SIDE SHOTS

Professional Land Surveyors of Colorado

Volume 54, Issue 2



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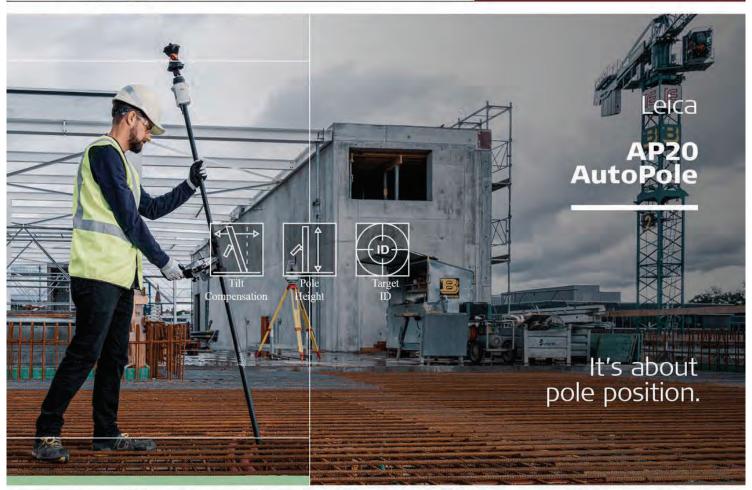
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OFFICERS (2023)

BRIAN DENNIS President 719-337-1262

SHAUN LEE Secretary/Treasurer sdl051@yahoo.com 570-499-8073

BECKY ROLAND

Executive Director PO Box 441069, Aurora, CO 80044 • broland@plsc.net

Phoenix AMC (303) 551-3266 F: (720) 230-4846

Directors: Brian Bowker, Ian Cortez, Todd Johnston, Heather Lassner, Steve Parker, Tom Sylvester, Scott Thompson

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Side Shots is the official publication of the Professional Land Surveyors of Colorado, Inc. and is published quarterly for the betterment of the surveying profession. **Brian Dennis** President

> For Editorial Correspondence, contact: Steve Parker / Laine Landau sideshots@plsc.net

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BRIAN DENNIS PRESIDENT C: (719) 337-1262 president@plsc.net

DIRECTORS (2021-2024)

BRIAN BOWKER C: (970) 985-8086

IAN CORTEZ O: (720) 523-6835

TOM SYLVESTER O: (970) 255-7386

TODD JOHNSTON O: (970) 769-8751

DIRECTORS (2023-2026)

SCOTT THOMPSON O: (970) 244-1821

DENNIS MOULAND O: (928) 460-0230

HEATHER LASSNER O: (970) 310-4089

STEVE PARKER C: (719) 641-3355

WFPS DELEGATES (2022-2023)

TODD BEERS (O): 303-353-3528

NSPS DIRECTOR (2022-2023)

TODD BEERS (O): 303-353-3528

STEVE PARKER Alternate C: (719) 641-3355

PROFESSIONAL LAND SURVEYORS OF COLORADO, INC.

PO Box 441069, Aurora, CO 80044

AFFILIATE - NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS MEMBER- WESTERN FEDERATION OF PROFESSIONAL SURVEYORS

OFFICERS (2022-2023)

RALPH PETTIT PAST PRESIDENT c: (720) 400-3723 ralph.pettit@denvergov.org

BECKY ROLAND EXECUTIVE DIRECTOR O: (303) 551-3266 broland@plsc.net

SHALIN LEE SECRETARY-TREASURER O: (570) 499-8073 sdl051@yahoo.com

Dear PLSC Membership,

It is my honor to serve as the newly elected President of the PLSC for the 2023-2024 term. I have actively participated in the PLSC at various Chapter and Board levels for the past 15+ years and been privileged to engage with many of our past Presidents. It will definitely be a challenge to lead and serve the PLSC with as high of a standard as my predecessors have. Many thanks to Ralph Petit, our outgoing President. Ralph brought a very high energy, approachable, and "can do" attitude to the role and has left the PLSC in a fantastic position to move forward.



We have recently completed the 2023 Rocky Mountain Survey Summit (RMSS). The numbers are still coming in, but it is clear the Summit was a significant financial success. This could not have happened without RMSS committee chair, Todd Johnston and the active committee members, Brian Bowker, Heather Lassner, David Seiler, David Berglund, Robert Boehm, Kathryn Lyon, Becky Roland, Steve Parker, and all of the folks that helped pull this together. Thank you to everyone! This was the first year trying a new format including a 2-hour lunch and 6-hour classes and extending the conference to 4 days. The feedback so far has been fantastic and very positive. Heather Lassner is the new RMSS committee chair for 2023-2024 and I know she will do great! If you want to get involved in the RMSS committee, reach out to Heather or Becky Roland. It takes a lot of effort, time, and energy to put a conference together, but many hands make light work.

As mentioned at the 2023 RMSS, my primary focus/goal for the PLSC is:

• Increase revenue: This is intended as revenue above that generated by the conference to ease our financial reliance on the conference. This can be accomplished through additional partnerships for books, online auctions, CST (Certified Survey Technician) training programs (similar to the Refresher Courses), CEU online classes for adjacent states and statute binders/books. All of this is accomplished through a larger digital footprint via our website to create trickle streams of additional revenue.

Additional goals are continuation of, and increased efforts to, the following;

- Youth Outreach: Continue with PLSC presence at career fairs at high schools, colleges, Boy Scouts, Girl Scouts and increase our presence with the Young Surveyors Network with NSPS (National Society of Professional Surveyors). We must continue efforts to introduce and retain the next generations to Land Surveying.
- Full support of the Legislative Committee as they guide us through the 2024 Sunset process
- Direct connections with the Chapters including attending chapter meetings and having chapter representation on the PLSC committees.

I look forward to input from all the membership in the coming months.

Brian Dennis, PLS **PLSC President**

We have an edition packed with professional content and news from friends in our local regions and across the state. I would like to thank those people who take the time and effort to provide articles and news for this publication. Thank you for enriching my professional life by sharing your knowledge, and my personal life with your friendship.

I was recently asked what could be done to help get this publication edited and out to our membership. The best thing you can do is contribute. Please send your ideas for articles and we will try to round up an expert. Please send in your professional articles, stories, poetry, historical find, letters, and tips and tricks.

Our deadlines are as follows:

February edition, content is due December 31st; May edition, content is due March 30th; August edition, content is due June 30th; November edition, content is due September 30th.

Something you can do for the future: The Northern Chapter has been working on getting a virtual sandbox constructed and is currently working with the Poudre School district to construct two in the fall of 2023 as part of their Futures Lab and Construction curriculum.

Consider volunteering to move a sandbox forward in your chapter to introduce the next generation to our profession.

Something easy you can do: Please review the frontispiece for updates that need to be made due to recent elections. I appreciate the feedback and want to recognize those who have chosen to support the PLSC (Professional Land Surveyors of Colorado) at every

Something helpful you can do: Please ask your fellow members if they are getting either a hard copy of Side Shots, or an emailed version, If the answer is "no". please forward their contact information and distribution preference to Becky Roland at broland@plsc.net.

Something thoughtful you can do: Please review "Under the Gold Dome" and contact Scott Thompson with the PLSC legislative committee with any thoughts for the Sunset review.

For Editorial Correspondence, contact: Laine Landau or Steve Parker at sideshots@plsc.net



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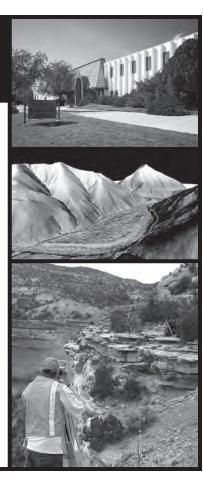
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PLSC Board of Directors **Meeting Minutes** January 10, 2023

1. Call to Order: Pettit

Name	Position	Chapter	Attending
Ralph Pettit	President	Central	Х
Brian Dennis	Vice President	Southern	Х
Shaun Lee	Secretary/Treasurer	Central	Х
Becky Roland	Executive Director	n/a	Х
Heather Lassner	Director	Northern/TrigStar	Х
Brian Bowker	Director	Western	
lan Cortez	Director	Central	Х
Todd Johnston	Director	Southwestern	Х
Eric White	Director	Southern	Х
Tom Sylvester	Director	Western	Х
Scott Thompson	Director	Western, Legislative	
		Co-Chair	Х
Steve Parker	Ex-Officio	Central	Х
Todd Beers	Non-Voting	NSPS/WFPS Delegate	Х
Guests:			
John Hunter	Geo-Coordinator		
Peggy Streicher	GIS in the Rockies		
Robert Boehm	Central Chapter		
David Berglund	Northern Chapter		Χ
Brian Kelly	NW 1/4 Chapter		
Brian Shaw	NOAA/NGS		Х
James Combs	YSN		
Cole Conger	YSN		

- 2. Determination of Quorum (6 voting): Lee
- 3. Any changes to the Agenda?: Pettit
- 4. Approve December 2022 Minutes: Pettit MOTION: To approve the December 2022 Minutes as presented (IC/BD) Approved unanimously
- 5. Action Items status from previous meetings
 - a. CO Real Estate Journal has invited PLSC to write an article on the difference between ILC and Land Survey Plat
 - i. ST working on article for review Here is the link to the DORA published article. https://sites.google.com/state.co.us/ architects- surveyors-engineers/ilcs. I was originally told this was published in the Real Estate newsletter, but it actually was in the AES newsletter. I am working on a similar article directed at the real estate community for publication in their newsletter.
 - 1. LTAC invited to do webinar 90% ready and RP will present - ST will finalize article from there (ILC/ISP differences)

- 2. Content can be shared with PLSC members and NSPS PR Committee
- b. LTAC asked PLSC to update webinar
 - i. BD working on this (need permission to release)
- c. Colorado Railroad Museum Project: Lee/Brown
 - i. BR met with SL and scanned the documents
 - ii. SL will physically stop by and take boxes back after scanning and try to get an update. Currently there is no curator for the museum.
- d. Treasurer asked to post monthly statements in a folder for Board access.
- e. Shaun will send out information on the current ACH costs/system for future Board discussion.
 - f. Shaun was able to sell some of the Aztec equipment on ebay for \$492, which he will transfer to PLSC.
 - g. Need to update scholarship application to note payment in arears -Tom Sylvester will work on this and send to Becky to post on website
 - i. Reviewed edits and board consensus is to post on the website.
- h. SL January 6 meeting to review investment account with Key Bank
 - i. BR would like to be on the call
 - ii. Need to update signers after election
 - i. Organization Chart
 - i. BOD reviewed prior to this meeting.
 - Add RMSS and QBS Committees.
 - 2. Do we add information on where Chapters can participate at PLSC level?
 - ii. Need to identify where Chapters can support the PLSC Committees
 - iii. Focus on Committee portion at next BOD call (discuss on the January BOD call at 4PM before meeting starts)
 - iv. BD/TJ to discuss offline on Chapter needs
 - j. Move to personal account setup and allow a single person approval process
 - i. Revisit in 90 days (from Dec 2022) with Board to see if it is effective and review safeguards
- 6. Financial Report Lee/Roland
 - a. Key Bank Investment Review Call Summary
 - b. Reported balances
 - c. Refresher Course has a record 37 students
 - i. BR to ask how the students heard about

the class and send summary with who employers are to the Board

- 7. Side Shots Report: Parker
 - a. February issue is at print
 - Starting a Young Surveyors series Board encouraged to identify surveyors and authors for this
 - c. Send material to sideshots@plsc.net copies Steve, Laine and Becky
 - d. Need volunteers to help with editing and soliciting articles
- 8. Update on ballot/nominations: Pettit
 - a. Organization Chart (see above): Lee
 - b. Returning: Shaun Lee, Scott Thompson
 - c. Might return: Eric White
 - d. Steve Parker will serve as Director
 - e. Need one director (possibly 2) and a VP
- 9. Reports
 - a. Chapter Reports
 - b. NCPLS
 - i. Elections will be announced at tomorrow's meeting
 - ii. Holiday party turnout was good, especially considering the weather
 - c. SCPLS
 - i. Meeting this month
 - d. WCPLS
 - i. No report
 - e. SWPLS
 - i. No elections this year (every other year)
 - f. CCPLS
 - i. Elections will be held soon
 - g. Legislative Committee: Thompson
 - i. Session started today
 - ii. Over 100 bills none that directly affect land surveyors
 - iii. ST will check with lobbyists on schedule Capitol Hill Day during National Surveyors week and on the request for Governor's Proclamation
 - h. Education/Scholarship Committee: Sylvester
 - i. WCCC/Scholarship Report: Sylvester
 - 1. Over 70 students taking survey classes this semester
 - 2. Next steps for Endowment Program
 - TS will meet with supervisor to discuss future of the program and funding needs
 - ii. What is the procedure for promotion of other programs?
 - 1. Board consensus is that PLSC needs to promote education throughout the US.
 - 2. BR to post all programs and highlight WCCC

- i. Outreach Committee Dennis
 - i. Adams County Youth On the Job Training March 7
 - 1. Todd Beers and Brian Dennis interested
- j. NSPS Report
 - i. Lobby Day/Spring Meeting in DC March 29-April 1

10. NGS Update: Shaw

- GRAV-D Data collection and processing for all except the very Western part of CO is done. Just waiting on creating project reports etc for block to be published. https://geodesy.noaa.gov/GRAV-D/data_
 - https://geodesy.noaa.gov/GRAV-D/data_products.shtml
- GPS on BM webinars in January and February Thursday, January 12th - GPS on BM with OPUS 5 RTK/RTN vectors (https://geodesy.noaa.gov/ web/science_edu/webinar_series/rtn-dataopus5.shtml)
 - Thursday, February 9th California GPS on BM
- 11. RMSS Report: Johnston/Bowker
 - a. Early registration discount ends Jan 13
 - b. Numbers are encouraging
 - c. BR to meet with Marriott this week to review costs and menus
- 12. Rocky Mountain Work Experience Scholarship: Pettit
 - a. Tabled to next meeting possibly have Randy Bloom join next call
- 13. New Business
- 14. Next Meetings
 - a. February 7 at 4:30 Abbreviated (RMSS and critical voting items only)
- 15. Adjourn



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Young Surveyor Profile – Erika Weins Zimmerman

Interview by Heather Lassner

Sometimes a chance meeting can change the trajectory of your future. Erika Weins Zimmerman, descending from a long line of Engineers, attended the University of Colorado at Denver in the Civil program. In the start of her college career, she was riding the RTD train with a fellow classmate and discussing some of the class materials, when an unknown stranger inquired if either young lady was looking for a job. Erika recalled thinking this a little strange but took the business card presented to her by Mr. Vernen K. Lee, a Surveyor with David, Evans, and Associates. At first, she had concerns whether the company, and Mr. Lee were legitimate and promptly researched them on her arrival home. She learned that it was a company that employed numerous professionals, including engineers and surveyors. So, she took a chance, submitted her resume, and was soon hired by David, Evans, and Associates as an intern. Here she was slotted to do high density scan modeling but also drafted easements and legal descriptions for the survey department under Vernen.

Although the experience had been a positive one, Erika continued forward as planned. She completed her Civil Engineering degree at CU Denver and acquired a position in engineering litigation, where she spent the next three years pouring over geotechnical reports and process reviews. Erika felt that she didn't have much direction and didn't really know where to take her career, so when Vernen once again reached out, the timing was perfect. He had just won the primary contract on the Alyeska Pipeline and was going to need help. By this time, Vernen had switched to Merrick and Company, and he convinced Erika to come aboard. She had the opportunity to work on the right of takings for the new pipeline, but also river and floodplain projects to determine the depth of pipe as it oscillated between above ground and below ground. By combining erosion information and cathodic protection information with LiDAR, she was able to produce plan and profiles for the proposed line.

Nine years later, Erika is still with Merrick and Company but has progressed from a Senior Survey Technician to a fully licensed Professional Land Surveyor who, like many of us, has an affinity for boundary work. When asked about why she liked it, she said how much she enjoys the history and the complexity of boundary. Speaking candidly, Erika confessed that she didn't have any love of history in her early years, but now it is one of her favorite things about doing boundary work. Additionally, Erika appreciated being able to



think outside of the box. She stated how important it is to remember what the original surveyor was using for equipment when it was laid out, to consider, "Are we really in the right spot for the corner? If something feels fishy, do more digging, and do more research, even if your budget doesn't allow for it." She stressed the importance of taking ownership of the corners you accept underscoring that if you don't feel comfortable defending a corner, you do not have the right answer.

But Erika knows that the surveying profession is not without its challenges. One of her concerns involves standing up and being able to say "no" to clients. Unfortunately, they often put their own interests first and may ask you to do something illegal and hurtful to the public, so it is especially important to retain your integrity. This is one of the qualities Erika feels distinguishes a good surveyor. A second challenge Erika sees is the lack of requiring continuing education as a profession. Erika fears that there are so many individuals diving into areas where they do not have experience and resources to tap into if they run into problems. She believes that continuing education will provide an avenue of exposure to the additional knowledge that might otherwise be lost.

She trusts it will also alleviate some of the issues we see such as the pin cushion effect and develop a deeper understanding as a profession. Third, Erika stresses the importance of having people you can trust. When you rely on your field crews to have your back, you are putting faith in them that they will protect your license. She states that she has lots of good team members that help her, but it may not be true for all surveyors. Last, Erika has encountered issues where plats have not been filed and sees a lack of follow-through by other professionals. In many ways she feels we are in an untenable position, in that we do not want to report others, but we still must hold everyone accountable for the survey work they produce.

When discussing new industry trends, Erika is most excited (and a bit apprehensive) about the new VLX walking scanner that her company recently acquired. She believes this will be a complete game changer for surveying. There will still be a need for control, but Erika reasons that traditional topo will become obsolete, and the technology will eliminate the need for remobilizing to the field for missed features. The logging features are web based, and quality images are produced, allowing for review of field work, and colorizing the point cloud. As with all new technologies, there is the possibility of abuse, and Erika notes that some members of her team

outside of the survey department have already ask to "just borrow it to go scan" without the importance of placing adequate control to rectify the scan point cloud.

As a young and upcoming professional, Erika has lots of positive things that help to keep her motivation high. When she is not working hard, she and her husband Justin, are hustling their two beautiful daughters to soccer, archery and swimming lessons or planning trips with the family. Her kids have already gone to more countries by the age of five than she had by the age of twenty, with cruises being top of the list for travel plans. She recently returned from Disney World last year and is working on planning the next big trip for summer. She also runs a furniture restoration and resale company with her mom, going to estate sales, thrift stores and consignment stores to "find a treasure that someone has discarded but knows someone, somewhere will cherish." For now, Erika is very happy and appreciates the opportunity to spend time with her family watching her children grow and enjoy all the moments fully. In the future once her kids are grown, she hopes to further her career and step into a Project Management position. Until then, she feels so blessed to work with the great people and mentors she has available and looks forward to the opportunities the future will bring.

6 The State of the

In Memoria

Donna Malleck 1949-2023

(The below is paraphrased from her memorial notes, and an email from Greg Markle)

Donna was born in Denver on September 19th, 1949. After graduating from high school she attended medical assistant training in Houston. Her love of the outdoors guided her to other endeavors: She was a ski instructor on weekends for more than 20 years at Loveland Basin. She became a licensed Land Surveyor and worked in the National Parks all over the United States for 15 years. She maintained her surveying practice for many years in Clear Creek County. At one time she worked as a miner at the Henderson Mine in Empire Colorado.

Greg Markle added that she while she worked with him for 16 years, she also worked with the BLM in Wyoming, and volunteered with PLSC. He asked us to let the surveying community know of Donna's passing as she was a well-known and much-loved surveyor. She will be missed.

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A Look Back at the 2023 Rocky Mountain Surveyor's Summit

Todd Johnston and I knew that it was going to be a challenge to be the Co-Chairs for the Rocky Mountain Surveyor's Summit (RMSS). We had put on our own local Chapter Seminars, but these paled in comparison to putting on a Statewide event. It was great working with Todd who is a natural leader, and able to handle issues that came up with professionalism. I feel that he was key in keeping everything on task and moving forward throughout the planning and execution process. The RMSS would not have been possible of course without the help of so many individuals. The people listed gave their time to put on a successful summit in no particular order: Ralph Pettit, Becky Roland, Dave Seiler, Heather Lassner, Scott Thompson-Buchanan, Dave Berglund, Brian Dennis, Steve Parker, Kathi Lyon, Robert Boehm, Adam Young, Shaun Lee, Mike Greer, Laine Landau, Ben Myers, and Todd Beers.

We would also like to recognize all of the Speakers who through their presentations help our profession grow. Speakers were unselfish with their time and donated additional items such as books to the Summit.

The Young Surveyors Network kicked off the RMSS unofficially on Monday night with a Network Social. On Tuesday, the RMSS was in full swing with more people than expected! A special thanks to Jim Reinbold with Carlson for being flexible during the Summit when we had to rearrange rooms due to attendee volume. It was great to see old friends and make new ones. We observed Surveyors networking and sharing stories. It was also great to see new Surveyors progressing in their careers with education and licensing. A big shout out to our State PLSC organization for supporting education in our State, with a special thanks to Tom Sylvester for being the right arm of this endeavor. He not only promotes but teaches courses in the Land Surveying and Geomatics program at the Western Colorado Community College in Grand Junction, Colorado.

Solve a Boundary Problem was another great hit this year, as were the technical sessions. It showed that people are hungry for hands on and real-world situations that surveyors come across. The Certified Survey Technician (CST) Preparation Course taught by Steve Parker and Brian Dennis had 46 attendees! That number far exceeded our expectations. The future of our profession is indeed bright.

The RMSS had a great response from our Vendors and Sponsors again this year. The two-hour lunch allowed for more time to spend with the Vendors and Sponsors. It appeared everyone enjoyed the extra time to connect.

Final numbers on the RMSS: Number of Attendees - 359 Number of Sponsors - 18

Todd and I are proud to have worked with the members of the Summit Committee and push ourselves out of our comfort zones to meet people. The RMSS is lucky to have Heather Lassner and Dave Berglund take over as Co-Chairs of this event. The RMSS is definitely in good hands. They are already excited about planning next year's Summit. This event is a big lift and takes a yearlong commitment, which starts as soon as the last one ends. Volunteers are always welcome on the Summit Committee, so if you are interested, please reach out to Heather or Dave.

Last but not least, thanks to Richard Huddleston who provided technical support with all the presentations and did a great job. Additionally, Alex Duhn created and maintained the RMSS web page who site with updates and was extremely responsive. One cannot talk about the RMSS without showing gratitude for Becky Roland who is the backbone of getting this event off the ground. Thanks again to Becky and to her husband Ken, who just seems to appear when work needs to be done!

If you did not get a chance to give feedback through the Whova App, feel free to email the PLSC and give us your thoughts.

Thanks to all who attended and are dedicated to the Profession of Land Surveying in Colorado, and for the memories!

Best,

Brian K. Bowker Co-Chair RMSS Committee

Scenes from the Summit











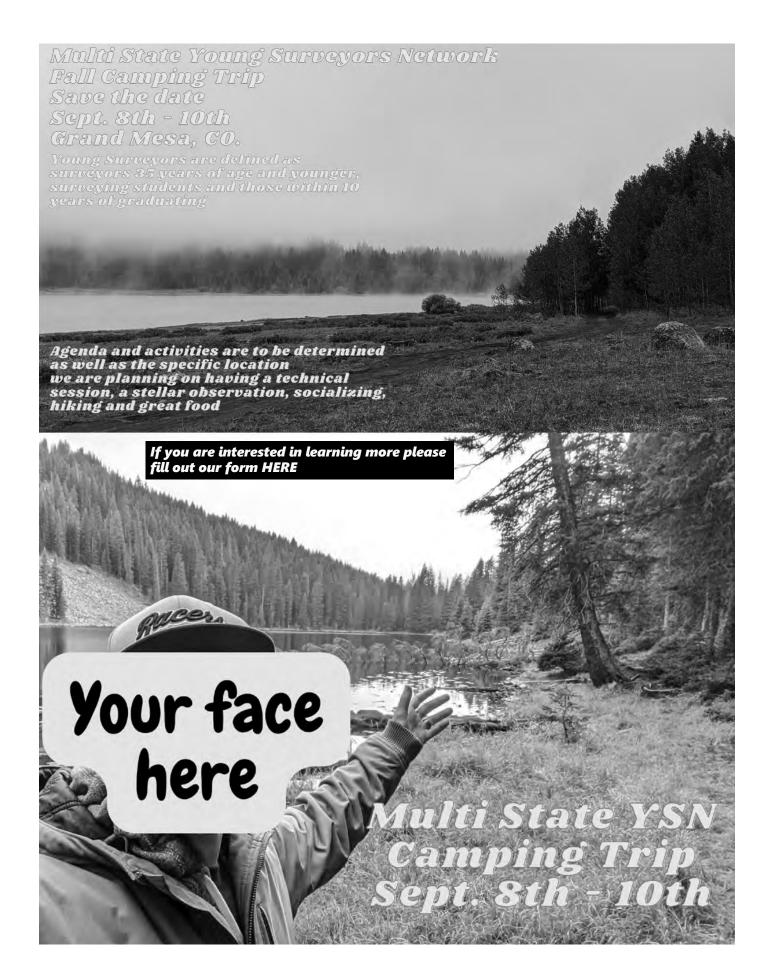


















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Colorado State Plane Coordinate System 2022 Update

By B. John Hunter, PLS

Colorado NGS Geodetic Coordinator

It has been a while since I have given an update on the status of the changes coming our way from the National Geodetic Survey (NGS). It is called the Modernization of the National Spatial Reference System (NSRS) of 2022 and was set to be released in 2022 but primarily due to the COVID19 pandemic, the release of these new datums and coordinate systems has been delayed. While there has not been an official release date set forth by the NGS, 2025 seems to be a consistently recurring timeframe associated with the release.

Summary

To review the new Modernization and Colorado State Plane, please revisit my previous two articles: "The 2022 Modernization is Coming. Are You Ready?", published in Side Shots, November 2018, and "2022 Colorado State Plane Coordinate System", published in Side Shots, May 2019. The following is a simplified summary of what Colorado Surveyors should expect as a result of the Modernization of the NSRS:

• North American Datum of 1983 (NAD83) will be replaced with the North American Terrestrial Reference Frame of 2022 (NATRF22) along with terrestrial

reference frames for the Pacific, Northern Mariana and Caribbean tectonic plates and approximately 3-foot horizontal differences are expected in Colorado.

- North American Vertical Datum of 1988 (NAVD88) will be replaced with North American-Pacific Geopotential Datum of 2022 (NAPGD22) and approximately 3-foot vertical differences in ellipsoidal heights are expected in Colorado.
- Colorado State Plane Coordinate System of 1983 will be replaced with the Colorado State Plane Coordinate System of 2022 (SPCS22).
- Decommissioning of the US Survey Foot and adoption of the International Foot.

NATRF22 Colorado State Plane Coordinate System

Colorado has been approved for one (1) state-wide zone (layer 1) and 35 smaller localized "low distortion" zones (layer 2). Image 1 below is a map showing the administrative boundaries of the 35 layer 2 zones.

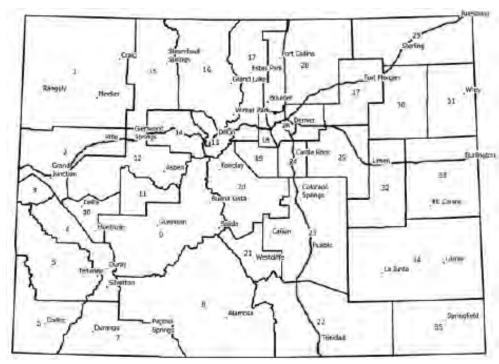


Image 1: Colorado's 2022 State Plane Coordinate System Multi-Zone Layer (layer 2), depicting the 35 NGS approved localized administrative boundaries.



Image 2: Yampa Zone administrative boundary v. 40ppm boundary (hatched area).

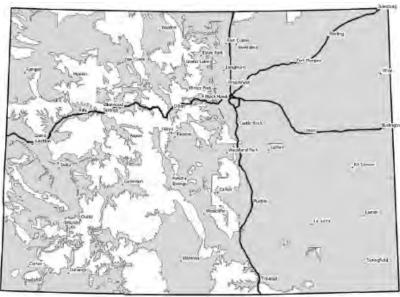


Image 3: Colorado State-Wide Coverage of "Low Distortion" (+/-40ppm)

Layer 1 is a state-wide coordinate system that covers the entire state of Colorado. It is defined as follows:

Lambert Conformal Conic Projection Projection Style Non-Intersecting (1 standard

parallel)

Latitude of Origin 39°00'00"N

254°30'00"E (105°30'00"W) Central Meridian

Origin Scale Factor (K_a) 1.0001 (exactly)

False Northing (Meters) 300,000 400,000 False Easting (Meters) Datum **NATRF 2022**

While this state-wide zone is designed with respect to the topographical surface, there are still areas with linear distortion that exceed what is typically allowable for most survey work. However, the state-wide zone may still be modified (the same way our current state plane system is often modified via the use of a combined scale factor) to address the specific needs of your project if and when a layer 2 zone is not sufficient or does not otherwise meet your needs. The state-wide zone is also ideal for state and municipal governmental Geographical Information System (GIS) needs, as well as other large-scale mapping projects.

Layer 2, also known as the multizone layer, is made up of 35 individual localized zones. Most people would view these zones as Low Distortion Projections (LDP), however I caution the user to perform the necessary due diligence prior to commencing their survey work. The

due diligence is necessary because of the administrative boundary of these zones. If you consider Colorado's extreme topography, it becomes clear that having "low distortion" grid coverage across the entire state is not all that practical, or even possible in many cases.

For example, the hatched area in Image 2 below shows an individual layer 2 zone and the coverage of area in which the linear distortion falls within +/-40ppm (0.2'/mile). Low distortion cannot be obtained across the entirety of the zone due to topography that has exceedingly steep slopes and mountains or valleys with excessive heights relative to the ambient topography. If your project falls outside of the "low distortion" boundary, the best practice is to modify the layer 1 state-wide zone and localize it to meet the needs of your project.

Image 3 shows the statewide coverage of "low distortion", that area that has linear distortion that ranges from -40ppm to +40ppm. In total, more than 70% of the entire state is covered by zones with +/-40ppm of linear distortion. The remaining 28% of the state is comprised of extreme topography, namely steep sloping mountainous, and valley terrain not suitable or practical for low distortion coverage.

Colorado State Plane Coordinate System -NAD83 v. NATRF22

The fundamental difference between the current NAD83 SPCS and the new NATRF22 SPCS is the projection style will be changing from a secant to a nonintersecting projection style. In other words, the conical mapping plane of the current NAD83 system intersects the ellipsoid at two lines of latitude (north and south standard parallels), whereas the mapping plane in the new NATRF22 system does not intersect or touch the ellipsoid at all and it is most commonly situated to the topographical surface. Image 4 shows the difference between these two projection styles.

Another major change is NATRF22 SPCS layer 2 zones utilize all the projection types: Lambert Conformal Conic (11), Transverse Mercator (19), and Oblique Mercator (5). These projection types are designed to uniquely coincide with the local topography through a very specific combination of projection type, projection axis scale factor (K_o), and projection axis latitude/longitude. The cross section shown in Image 5 demonstrates the generic concept of a layer 2 zone, localizing the grid to the topography.

What Now?

Now that we have conditional approval of our coordinate system, I will be working with the PLSC Legislative Committee to update the Colorado State Statutes to adopt the International Foot and new Colorado State Plane Coordinate System. Upon NGS' rollout, hopefully by the end of 2025, Colorado will enjoy a brand-new modernized reference system, including a new reference frame, geopotential vertical datum, and ground-based state plane coordinate systems. We are also busy developing resources to help Colorado surveyors transition to the new system such as digital and static linear distortion maps. If your local PLSC chapter would like a presentation on the Modernization or the new State Plane Coordinate System, please contact me at the email, below.

Resources

National Geodetic Survey (NGS)

New Datums:

https://geodesy.noaa.gov/datums/newdatums/index.shtml

US Survey Foot:

https://www.ngs.noaa.gov/web/news/us-survey-foot.shtml

Colorado Geodetic Coordinator

Web Experience:

https://arcg.is/05L1D1

(Note: Information on this site may be outdated)

Email:

NGS.Colorado@gmail.com

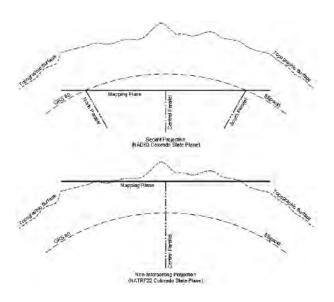


Image 4: Cross-Section comparison of Secant (NAD83) & Non-Intersecting Projections (NATRF22)

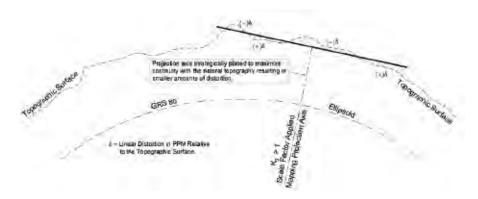


Image 5: General Colorado NATRF22 SPCS layer 2 zone cross section localized to the topographic surface using a combination of projection type, projection axis scale, and projection axis placement.





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What is Passive Control and Why is it Important?

By Brian Shaw

Passive Control has been instrumental to the mission and success of the National Oceanic and Atmospheric Administration's (NOAA) National Geodetic Survey (NGS) throughout its history, which dates back to 1807 when Thomas Jefferson created the Survey of the Coast. Prior to the creation of NOAA in 1970, NGS's predecessor agency was the United States Coast and Geodetic Survey (USC&GS). USC&GS had been the office's name for almost 100 years and many of the survey marks you will find throughout the United States and its territories have USC&GS stamped on them. These marks were established primarily for horizontal and vertical positioning, and the survey observations between them were used to help determine both the datums of the past, and the datums we still use today. For over a century these marks in the ground have formed the foundation of the National Spatial Reference System (NSRS), a consistent coordinate system that defines latitude, longitude, height, scale, gravity, orientation, and shoreline throughout the United States. Passive control and the datums derived from them are truly the infrastructure of our nation's infrastructure. Highways, railroads, bridges and more rely on these marks in the ground and the surveys performed using them. While today we rely more heavily on the GNSS "stars" in the sky for positioning, these marks in the ground will continue to be important and should be perpetuated whenever possible.

Passive control is a term applied to survey marks that are "permanently" monumented and infrequently surveyed, whereas the term active control was developed for Continuously Operating Reference Stations (CORS), as well as other geodetic techniques that are constantly collecting data. Passive control includes brass marks in the ground, 3-D deep driven rod marks, and many other types of monuments that were established to weather time and the elements, providing a location for surveyors to use to access the geodetic datum. The Geodetic Glossary¹ has a number of definitions that can be used for passive control, and one definition is *control point:* "A point to which coordinates have been assigned; these coordinates are then used in other (dependent) surveys." There are many synonyms for passive control including control point, geodetic control, monument, station, mark, survey mark, bench mark and many more. In the past, some of the different terms were originally intended for use with specific types of control – for instance bench mark was used for marks with a precisely

determined height, also known as vertical control – but today most of these terms have become generalized as a term applied to all survey marks.

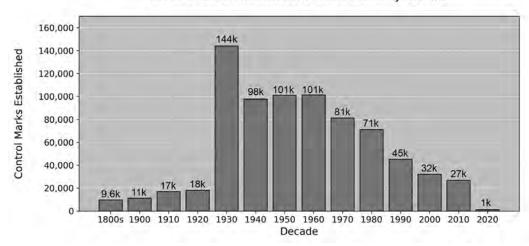
For over 200 years NGS has spent a considerable amount of money and effort establishing control across the United States and territories. This was done primarily to determine precise coordinates (positions and heights) by performing extensive surveys across all states and territories, and sometimes even surveying in other countries. The Survey of the Coast originally established control and performed surveys to determine coordinates for locations on shore as well as offshore. These surveys determined where places were on land, but also mapped offshore obstructions – such as sea mounts, rocks and sand bars - to develop accurate nautical charts in support of safer navigation. As our country grew and the surveys spread across our growing nation, this control was used to determine national datums for positioning, ensuring our nation had a consistent coordinate system for all to use.

The growth of our national network can be seen in maps of the survey control networks below and by looking at the total station counts in the table and chart below. In 1901 the US Coast and Geodetic Survey released the first major nation-wide datum adjustment called the United States Standard Datum of 1900 (USSD), which included coordinates on 5,000 control stations. Surveying increased and the network greatly expanded so when the North American Datum of 1927 (NAD 27) was released there were 25,000 control stations. Just after NAD 27 was realized our nation fell into the Great Depression. As part of Franklin D. Roosevelt's New Deal, the Works Progress Administration (WPA) and other similar programs helped the USC&GS hire unemployed surveyors and engineers. These programs enabled the USC&GS to perform more surveys across the nation, significantly helping to develop the geodetic infrastructure and datums we have today. You can see this major increase in the chart below that shows the dates that marks were first established in the NGS database. The 1930s were by far the most productive decade for establishing new control across our nation from ~18,000 new marks in the 1920's to ~144,000 new marks in the 1930s, an eight fold increase. By the time the North American Datum of 1983 (NAD 83) was established there were 272,000 stations included in the datum adjustment, making it the largest mathematical equation ever solved at the time.²

Year	Datum	Stations
1901	U.S. Standard Datum	5,000
1927	North American Datum of 1927	25,000
1983	North American Datum of 1983	272,000

Table 1 - Growth of the networks in the United States²

Distribution of Established Control Marks by Decade



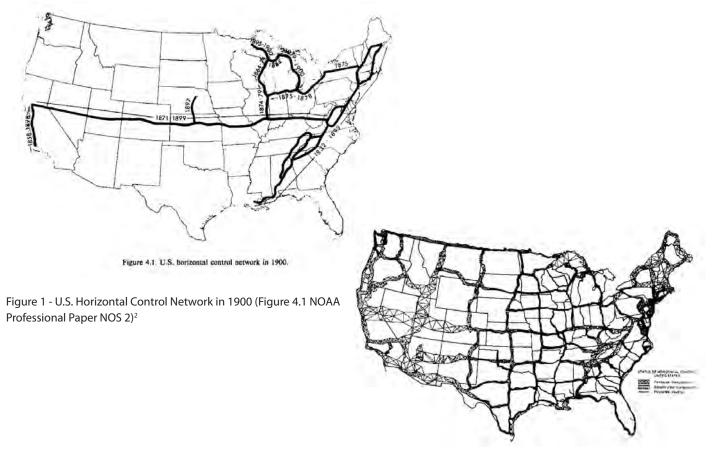


Figure 2 -U.S. Horizontal Control Network in 1927 (Figure 4.2 NOAA Professional Paper NOS 2)2

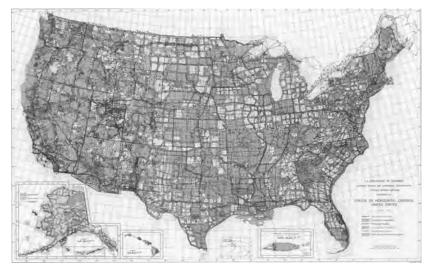


Figure 3 - Status of Horizontal Control United States in 1983³

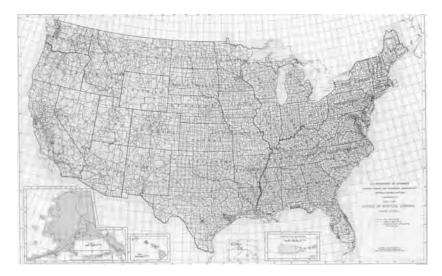


Figure 4 - Status of Vertical Control United States in 19834

As you can see by the progression of the maps (Fig. 1-Fig. 4), there was a tremendous amount of surveying accomplished between NAD 27 and NAD 83. This included surveying the 272,000 horizontal stations used in the NAD 83 adjustment² and 505,000 permanently monumented bench marks and 204,000 temporary bench marks with over 730,000 km of geodetic leveling for the North American Vertical Datum of 1988 (NAVD 88) adjustment.5 The amount of people hours it took to accomplish this was a monumental feat. Horizontal survey crews set up Bilby Towers, climbed mountains and determined positions by measuring angles and distances.

During the same time period, vertical survey crews walked hundreds of thousands of kilometers measuring accurate height differences between marks using leveling rods. Below are some historical photos of survey crews on Bilby Towers and performing geodetic leveling.



Photo 1, above - U.S. Coast and Geodetic Survey surveyors on Bilby Towers.6

Photo 2, right - Leveling down the trail into Glen Canyon. Level party of Fred E. Joeckel. Glen Canyon, Arizona. 1921. Credit: C&GS Season's Report Joekel 1921.7



In Colorado, the Southwest corner of the state is the only area with a high precision traverse likely going through Cortez. In the map you can see there is a decent amount of first order triangulation through the state following many of the interstates, state highway corridors and railroads. Similarly, the first order leveling was following the major roadways and railways with second order leveling along smaller roadways.

Passive control has been very important in the past and will continue to be important in the future. Extensive amounts of effort and money have been put into developing these control networks that are the infrastructure for our nation's infrastructure. The National Geodetic Survey is no longer establishing monuments and surveying them across the country, but state departments of transportation and other agencies still utilize this control for accessing the National Spatial Reference System and determining new survey control. Performing repeat surveys enables organizations to monitor how control is moving over time and at what rates. Soon NGS will be modernizing the NSRS and the passive control will not define the new datums but it will still be important to perpetuate passive control allowing it to be used today and in the future. While it is inevitable that some of this control will be destroyed due to roads expanding, railroads being removed and more, it is important to educate the public on the importance and purpose of these monuments so they can continue to be used by surveyors today and into the future.

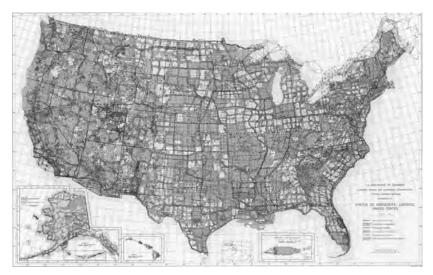


Figure 5 - Colorado Horizontal Network 1983

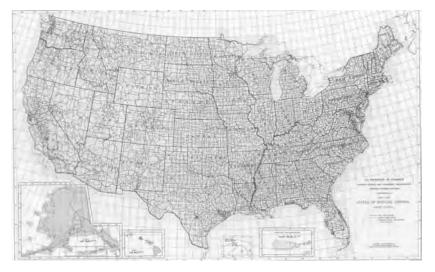


Figure 6 - Colorado Vertical Network 1983

¹Geodetic Glossary. United States, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service, Charting and Geodetic Services, 1986.

https://repository.library.noaa.gov/view/ noaa/2827/noaa_2827_DS1.pdf

² Schwarz, Charles R.. North American Datum of 1983. United States, National Geodetic Survey, Charting and Geodetic Services, National Ocean Service, 1989.

https://geodesy.noaa.gov/PUBS_LIB/ NADof1983.pdf

³ https://geodesy.noaa.gov/INFO/history/ network-surveying.shtml

⁴ https://geodesy.noaa.gov/INFO/history/ leveling-network.shtml

⁵ Zilkoski, D., Richards, J, Young, G.. Results of the General Adjustment of the North American Vertical Datum of 1988. Surveying and Land Information Systems: Journal of American Congress on Surveying and Mapping. United States, American Congress on Surveying and Mapping, Vol. 52, No. 3, 1992, pp. 133-149.

https://geodesy.noaa.gov/library/pdfs/resultsadjustment-navd-1988.pdf

⁶ https://oceanservice.noaa.gov/geodesy/ bilby-towers.html

⁷ https://www.flickr.com/photos/ noaaphotolib/5578048172/in/ album-72157635334100609/

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Larimer County Right of Way Research Part II

By Laine Landau

March 15, 2023, I had the privilege of meeting with Justin Core, Tim Meyer, Alex Swartz, Celine LeBeau, and Ron Perkins and learning to use the tools for researching right of way within the Larimer County Engineering office. I think each of us learned at least one new thing.

Tim and Alex are the day-to-day contacts for right of way research questions in Larimer County. The primary way to research rights of way is using the "Landmark" system which is the digital grantor grantee index. Anyone who has researched County roads knows how difficult it is to find a road through the grantor grantee system. I gueried "Starts with Larimer County" or "Contains Larimer County" as a Grantee and got over 2000 returns each including local companies with Larimer County in their name, as well as various county departments including seizures by the Sheriff and Mobile Home Documents. When I used "Equals Larimer County" I only had 857 returns. Since documents were indexed as different document types through the years you may need to search "deed of easement/right of way," "warranty deed," "quit claim deed." These searches returned 24, 42 and 21 results, respectively. Well, that does not seem like enough documents to cover all the deeded roads in Larimer County. Normally, less is more, but when I typed in "deed" for the type of document it returned only four results. Searching "easement/right of way" seems to return the same entries as "deed of easement/right of way." The point is that you are looking for a needle in a haystack, and the haystack may be in an entirely different hay field than the one you are looking in. To find the right document, you need to follow some additional clues. Tim suggests using the advanced search options to be able to enter the Section, Township, and Range, which significantly narrows the search. Additional clues can be found on recorded subdivision or survey plats which may contain the reference you need. A chain of title on the adjacent private land will provide you with a list of grantors, which can help narrow the search.

In the 1980's Engineering and Road and Bridge put together files for some of the major roads in the county with "data sheets". These outline the road layout by station and offset with callouts to features so many feet left and right of the project centerline. They are a narrative form of the construction plans and may include copies of the actual plans. The road right of way width may also be stated. Since this is not a comprehensive set of County Road files, additional research methods are needed.

Another resource is the Township and Range folders. Each Section has an index which indicates the roads that are included and contains copies of as many documents as have been collected for the roads in that section. If you see a red tab in the folder, it indicates that the documents in that section cover road vacations. These are usually listed in the index as well.

Odd bits and pieces: There is an index map of old roads so you can look up the old road name and check the old road files. There are miscellaneous books with Forest Service and Bureau of Reclamation Roads. One of the most interesting set of files is called the "problem" files. Whenever the County conducted right of way research, they documented their findings. If the work was too complex for the Township and Range folders, they put the research into its own binder by road. Mostly the problem files are organized by date as a chronological record of a specific road, like a chain of title. If a section line road is granted by the County Commissioners and no width is stated it is presumed to be a 60' wide right of way per state statute. Larimer County does contain some prescriptive rights of way, in which case only the traveled way is claimed by the County.

Dedication of County roads in Larimer County now happens mostly by plat, but older roads were "prayed for" by petition and granted by the County Commissioners. The Larimer County Commissioners Records are not open directly to the public. If you want to research the Commissioner's Records you need to make an appointment with Tim, Justin, or Alex in Larimer County Engineering to access records from the earliest days of the County up until the 1930's when the records were recorded in the Clerk and Recorder's records.

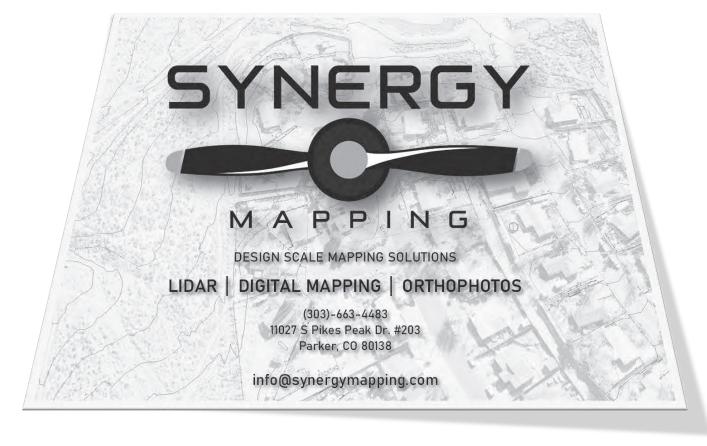
In Larimer County Right of Way Research Part I, published in the February 2023 edition of Side Shots we covered how to look up the petitions and how to use the Road Books, but the biggest surprise of my visit was that the County has annotated the old road books for roads that were granted by petition with notes reflecting more recent deeds, vacations, and revisions. See the Larimer County Engineering Page, select Road Viewer plats and you will be treated to the original plats and the annotated versions (modified). The treasure trove does not stop there. On this page there is also a spreadsheet of road vacations with cross references to the Commissioner's records and related plats. The list is in a pdf format, but it is sorted by Section, Township, and

Range and is not overly cumbersome to search. The list is not guaranteed to be comprehensive, but it is a beneficial resource. If you find Larimer County roads which have been vacated and have not been included in the list, please forward the information to Timothy Meyer at meyertd@ larimer.co.us.

Before I left the office, I decided to try out my new research skills to search for a vacation for a portion of Larimer County Road 24E across Section 5, Township 5 North, Range 68 West, and County Road 26 along the north line of Section 4, Township 5 North, Range 68 West. It is amusing because these stretches of road traverse many subdivisions, but most comically, Boyd Lake and the Northern Colorado Regional Airport. Using the Road Books, I was able to identify the original road dedications and a few vacated pieces. The "modified" Road Books clearly identified the issue as the outline of Boyd Lake has been added in cyan ink with County Road 24E slicing across it. The current roads are marked in orange, and the portions I am researching are still reflecting their original red colored pencil. Switching

from the Road Books to the Township and Range folders I uncovered several dedication documents, but there was no red tab, and no vacations included. I reviewed the vacation spreadsheet and found no vacations in the section of interest. That was when Tim gave me a piece of advice. He said that sometimes you have to say, "I've looked everywhere I can think of, and I can't find it." Hopefully, this has given you a few more places to look for right of way in Larimer County before reaching that point.

P.S. My client is now planning to pursue a vacation of the portion of the roadway crossing their development site. I have since found the Northern Colorado Regional Airport has shown a piece of County Road 26 west of their boundary fence on their 2020 Master Plan, something I randomly consulted. Which brings us back to other needles and other haystacks.



Highlights from the Western States

The Western Federation of Professional Surveyors (WFPS) held a Board of Directors meeting on February 17, 2023 at the Grand Davenport Hotel in Spokane, WA.

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. Plans are underway for a joint conference with HLSA in Hawaii in 2023. More information about APLS can be found on their website AlaskaPLS.org

ARIZONA (APLS) Mike Fondren – Current membership is 390, an increase from the last quarter. The 2023 Conference will be held virtually on April 20-22 and APLS will rejoin Nevada and WestFed in 2024 in Las Vegas. The AZ-YSN has been actively participating in outreach events including job fairs, career technical education events, and more. More information about APLS can be found on their website AzPLS. org

COLORADO (PLSC) Todd Beers - Current membership is 421. 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 will host a Capitol Hill Day at the Colorado state capital during National Surveyors Week. 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 119. A joint conference with ASPLS in Hawaii is planned for March 16-17, 2023. Right of Entry legislation is being introduced by Senator Kouchi. Plans are in the works for Surveying Geomatics class for UH Manoa in the Fall of 2023. Hawaii Community College is considering making the Geomatics & GIS certificate available again to students in 2023. More information about HLSA can be found on their website HLSAhawaii.org

IDAHO (ISPLS) Austin Ishino – Current membership 243. ISPLS Conference will be held March 13-16 in Boise, ID. A new Executive Director and management company has been hired. More information about ISPLS can be found on their new website IdahoPLS.org

MONTANA (MARLS) Russ Kluesner and Dick Smith -

Current membership 426, an increase from last quarter. Montana has established a Young Surveyors Network (MT YSN). Ongoing efforts continue to update the MARLS Standards of Practice manual. 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. 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 287. Great Basin College continues to see good enrollment numbers 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 will celebrate their 50 year anniversary this year and has planned several special events/programs. NALS continues to focus on outreach and has participated in multiple job fairs, STEM fairs, and career technical education (CTE) events this year. The new Governor has issued an Executive Order requesting every licensing board eliminate at least ten requirements for licensure. More information about NALS can be found on their website NvLandSurveyors.org

NEW MEXICO (NMPS) Roxanne Nimmer & Diego Sisneros

- NMPS held their first conference since the pandemic on October 20-22, 2022. The New Mexico Board of Registration now has filled all three of the LS positions on the Board. More information about NMPS can be found on their website NMPS.org

UTAH (UCLS) Mike Nadeau – Current membership is 335. The UCLS Conference will be held February 8-10, 2023 in St. George. UCLS is currently exploring the potential of introducing legislation for Right of Entry for Surveyors. UCLS Standards and Ethics Committee has completed a draft of the condominium guide. The guide has been sent to the UCLS Board for review and adoption. 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 813, an increase over last quarter. The 2023 Conference is Spokane was well attended. The 2024 Conference will be held at the Tulalip Resort & Casino. LSAW supported Board of Registration proposed changes relative to license comity. Department of Natural Resources is proposing an increase for filing and recording fees from \$64 to \$100. LSAW is working with Kris Kline to update the Washington Common Law publication that was originally published in 2009. More information about LSAW can be found on their website LSAW.org

WYOMING (PLSW) John Lee - Current membership is 124. PLSW held a fall forum in November featuring Dennis Mouland. 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 \$3000 in profits with our state association members. 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 WFPS Colorado Director







UNDER THE GOLD DOME

April 2023

The 2023 Colorado General Assembly began its session on Monday, January 8 with its largest freshmen class in history. Thirty-two members, which is about one-third of the entire body, are new to the legislature, bringing much energy to the building and our legislative process. As we enter into our last month of session, about five hundred bills have been introduced and they are working their way through the system. Colorado is unique in comparison to many states, as every bill must have at least one public hearing.

Because the majorities did not change in either the House or Senate, the major legislative issues this session are similar to the last two sessions. They include the creation of affordable housing, wildfire prevention and forest recovery programs, and the administration of behavioral health. In late March, Governor Polis introduced a massive one hundred and six page bill to address statewide land use policies to encourage the growth of affordable housing. It is our guess this legislation will draw a lot of attention and debate under the Gold Dome, as the legislation is analyzed and scrutinized.

The Professional Land Surveyors of Colorado (PLSC) did not initiate any legislation this session. However, there are two pieces of legislation that are worth mentioning; HB23-1066 and HB23-1250. HB23-1066 concerns diagonally touching corners of public land and whether the public can cross from one piece of public land to the other without trespassing the adjoining private lands. HB23-1250 was brought forward by the Statutory Review Committee, whose purpose is an "ongoing examination" of the statutes to discover defects and anachronisms.

HB23-1066 is advocated by hunters and other outdoor recreational enthusiasts. The legislation is opposed by many Agricultural groups, including the Colorado Farm Bureau, the Colorado Farmers Union, and the Colorado Cattlemen's Association. The initial legislation would have given the general public diagonal access to the over four hundred parcels of public, diagonally touching corners of land in the state. Because of strong opposition to that idea, the legislation has been amended to a study of the issue. It remains unclear whether this legislation will become law as agricultural groups are still opposing the amended measure. HB23-1250 came about as a result of a private citizen noticing an incorrect citation within statute. In 2020, the legislature gave the attorney general and district attorneys power over architects, but the legislation incorrectly citied the surveyor reference, part 3 of article 120 of title 12. The legislation corrects that misplacement by placing the 2020 legislation in part 4 of the above referenced article and title, which is for architects.

The Board of Licensure for Architects, Engineers, and Land Surveyors is up for sunset review in 2024. This sunset review process was established by the legislature in the 1970s as a response to problems with Colorado's regulatory boards lack of transparency. Colorado's Department of Regulatory Agencies (DORA) conducts the sunset review and evaluates if regulation is needed to protect the public. If regulation is determined to be needed, their review will look for the least restrictive level of regulation consistent with the public interest and make recommendations for statutory changes to the Colorado legislature.

DORA's first recommendation is whether the profession should be continued to remain licensed. The other recommendations are developed by DORA interviewing stakeholders that are either members of the profession or have a indirect relationship with the licensee.

Currently, DORA is meeting with interested stakeholders to prepare their recommendations for release in mid-October. These recommendations will be reviewed by the licensee's legislative committee of reference. This should be the House Business Affairs and Labor Committee. All sunset committee hearings will start in the House next year.

At the initial sunset House committee hearing, committee members will hear testimony from DORA and impacted stakeholders. After testimony, they will vote to introduce legislation based on DORA and stakeholder's recommendations. The committee does not have to follow DORA's recommendations. This legislation will follow the standard procedures for any bill introduced. If for some reason this legislation does not pass, DORA would start implementing a wind-down process for surveyors.

PLSC is actively working with other stakeholders to coordinate a unified message to DORA and to the legislature next year. If you are interested in helping, please contact Scott Thompson at 970-261-9290.

As we enter the home stretch of the session, there will be long hours of debate to come. Although we are far from finished, we would like to thank PLSC's Legislative Chair, Scott Thompson from Mesa County, for his expertise and solid direction. He is always there to help us understand sometimes technical issues, so that we can communicate them to legislators in an effective and simplified way.

Best wishes, Steve Balcerovich and Kathy Oatis PLSC contract lobby team

NW1/4 PLSC

A long, hard winter is still not quite done in Northwestern Colorado. It's impacts on Moffat, Routt, Jackson and Grand Counties are immediate and longer term. Northwest Colorado has had much drier winters on the average the last thirty years than the prior thirty years. Despite a couple of exceptional winters during this past thirty years, we have gotten kind of used to milder winter temperatures and something on the order of 17% less snow on the average. This has enabled us in the surveying industry to work effectively into mid-December most of these years and then resume normal activities in large portions of three of the Counties by latter March. We still have considerable snowpack throughout most of the NW1/4 as of April 4th. Steamboat Springs has three to four feet of snow on the ground. I was digging yesterday through this hardened snowpack. This will result in an even more hectic field season as the work demand is relatively the same, but we now will be dealing with six less weeks of "good" field operations. Coupling that with aging surveyors and a decreased technically qualified workforce and it is obvious we have our work cut out for us. The good news is Arizona, Nevada and California will

love all the water we're sending their way, albeit one winter only. And the skiers had a memorable ski season to boot!

> Brian T. Kelly, President NW1/4

SWC - PLSC

The SWC held an in-person/virtual meeting on March 28th at the La Plata County Fairgrounds. We had the pleasure of having three County Surveyors attend our meeting.

Steve McCormack (La Plata County), Rita Caffey (Montezuma County) and

Ron Sutcliffe (Archuleta County) introduced themselves, gave reports about their positions and fielded questions from attendees. Here is a summary:

Steve McCormack (La Plata County)

Steve provided some great information pertaining to monument records and the new system being worked on with the County Clerk to provide them as a new layer on the County GIS. This would be a free service. The system will not be in place before April 15th. The County Clerk's office was working hard to scan over 8700 reports.

Steve had a recent meeting with the County Commissioners regarding an issue of requiring not only

a dedication on a subdivision plat for a right of way, but also the additional, potentially unnecessary, request for a separate deeded meets and bounds description. Steve will meet with the County Attorney to discuss this issue and will provide an update at next regular Chapter meetina.

Rita Caffey (Montezuma County) Rita had just recently taken up the position in Montezuma County as the County Surveyor, but has had a role in the plat reviewing process and County standards for many years.

Rita informed the group she was working on getting more participation from the County to help the surveying community, not only for the surveyors who reside in Montezuma County, but also the surveyors from surrounding communities who hope to survey in Montezuma County. Rita understands that coming into the area has been a daunting task for the surveyor. She has been drafting checklists for the required items needed on the different types of surveys and plats required in Montezuma County. This effort is in hopes to assist the surveyor and provide necessary guidance when working in the County.

As she continues to further develop the position, she is looking into attend County Commissioner meetings more regularly and provide additional support to surveyors and the profession in Montezuma County.

Ron Sutcliffe (Archuleta County) Like each of the County Surveyors in attendance, Ron provided a great understanding and history of his County's background and its relation to the survey profession. Ron talked about the Clerk and Recorder's office and some of the services they provide.

Ron recently underwent the task of working through some difficult situations with a home owner's association in his County to help explain the roles and responsibilities of the land surveyor. This effort from Ron helped to set a new path in preliminary surveys in Archuleta County and hopefully with his assistance will continue.

Here were other items discussed at this meeting:

Treasurer's Report: Account balance is \$14,760.29. A new Chapter account has been created with Alpine Bank. Treasurer, Justin Bonnell is working to transfer funds and close the old account.

- Todd Johnston (President) let the group know that he is no longer Co-Chair for the Rocky Mountain Survey Summit (RMSS). The new chairs for the 2024 RMSS are Heather Lassner and Dave Berglund from the Northern Chapter.
- Todd Johnston (President) and Josh Casselberry (Vice President) will serve in their Chapter officer roles through 2023, then step down. Nominations and elections will be held at the September 2023 meeting. If anyone is interested in being President/Vice President, please contact Todd. Justin Bonnell (Treasurer) and Brian Boniface (Secretary) will serve another term (two years).
- A Chapter "GPS on Benchmarks" event may be held this Summer. No date has been set yet, but the National Geodetic Survey has extended the deadline for submitted observations to September 30th, 2023.
- The "Surveyor Rendezvous" Committee is looking to have the social gathering this Summer or early Fall. Date and time of the event are pending. The SWC will make announcement as soon as plans are finalized.
- A six hour field-training class with Wilderness Medic, LLC for Chapter members is being developed for Fall 2023.
- 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.
- A presentation from Mike Boeckman, PLS (retired BLM Surveyor) will be held in May. Mike's presentation is a follow-up to his previous presentation on the 1877 erroneous Fahringer surveys in La Plata County. This presentation will be held in-person only.

Our next meeting is scheduled for June 20th at the La Plata County Fairgrounds. Everyone have a great Summer!

> Todd C. Johnston, PLS President - SW Chapter PLSC

SCPLS

The Southern Chapter is staying quite busy. We are working together with the El Paso County Surveyor Richard Mariotti and the county DPW surveyors to complete a Final Mark honoring past county surveyor Lawrence Burnett. We have our 35th annual Paul Grout Golf Outing planned for Sunday, July 30th at the Holly Dot Golf Course. Followed by our annual barbeque. We have a guest speaker Nick Powell scheduled for June 20th in Colorado Springs. We have two scholarships awarded this year, both Jordan Johannes (\$1,500) and Rafael Bombacini (\$1,000). Congratulations!!! Also, our Annual Christmas Party and White Elephant gift exchange is reserved for Friday December 2nd. Join us at scpls.net.

> Steve Parker 719-641-3355

WCLS

Mesa County Surveyor Scott Thompson, P.L.S. is working on making books for the years 1912 to 1967 available for research which can help in determining the chain of title. Both the Mesa County Surveyor and the City of Grand Junction Surveyor Renee Parent, P.E., P.L.S., & CFedS are busy reviewing projects that have been submitted. Approximately 150 total.

Tom Sylvester, P.E. & P.L.S. was happy to report 101 seats filled for the Western Colorado Community College for courses related to Geomatics.

WCLS is working on topics and schedules for our WCLS Fall Seminar. We wanted to let our members know that Kurt Shepherd, P.L.S. is currently a proctor for the CST Program here on the Western Slope. The CST Program could always use additional people. If interested please contact WCLS.

WCLS are looking forward to this summer and will have guest speakers for our regular meetings.

> Brian K. Bowker, P.L.S. WCLS President

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AIRWORKS

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Richard Chuapoco 2851 S. County Rd. 137 Bennett, CO 80102 720-490-1321 richard@diversifiedunderground. com

ECAD

Kelly Marrill 12130 N. Pennsylvania St. Thornton, CO 80241 303-427-2231 Kmarrill@cad-1.com

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GALLOWAY

Brian Dennis 1155 Kelly Johnson Blvd., Ste. 305 Colorado Springs, CO 80920 719-900-7220 briandennis@gallowayus.com

GEOSHACK

Thad King 7000 E 47th Ave., Ste. 900 Denver, CO 80216 303-853-0311 tking@geoshack.com

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RJM PRECISION INSTRUMENTS

David Moss 5007 Pacific Hwy. E, Ste. 19 Fife. WA 98424 602-462-3990 davidmoss@rjmprecision.com

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Kelly Mulé Sales Representative 9540 East Jewell Ave Suite A Denver, CO 80247 (303)695-3850 kmule@skld.com

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TERRAMETRA RESOURCES

Lvnn Patten 2919 Bryn Mawr Place Lonamont, CO 80503 303-709-2903 lynn.r.patten@gmail.com

THAT CAD GIRL

Claire DiBlasi PO Box 1360 Holly Springs, NC 27540 919-578-1499 claire@thatcadgirl.com

TOM RICHARDSON LLC

41255 Dublin Dr. Parker, CO 80138 303-699-3524 Gwen@TomRichardsonLLC.com

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