have a huge housing crisis. Being restricted by the surrounding geography and amount of public lands, AJ feels it is especially important to have effective community planning where everyone has a stake in the community in which they live and work. His parents experienced the rapid growth in Aspen, where many of the working-class individuals were pushed down valley due to rising costs and he sees a similar pattern starting to occur in Steamboat today. He feels it is critical to plan for the future and ensure there are places for the people who work in Steamboat to be able to live.

In his free time, he enjoys spending time with his wife and three amazing children, 12-year-old son, 9-year-old son, and 5-year-old daughter. Over this past summer, AJ was able to do a bit of hiking with his oldest son on some classic Colorado 14ers, including Quandary and Sherman. In the winter, the entire family is heavily



involved in skiing, with their kids being members of the Steamboat Winter Sports Club which involves hitting the slopes four or five times per week. AJ is also the committee chairman for the Cub Scouts and Boy Scouts, of which his sons are members. He commits a large amount of time to organizing campouts, hikes and summer camps for both groups. Below are the responses he shared to some of my questions when I spoke with him.

(Some answers have been edited for clarity and brevity)

Heather: What do you love about surveying?

AJ: It’s got to be the diversity of the projects and the different problems to solve. No two surveys that are exactly the same and it keeps it fresh and you get different weird kind of off-the-wall questions from clients. Can you measure this? Can we solve this? I really enjoy that just it’s something different every day, you’re not just stuck doing the same kind of thing.

Heather: Who was your biggest professional influence and why?

AJ: Probably a guy named Rabbit at Sopris Engineering whose real name’s Darren Alstat, but everybody calls him Rabbit. He was the survey manager that kidnapped me. But he taught me how to draft, how to manage field crews, how to deal with tough clients and construction crews with their emergency surveys they always need. And he taught me to be really detail oriented when you’re doing construction calcs and stuff, make sure that the engineers numbers work. They work with the surrounding built environment and with the surrounding natural environment. You know, it’s easy to, grade some huge project and miss that you’re not be able to tie into this sidewalk. Or this ditch isn’t going to quite flow. He taught me to really be careful and make sure all those things were just so everybody can stay in harmony through the project.

Heather: Sounds like a pretty interesting guy and very knowledgeable.

AJ: Yeah, he actually is not licensed but he probably should be. He just liked what he was doing and didn’t

feel like he needed to go any further with it. And every PLS over there at Sopris just leans very heavily on him and his knowledge base and just everything he does. Even engineers do.

Heather: Is there trait or anything that you would use to describe Darren?

AJ: That's a tough question. I don't know if there's one specific trait that really nails him down, but he listens to your question. Whatever it is, no matter how dumb your question is, he's got the patience to listen to it and try to help you with your problem, whether or not it's his problem.

Heather: What are your biggest challenges with this profession?

AJ: Probably managing expectations. People who want surveys, someone's selling their lot or it's a realtor or something, they always want it fast and they want it cheap and it's not always that easy. Maybe it's a really simple lot in a subdivision and it is kind of easy. But sometimes you get out there and there's fences over the line and there's missing corners and, it's not going to be as cheap or as easy as they want it to be.

Then you have your construction clients and, those construction sites are always a bit more demanding. I've found that a lot of construction clients are increasingly relying on digital methods. They have machine control, they've guys out there with their own GPS and the guys using that stuff, there's some really good ones out there and there's some that don't really seem to know exactly what they're doing. And trying to help those guys figure out what it is they should be doing can be a challenge. They'll go out there and they'll get something wrong and insist their GPS is 100%, right. That can be difficult but it's manageable, but it's tough.

Heather: What qualities make a good surveyor and what do you need to be a good surveyor?

AJ: I would say diligence and probably a good healthy dose of curiosity. Diligence to follow the notes and the numbers that you're measuring. The notes that came before you and the plats that came before you and trying to align all of those things to come to your conclusion. And then curiosity to follow up on that and figure out, why your conclusion may or may not match whatever it is you found out there in the field.

Heather: What is the most significant issue affecting surveying as a profession?

AJ: I'd say it's probably a lack of young professionals. I had a recent Northwest Quarter chapter meeting, and all the old guys were talking about how old they are, when their birthdays are coming up and, I realized I was the youngest guy in the room. It was totally obvious. I think the youngest guy besides me sitting there that day was 65 and I'm 38.

Everybody sitting there could have been at least my dad, if not my grandpa. There are a couple others around here in northwest Colorado, there's a guy in Craig, that is close to my age, there's a couple guys that are in their

early 50s so that's not too far off. But the vast majority of the surveyors up here, at least in Northwest Colorado, are in their 60s. Some are in their 70s. There's not really a whole lot of people in their 30s. Now there are not a lot of people who are younger, I've got some field guys that are my age or younger, some of them have degrees some of them don't, none of them are in surveying. Nobody has a survey degree and those guys that don't have a degree, they don't really have a track to licensure. So, where our surveyors are going to come from for the next 10, 20, 30 years, I'm not really sure.

Heather: What, if any, industry trends excite you?

AJ: I'm pretty excited about Lidar. We bought a terrestrial laser scanner, and we are thinking about getting a drone here pretty soon. But something about having a site that you've mapped with Lidar, present itself in 3D and in color on a computer, just sort of geeks me out a little bit I guess.

Heather: What would you like to do more in surveying?

AJ: If the opportunity presented itself, I'd probably just do huge boundary surveys. Up here, it's awesome. You're just walking around in the rugged untouched country, finding brass caps from 100 years ago, and it's quiet. There's no pressure. I'm sure, probably everybody would like to do that, but even ranch surveys. There're ranches that are 4,000 acres out here that cover multiple sections, and I guess it is a section retracement, but it's a private property survey.

Heather: Where do you see yourself in 10 years?

AJ: Hopefully I'm still here in Steamboat surveying.

Heather: What career accomplishment makes you most proud?

AJ: Probably becoming a partner here at Landmark before I hit 40.

Heather: Outside of your career, what has been your biggest accomplishment?

AJ: So my three kids. They're pretty awesome and I'm very proud of them.

Heather: What was your favorite project and why?

AJ: My favorite real project is probably the Wild Blue Gondola that we're working on here in Steamboat. It's going to be the longest lift in North America when it's done this year. It's three miles long. And it is very interesting to try to help the lift guys get over the grid to ground situation when you're going from, 6,000 feet to 10,000 feet.

And then, my favorite weird, trivial project comes from back when I was working up in Aspen. There're a couple property owners, really wealthy property owners, that were very litigious. One guy came in from New York, I believe, and decided to build this giant house, basically, right in front of this other giant house. So, the owners of the house that was existing sued him saying that his building was above the sight lines and basically dragged his project out and were a huge pain. So, after he cleared all of that, he hired us to help him with

this statue that he commissioned. He commissioned this statue, I think it cost him 2.5 million dollars for the statue, and we called it the bone phone. It was like a giant femur bone with a telephone receiver on the top of it. He put this statue directly in front of these people's picture window and he wanted to put it one inch below the maximum height limit, out of spite, and it was just wild that somebody would spend that much money just to get back at the neighbors.

Heather: That's pretty passive aggressive.

AJ: Yeah. I don't think I'll ever forget that. We were out there with levels, making sure this statue was one inch below the maximum height allowed.

Heather: If you could start your career again, is there anything you would do differently?

AJ: Maybe I would have gone and gotten a surveying degree instead of a civil engineering degree. But that civil engineering degree, I got from Mines has been invaluable in what I do on a day-to-day basis. Both at Sopris and here at Landmark. I spend a lot of time checking grades and making sure construction plans are good to go before they go out in the field. That engineering part is key to that, I think.

Heather: Do you have any advice for other up-and-coming surveyors?

AJ: Yeah, I would say be adaptable. Stay up on technology. The technology is changing a lot faster now, than it has for, I guess, ever. Many of our predecessors had the same kind of equipment for decades. Now, it seems like every five years, there's new stuff you have to take into account.

Heather: What survey books would you recommend?

AJ: I don't know if I necessarily have a book I would recommend. I know I always have my BLM manual and the PLSC books that they were publishing over the past couple years and sending out. Those are always sitting on my desk. But other than that, it seems like most surveying books that I've read are a little bit of a dry read. No offense to guys that are writing those books, I mean that's good stuff but if I wasn't a surveyor, there's no way I'd be reading it.

Heather: Are there areas of the profession where you would like more mentoring? Or is there any knowledge that you would like passed down from others?

AJ: You know, there's always more to learn. Specifically, I don't know. But it seems like every time you talk to an old timer or another surveyor, they've got some kind of trick that you hadn't thought of and might fit well within your workflow. So, it ties back into being adaptable, a little bit, but there's always more to learn. Keeping an open mind and just seeing what you can learn from others and try to make that your own.

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WFPS REPORT

HIGHLIGHTS FROM THE WESTERN STATES

The Western Federation of Professional Surveyors (WFPS) held a Board of Directors meeting on June 10, 2023 in Salt Lake City, UT.

ALASKA (ASPLS) Gary Gervelis – ASPLS Chapters are hosting virtual statewide meetings on a rotating basis. This reduces the workload for chapter officers and allows members from across the state to network. More information about APLS can be found on their website AlaskaPLS.org

ARIZONA (APLS) Mike Fondren – Current membership is 332. APLS is currently planning a fall seminar and member appreciation event. APLS presented a plaque to Lynda Bell in appreciation for her service as NGS Southwest Regional Geodetic Advisor. APLS is currently drafting letter to educate counties regarding the fact that it is a violation to accept subdivision plats sealed by Engineers. More information about APLS can be found on their website AzPLS.org

COLORADO (PLSC) Todd Beers – Current membership is 582. PLSC continues to actively participate in Quality Based Selection (QBS) meetings. Board of Registration will be going through sunset review process beginning in September 2023. PLSC is currently discussing mandatory continuing education. If the membership remains in favor, PLSC will work to introduce a bill in 2024. The scholarship committee has revised their requirements and will now accept applications from those attending non-Colorado schools. PLSC continues outreach efforts including reaching out to real estate and title companies, middle schools, high school, and guidance counselors. More information about PLSC can be found on their website PLSC.net

HAWAII (HLSA) Joanne Williamson – Current membership is 159. Right of Entry legislation was successful and was sent to the Governor for signature on May 4th In 2024 HLSA plans to introduce legislation for a statute of repose as currently there is no statute of liability or repose in Hawaii. More information about HLSA can be found on their website HLSA.hawaii.org

IDAHO (ISPLS) Austin Ishino – Current membership 223. The 2023 ISPLS Conference was a success. The Gem State Surveyor can now be viewed on the ISPLS website. More information about ISPLS can be found on their new website IdahoPLS.org

MONTANA (MARLS) Russ Kluesner and Dick Smith – Current membership 426. Montana has established a Young Surveyors Network (MT YSN). MARLS awarded \$11,500 in scholarships. An increase in CST participation has been noticed. The 3rd Edition of the Montana Subdivision and Surveying Laws Digest has been published and is available free of charge to current MARLS members, and for sale to non-members. Flathead Valley Community College is currently searching for a professor. MARLS is currently working on updating their bylaws. More information can be found on their website MARLS.com

NEVADA (NALS) Trent Keenan & Greg Phillips – Current membership is 276. Great Basin College had eleven graduates this year and the College of Southern Nevada (CSN) has received initial authorization for a new land surveying 4-year degree program. NALS continues to publish, print, and mail four issues a year of the Nevada Traverse. NALS is celebrating their 50-year anniversary this year and held a gala in conjunction with the Conference to honor past presidents and charter members. As part of our 50th Anniversary celebration NALS will be setting a monument at the geographic center of Nevada. NALS continues to focus on outreach and has participated in multiple job fairs, STEM fairs, and career technical education (CTE) events this year. NALS mobilized a grassroots effort and was able to defeat a recommendation to eliminate the state-specific exam for licensure by comity. More information about NALS can be found on their website NvLandSurveyors.org

NEW MEXICO (NMPS) Roxanne Nimmer & Diego Sisneros – NMPS allocated funds to support land surveying students to travel to Washington D.C. for the NSPS Student Competition. NMPS will be participating in the Western Regional Survey Conference in 2024. More information about NMPS can be found on their website NMPS.org

UTAH (UCLS) Mike Nadeau – Current membership is 335. UCLS is planning a fall forum. UCLS was able to obtain an exemption for land surveyors from legislation that would have limited use of drones. UCLS Board has adopted a condominium plat guide. UCLS has a new membership fee structure. More information about UCLS can be found on their website UCLS.org

WASHINGTON (LSAW) Ben Petersen and Desi Schilling – Current membership is 789, an increase over last quarter. The LSAW fall seminar will be held in Vancouver, WA. The 2024 Conference will be held at the Tulalip Resort & Casino. LSAW continues to publish the Evergreen State Surveyor magazine in both print and digital formats. The second edition of the Washington Common Law publication is now available for order from the LSAW website. LSAW is considering hosting an in-state Lobby Day. More information about LSAW can be found on their website LSAW.org

WYOMING (PLSW) John Lee – Current membership is 126. PLSW held a fall forum in November featuring Dennis Moulard. The University of Wyoming has in place a minor in land surveying and a land surveying certificate program. Information about PLSW can be found on their website PLSW.org

WFPS FUNDAMENTAL OF SURVEYING (FS) EXAM STUDY COURSE

WFPS online Fundamentals of Surveying (FS) Study Course includes approximately 16 hours of videos and a manual. The program not only helps to bring affordable study resources to future Surveyors but also generates revenue for our state association members. To date,

WFPS shared over \$4000 in profits with our state association members. Information on the program can be found at WFPS.org

STEVE PARRISH CONTINUING EDUCATION LIBRARY

WFPS has captured over 18 hours of webinars with respected speaker Steve Parrish. The webinars are available to purchase as a full library or as individual modules. For those that require certificate of completion for continuing education, exams are available. Please check with your state licensing board to confirm that continuing education credit for self-study webinars. Information on the program can be found at WFPS.org

WESTFED EDITOR'S FORUM

WFPS continues to host an Editors Forum to share information and exchange ideas for building better magazines. For information, please email the WFPS Executive Office at admin@wfps.org

Respectfully submitted,

Todd Beers, PLS
Western Federation of Professional Surveyors
Colorado Director

In Memoriam – Steve Parrish



It is with deep sadness and heavy hearts that we inform you of the loss of our dear friend, Steve Parrish. Steve passed away on Tuesday, October 2, 2023, after battling pancreatic cancer. Steve had a significant impact on the survey community and was a mentor to many.

Steve had a passion for mentoring and supporting the next generation of Surveyors. It was his wish that in lieu of flowers, donations be made to your state association land surveying education foundation or the Pancreatic Cancer Action Network.

NALS Education Foundation

checkout.square.site/buy/VOLKE7UMDWCSHHPVJCSPJPJV

Pancreatic Cancer Action Network

secure.pancan.org/site/Donation2?df_id=6701&mfc_pref=T&6701.donation=form1

A Celebration of Life will be planned in the spring. Cards may be sent to the NALS Office and will be forwarded to Steve's family.

NALS Office
526 South E Street
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Reprinted in part from 10/23 NALS announcement:

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The Professional Land Surveyors of Colorado, Inc., and the Central Colorado Professional Surveyor Chapter are offering a comprehensive Land Surveying Refresher Course beginning Wednesday, January 3, 2024. This course offers a review and self-study plan for those taking the National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Surveying (FS) and Principles and Practice of Surveying (PS), and for the Colorado State Specific examinations. The course is designed to aid candidates in developing and expanding exam-taking proficiencies. Each 3-hour class takes place on **Wednesday** evenings starting promptly at 6:00 pm. Information available on the PLSC website: <http://www.plsc.net/>

<u>Session</u>	<u>Date</u>	<u>Topic</u>
1	Jan. 3	Course Overview, Exam Skills and Testing Basics
<u>Focus on Fundamentals of Surveying</u>		
2	Jan. 10	Survey Computations I
3	Jan. 17	Survey Computations II
4	Jan. 24	GIS, State Plane, Geodesy
5	Jan. 31	Boundary Law/Legal Terms and Definitions
<u>Focus on Principles and Practice of Surveying and Colorado Specific</u>		
6	Feb. 7	Public Land Survey System
7	Feb. 14	Colorado Survey Law I
8	Feb. 21	Colorado Survey Law II
9	Feb. 28	Ethics/FS&PS Topics
<u>Final Class</u>		
10	Mar. 6	Mock Examinations (FS, PS & CO Specific)

Registration is open beginning Monday, November 1, 2023 through PLSC: <http://www.plsc.net/>

The fee for the entire course is \$425 or \$75 per individual class.

In-person classes will be held at Galloway & Co., 5500 Greenwood Plaza Blvd., Ste. 200, Greenwood Village, CO 80111. Online classes will be broadcast each night, and recordings will be available at the end of the series to all registered students.

Questions? Please contact Becky Roland, Executive Director, PLSC, 303-551-3266, broland@plsc.net. Visit the NCEES site at <http://ncees.org/exams/> to learn more about the FS and PS examinations.



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In Reply Refer To:
9600 (CO-956)
Colorado

September 18, 2023

Steven Parker and Laine Landau, Side Shots Co-Editors
PO Box 441069
Aurora, Colorado 80044

Dear Mr. Parker and Ms. Landau:

This letter informs you of official BLM cadastral surveys in Colorado that have been accepted from April 27, 2023, through July 7, 2023, officially filed, and are now available in the Public Room, Bureau of Land Management, Colorado State Office, Denver Federal Center, Building 1A, Lakewood, Colorado 80215. The surveys will also be available at <https://glorerecords.blm.gov>.

The accepted surveys are listed below by township, range, meridian, group number, type, acceptance date and number of plats.

<u>Township</u>	<u>Range</u>	<u>Meridian</u>	<u>Group No.</u>	<u>Type</u>	<u>Accepted</u>	<u>Plats</u>
Tps. 32 N.	Rs. 6 & 7 E.	NMPM	1748	Plat & Notes	04/27/23	1
T. 5 N.	R. 72 W.	Sixth	1500	Plat Only	05/19/23	1
T. 10 N.	R. 73 W.	Sixth	1500	Plat Only	05/19/23	1
T. 9 N.	R. 74 W.	Sixth	1759	Plat & Notes	06/06/23	1
T. 11 N.	R. 73 W.	Sixth	1752	Plat & Notes	06/15/23	1
T. 10 N.	R. 72 W.	Sixth	1756	Plat & Notes	07/07/23	1

As other surveys are completed, I will advise you of their acceptance. You may circulate this letter among the membership of the Professional Land Surveyors of Colorado.

Sincerely,

Digitally signed by
DAVID GINTHER
Date: 2023.09.18
13:47:22 -06'00'
David W. Ginther
Chief Cadastral Surveyor for Colorado

COLORADO CST

Congratulations to all the CST in Colorado

Certified Survey Technician (CST) is a comprehensive national certification program for survey technicians, and is sponsored by the National Society of Professional Surveyors.

As of September 26, 2023, the following have successfully completed the following CST Level:

Level I

Justin Baker	Taylor Fisher	Derek Leidigh	Gilbert Sandoval
Wayne Beack	Derek Flippin	Timothy Mancuso	Grant Saville
Michael Bibo	Nick Gillman	Allen Matz	Ryan Schiffner
Meghan Bissen	Jeremy Gonzolas	Cullen Munch	Jason Sorensen
Stephen Crim	Paul Gore	Hayden Murphy-Estus	William Tyson
Lucas Currell	Joshua Hartman	Joel Navarrete	Yamile Villalobos-Chavez
Jeremy Donaldson	Jeffrey Hawkins	Armando Nunez	Scott Voorhees
Christopher Drullinger	Justin Hickman	Ivan Prushnok	Nicholas Ward
Robert Edwards	Jacob Hulse	Austin Querry	Josh Widler
Alexander Fano	Jeffrey Ivy	Kevin Reed	Terry Wiekhorst
Jeremy Felder	Jonathan Lange	Gerald Runyan	

Level II

Benjamin Adsit	Jason Carothers	Chris Penfield	Travis Shuey
Justin Aidinovich	Ryan Kindt	Dillon Ragsdale	John Stebbins
Samuel Anderson	Jason Lord	Kevin Russell	Kirk Woltemade
Kevin Bogard	Clinton Parkinson		

Level III

Aristo Cauwels	Cesar DiPaulo	Franke Sinker	Adam Young
Corey Buck			

Level IV

John Houston

If you are interested in applying for CST, go to cstnsp.com. If you are interested in becoming an exam proctor, please contact Sue Weiss at cst@plsc.net.

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Thoughts on Professional Practice and Education

Article 11: Common Practical Deficiencies in Student Education

by Knud E. Hermansen†
P.L.S., P.E., Ph.D., Esq.

This is the eleventh article I have prepared in the series of articles offering thoughts on professional practice and education. In this article I am going to explain what I believe to be common deficiencies in student education from the perspective of the professional practitioner.

I offer this perspective from teaching surveying for over thirty years in four different universities and practicing surveying for over fifty years.

Of course, I will acknowledge from the outset that individual students often suffer from one or more deficiencies in their knowledge despite the best efforts of the faculty. Also, there are programs that have unique deficiencies brought about by faculty deficiencies or program deficiencies. This article will focus on deficiencies found across the many survey programs found in the United States. I should also state there are individual programs that don't suffer from the deficiencies I will discuss because of the efforts of faculty in the program. I will exclude a discussion on one common deficiency that I have already written about – business and management knowledge.

The most common deficiency that will be the focus of this article is communication skills. Communication skills involve e-mails, reports, correspondence, public speaking, and CAD. Within each one of the methods of communication are numerous facets that could be explored.

I must acknowledge before continuing that this is the eleventh article I have written on practice and education. For those that have read my earlier articles, articles on my web site, or even read my fictional books, I am clearly not the source to expound on writing perfection. With my mea culpa on record, I continue.

The form of communication that a student has the most experience is often the area the student is most deficient. I am referring to e-mail and digital messages. It is discouraging to receive an e-mail from a senior or graduate that begins a formal e-mail with the salutation of 'hey' or fails to include an adequate subject line that a business needs to triage e-mails.

The typical student's experience with digital communication seems to be composed of continuous repetition of bad habits. The student and recent graduate have failed to shift their focus from e-mails, tweets, and twitters composing electronic messages that seems to be the center of their life to a business e-mail read by the employer or client. As an employee they should realize that continuous quips during working hours from friends and family are a frustrating distraction that is inappropriate to continue as an employee during working hours, in a business environment.

Unfortunately, surveying programs have not been able to improve the communication skills of students using university resources. Many universities lack courses that teach business communications. All universities abound in courses on poetry, fictional writing, grant writing, persuasive writing, or technical writing. The last course is more appropriate to an engineer reporting engineering test results. The technical writing course has little relevancy to a surveyor reporting on a boundary location. Writing courses taught by English faculty that have no experience in business and in many cases have never worked outside of a university environment, perhaps majored in literature, poetry, medieval writing, or such in graduate school, cannot be expected to teach the necessary writing and communication skills needed by surveying graduates practicing surveying.

The next deficiency of college graduates involving communicating is public speaking. Surveyors that have practiced for years know the value of public speaking. Public speaking courses offer a good start but fall short of educating the student on the public speaking a surveyor most often encounters. I need not elaborate what many of you reading this article experience when speaking at planning board meetings filled with a crowd opposed to a client's development, testifying as an expert witness, or coordinating a business meeting involving a multi-discipline project.

CAD is another deficiency often found in surveying and engineering students that has surprised me. Diagraming, platting, and plans should be one form

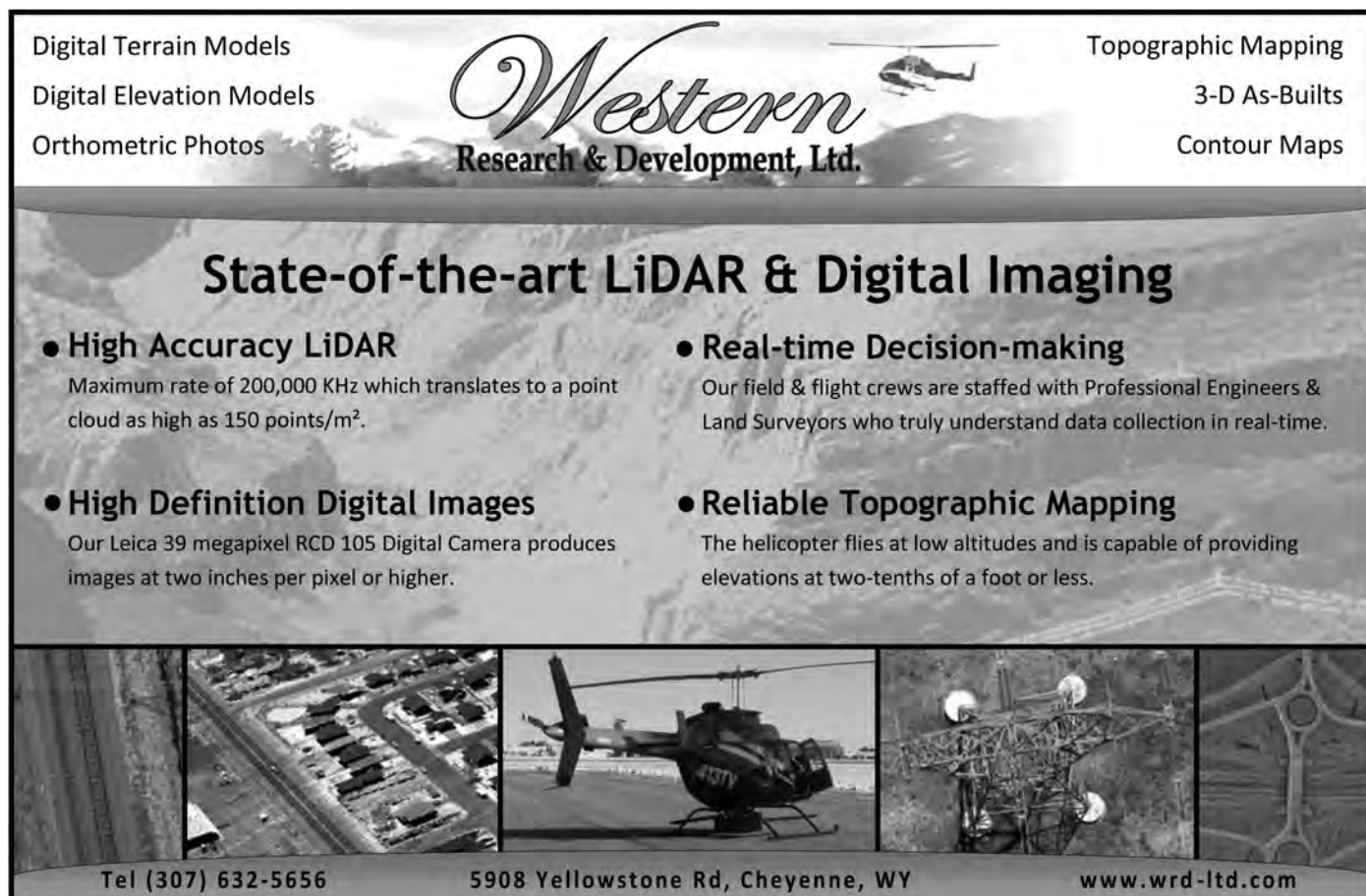
of communication that surveying students excel yet I often must resort to first threatening then later removing numerous points for a student's repeated failure to us a diagram that would immensely clarify their communications.

Having given my opinion, I now offer advice by suggesting surveying faculty take it upon themselves to instruct students on communication deficiencies that continue to exist after the student has taken numerous writing and speech courses. Request letters of transmittals with assignments. CAD should be taught sooner rather than later in the surveying program. I believe six credits of CAD to be a minimum for a surveying student. Require diagrams with every assignment that would benefit by inserting a diagram into an assignment response.

I would and probably should end this article at this point but for one more item I must mention. In reviewing the article, I see that I have failed to create much fodder for controversy. To write an article without generating some controversy is unimaginable. Allow me to do so now.

I have noticed one concerted university effort at teaching communication to students that I must admit I roll my eyes in mystification. There are so many avenues of guidance that can be given to improve communication that are ignored. So, I must ask, why is it necessary to encourage, on a formal sign-off, what pronoun the writer wishes to associate with themselves when it is otherwise obvious. For example, if a person signs off as "Nancy" why would I ever begin to think I should address 'Nancy' using some other pronoun than as a she or her? If a 'Harry' wishes to be addressed as a she/her pronoun, I almost get the point. Perhaps I am not sensitive enough to evolving social norms. I do know that if I could change social norms I would focus on tv newscasters that show the picture of a person clearly dressed in a Marine uniform and then in a display of gross incompetence and insensitivity to thousands of Marines refer to that person as a soldier.

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



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