

May 2024

SIDE SHOTS

Professional Land Surveyors of Colorado

Volume 55, Issue 2



RMSS: A Look Back

SEE PAGE 10

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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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Hello Fellow Members

I want to believe Spring is here, but Mother Nature keeps throwing winter curve balls at us. Especially the mountain communities. I know our skiers love it, but I am ready for warmer days; and field crews are ready to dig for monuments and set stakes in ground that isn't frozen. With Summer around the corner being a surveyor's "busy" season, as if it ever slows down anymore, make sure your field staff are prepared for the sunny days coming. That includes sunscreen, bug spray, snake bite kits and first aid kits. With warmer months comes fire season. Please ensure your field crews have a fire extinguisher. Grass fires started by catalytic converters and exhaust manifolds are real and more frequent than you think. Parking the truck in tall grass is usually a bad idea for everyone. A little training and a full fire extinguisher go a long way. Keep everyone safe and the grassy fields the way you found them.



We just completed the 2024 Rocky Mountain Summit (RMSS) in March. I want to thank our new RMSS committee chair Heather Lassner and all of the committee members for their efforts for this year's conference. The committee members are Heather Lassner, Dave Berglund, Dave Seiler, Steve Parker, Robert Boehm, Todd Johnston and Becky Roland. Thank you to all of you for your hard work, communications, great ideas and execution putting together a conference we all can enjoy and benefit from. The feedback from the conference was overwhelmingly positive. Heather has agreed to chair next year's conference as well, and I know she will do great!

As of the time of this writing, House Bill 24-1329 passed the House and Senate. Next step is to the Governor for signing into law. For those not sure what HB 24-1329 is, the bill contained our amendment for continuing education requirements in Colorado. This is a major achievement for the Survey profession in Colorado. Todd Beers (Past President), Paul Bacus (Past Legislative Chair) and others began this pursuit years ago. Unfortunately, with opposition from adjacent professions and DORA, the bill did not pass the Senate and their efforts were not successful at that time. After polling the PLSC membership last year our membership green lit the Legislative Committee to pursue this effort again. Lead by Scott Thompson (Legislative Chair) and with the help of many others including consultations with Todd and Paul for their lessons learned, Scott and the Legislative Committee and our lobbyist were able to navigate the legislative process all the way through until approved by Senate. This included testimony hearings to the House of Representatives and Senate committees to defend the amendment and its necessity for the Profession. In fact, this time, we had endorsements from ACEC, and adjacent professional associations. DORA no longer opposed either. This was a much simpler path than Todd or Paul had then, but it was no easy path to say the least. Thank you, Scott and all involved for making this happen. Colorado is now the 45th state to require continuing education for license renewals. The PLSC's next job responsibility in the process is to work with DORA to mold the requirements into something that works for the Survey Profession and truly makes us better.

Thank you
Brian Dennis, PLS, PLSC President

FROM THE EDITORIAL COMMITTEE

Having started work during the oil and gas bust of the mid-80's and agonized through the 2008-2010 collapse of the real estate bubble I am loathe to turn down work. Any work. You want me to walk your dog, find your pins, shovel your snow, do a boundary survey over 14 sections? I'll say "yes" to it all. Re-reading Dennis Mouland's book *Ethics for the Professional Surveyor: A Collection of Thoughts* made me realize that saying "yes" is an ethical problem if you can't execute properly because you are overloading yourself or operating outside your area of expertise. Please read the book review and Dennis's book and reflect on your own biases and how they impact your professional practice.

Earl Henderson has contributed a promising start to a new series on the origin of the State of Colorado. His articles are based on *Colorado Mapology* by Erl H. Ellis of Frederick, CO. Please send a letter to the Editor if you have read this book and have any questions that you'd like Earl to address in future articles.

The 2024 Rocky Mountain Survey Summit was a great success. Our headliner, Wendy Lathrop, was informative, intelligent and on topic. Since nothing gets done without a team, please consider volunteering to be part of the 2025 RMSS crew by contacting Heather Lassner (hmlassner@gmail.com) or your Chapter President. Thank you for contributing to our profession.

Sincerely,
Laine Landau
Chair, Editorial Committee

P.S. I am an accomplished dog walker and snow shoveler even if I don't have a license for those activities!



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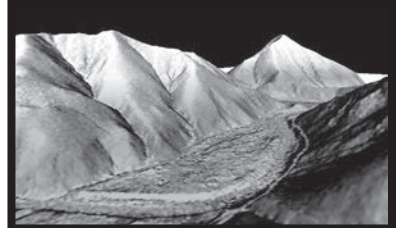
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PLSC Board of Directors Meeting Minutes January 25, 2024 • 4:30 p.m.

1. Call to Order: Dennis

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	x
Brian Bowker	Director	Western	x
Ian Cortez	Director	Central	x
Todd Johnston	Director	Southwestern	x
Steve Parker	Director	Southern	x
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	
Guests:			
John Hunter	Geo-Coordinator		
Laine Landau	Side Shots Co-Editor		x
Randy Fortuin	Central Chapter		x
David Berglund	Northern Chapter		x
Brian Kelly	NW 1/4 Chapter		
Brian Shaw	NOAA/NGS		
James Combs	YSN		
Cole Conger	YSN		
Sue Weiss	CST		x

2. Determined Quorum (6 voting): Lee

3. Any changes to the Agenda: Dennis

4. Approve November 2023 Minutes Dennis
MOTION: To approve the November 2023 BOD Meeting Minutes as amended. (TJ/SL)

Approved unanimously

5. Financial Report: Lee/Roland

- a. BR to send YE financials after all invoices have been received and posted.
- b. Checking: \$6,385 Savings: \$23,875 Investments: \$153,339
- c. Cash flow is healthy with Refresher Course, Renewals, Summit Income now coming in.
- d. Refresher Course Speaker Payout – BOD consensus is to pay the suggested \$630 per speaker/class
- e. Chapter payments for 2023 need to be paid – SL will make these transfers
- f. Table discussion on Chapter agreements for Summit

6. Voting Items

a. NCEES Model Law – vote to approve/disapprove NSPS edits

1. NSPS is taking edits until January 31.
2. BR to reach out and get final version release date after edits.

MOTION: To direct the PLSC Director at the NSPS Spring Meeting to vote yay on the NCEES Model Law revisions as of January 25, 2024. This vote will be revisited if the revisions change based on input. (ST/TJ)

Four Approved/Four Abstentions - Motion not approved

3. Vote at next appropriate BOD Meeting after final revisions received.

b. Scholarships: Sylvester

1. Approval of Gregory Fobes Scholarship Application

MOTION: To approve a \$1500 scholarship for Gregory Fobes to be awarded upon receipt of proof of successful completion of coursework. Funds to be paid from the PLSC Scholarship Fund. (TS/SL)

Approved Unanimously

2. Approval of Jack Johnson Scholarship Application

MOTION: To approve a \$1500 scholarship for Jack Johnson to be awarded upon receipt of proof of successful completion of coursework and clarification from Tom Sylvester on award for Fall 2023. Funds to be paid from the PLSC Scholarship Fund. (TS/BB)

Approved Unanimously

3. Approval of Alexander White Scholarship Application

MOTION: To approve a \$1500 scholarship for Alexander White to be awarded upon receipt of proof of successful completion of coursework. Funds to be paid from the PLSC Scholarship Fund. (TS/BB)

Approved Unanimously

7. Next Meeting

- a. February 29 – Full Board Meeting (IC/HL)
 1. Galloway Office and online

8. New Business

- a. LL thanked everyone for the new material for the February issue that was on time and covered the State.
- b. BR to send Legislative Breakfast summary to BOD.

9. Adjourn HL/SP



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Under the Gold Dome

By Scott Thompson and Steve Balcerovich

As the 2024 Colorado Legislative session neared completion, on April 26, 2024, the Colorado Senate passed House Bill 24-1329, concerning continuing the Architects, Engineers, and Professional Land Surveyors Board. This was the final legislative action needed before this important, landmark bill for surveyors headed to the Governor for his signature.

HB24-1329 contains a number of “housekeeping” items and clarifications to the powers and duties of the Board and continues its existence for another nine years. However, more importantly, a significant addition was made regarding professional land surveyors. The legislation mandates that the board “PROMULGATE RULES TO ESTABLISH CONTINUING EDUCATION REQUIREMENTS FOR PROFESSIONAL LAND SURVEYORS AS A CONDITION OF LICENSE RENEWAL.”

This important addition is the result of a coordinated, concentrated effort by the PLSC that began over a year ago. Recognizing that Sunset Review was coming up in 2024, the PLSC Legislative Committee began in March of 2023 to solicit suggestions for changes in the statutes regulating the practice of surveying. By early April last year, a Zoom meeting was held to discuss nine proposals. Near the end of that meeting the idea of continuing education was brought up, and it quickly became obvious that the members wanted another legislative try at incorporating mandatory continuing education into state statute. In the interest of concentrating on the continuing education issue the other proposals were set aside to be considered later.

To make sure the committee was on the right track, a poll was conducted of the PLSC membership. The results were 75% in favor of the proposed requirement. The PLSC Board of Directors subsequently passed a resolution supporting mandatory continuing education. In May 2023, PLSC members met with the DORA Policy Analyst to discuss the recommendations they would be making to DORA. In June PLSC members attended a stakeholder meeting with representatives of DORA and the other professions of the AES Board. Some opposition to continuing education was noted, but we thought an apparently convincing argument was made

in favor. However, when the final report was released last October, it did not recommend or oppose continuing education for surveyors.

Despite lacking a continuing education recommendation from DORA, PLSC and its lobby team continued to move forward. Our lobbyists met with the House Chair of the Business Affairs committee to secure her support for an amendment to require continuing education for surveyors. In addition, the lobbyists reached out to DORA to explain our intentions and secured DORA’s neutrality on the issue.

In January of 2024, a brochure was developed explaining the reasons the PLSC was in favor, and the anticipated benefits, of continuing education. PLSC members and the PLSC Lobbyists attended the Lobby Day on January 24 where coffee and burritos were provided. Twenty-eight legislators attended and heard us advocate for a continuing education amendment.

On February 21, the sunset review bill was introduced in the House, HB24-1329, and assigned to the House Business Affairs Committee. The PLSC Lobbyists were quick to find a Representative to offer an amendment and lobbied the committee members. The House Committee hearing was held on March 7, and several PLSC members offered testimony in favor of the amendment. The bill and amendment passed unanimously, although not without anxiety by those of us who have waited over seven years for this to occur. The legislation passed the House with 52 votes in favor and moved quickly through the Senate with 32 votes of approval and only 2 votes against.

As chair of PLSC’s legislative committee, I want to thank everyone who contributed ideas, time, testimony, letters of support, and attendance at the numerous meetings and legislative hearings; it was a job well done!

We look forward to working with DORA to define the mandatory continuing education requirements and its implementation.

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RMSS 2024: Looking Back

By Heather Lassner



The culmination of hard work from an entire year plays out in a few short and frantic days. It's never easy to bring together all the pieces that make a conference successful, but it is so rewarding once everything has run its course. It wasn't without its hiccups, but with some fast action, we were able to keep the program moving forward successfully.

I would like to start off by saying a special thank you to all the contributors this year. Starting with the RMSS committee: Dave Seiler, who always stepped up to assist in any way necessary; Steve Parker who is always so great at coordinating the CFedS program and running our contests; Brian Dennis for getting together our City/County Submissions: What you need to know and providing the necessary oversight; Todd Johnston who couldn't be there in person, but who was invaluable in helping me with the presenters and liaisons, and someone who worked hard to alleviate my worries; Robert Boehm who pulled out some amazing vendor support in the eleventh hour; Dave Berglund, my co-chair who did a fantastic job early on helping with the keynotes for both 2024 and 2025 at a time when I had too much going on in my personal life to be able to engage much; and Becky who helped with all the ins and outs of conference and handles problems like a champion.

A shout out to Shaun Lee who assisted with set up of the silent auction and Laine Landau who pulled out some remarkable content in my hour of need, I am forever in your debt. Thanks to Sue Weiss, who has agreed to walk this journey with me next year and was always willing to lend a hand during the conference with anything we needed. Of course, all the fantastic people who acted as liaison for our speakers, a big thank you to you as well. Thanks to all our out-of-town guests, who traveled to provide new regional perspectives for us, and thank you to Mike Greer for taking photos. I appreciate the chapters showing up and helping, giving wonderful prizes, and engaging with our PLSC (Professional Land Surveyors of Colorado) members. It takes a lot of great and dedicated people to pull off a conference of this size, and it's important to recognize everyone's hard work.

One of the best things about going to the Summit is being able to meet with people you haven't seen in quite a while. I truly enjoy seeing people reconnect after being separated for such a long time. It can also be a great time to encounter new people and create new relationships. I personally like it when I can add a face and personality to a surveyor I have followed or someone who has helped me, but I had not met in person.

This year, I had the privilege to host our keynote speaker, Wendy Lathrop before the conference and really was able to sit with her and learn about her successes and challenges. You get a better insight into a person when you get to spend a little time with them, versus just listening to them present. I appreciate Wendy's sense of adventure. She always seems to be up for trying new things. Moreover, she is unbelievably active, and I wish her the best on her upcoming trek across the UK. I know she was excited to catch up with her good friend, Dennis Mouland, who was responsible for introducing her to Steve Parrish back in the day and she relished her time in Colorado.



Everything I heard about our new venue, The Westin, was positive. I know it was a bit farther north, but the facility is well equipped for continued growth and expansion as the conference moves forward. We will be in the same facility next year and are currently working on the dates for 2025. I know the end of March isn't ideal, so we may look at getting it back to February, but unfortunately, I do not know if we can do that for next year since we have already committed to a timeframe.



We welcomed over 290 attendees and 21 vendors. The Silent Auction raised a record-breaking \$4,377, which goes directly to scholarships.

I hope everyone had a marvelous time, learned something new, and enjoyed the overall experience. We look forward to seeing you again in 2025!



CCPS

The Central Chapter welcomed in our new and existing board members for 2024 at the Rocky Mountain Surveying Summit this past March. President - Justin C Scheitler, PLS; Vice President - Randall Bloom, PLS; Treasurer - Daniel Davis, PLS; and Secretary - Greg Gilbert, LSI. Directors - Roger Atnes, PLS; Derek Brown, PLS; Amara Hildebrand, PE; Eric Laburda, LSI; Jim Lynch, PLS; Tony Peall, PLS; and Hayley Young, PE & PLS.

And a big thank you to past-president Randy Fortuin and all of the out-going directors. We appreciate all you did for the Chapter and the Land Surveying Community.

The CCPS is reinforcing our focus to provide exceptional value to our membership. We have big plans for 2024. We started things off this year with a chapter meeting at a new location in Lakewood, CO, Creative Locale. To encourage discussion and growth in attendance, the new location was designed to be centrally located and have plenty of parking for large vehicles. Attendance was solid and the conversation was excellent. The next Central Chapter General Meeting is scheduled for Thursday, June 20. Please come and join in the discussion.

Our series of online land surveying discussions entitled *Wednesday Talks*, kicked off April 17 with a very entertaining presentation by Tom Sylvester, PE & PLS on an interesting survey adjacent to the Colorado National Monument in Grand County. The series will continue May 22 from 6-7 p.m. with a presentation by Bob Dahl, PLS and Katie Singleton, PLS of the Bureau of Land Management (BLM). The discussion will be regarding the development of the *2009 Manual of Surveying Instructions*. In June, we will have a combined *Wednesday Talk* and in-person chapter meeting at Creative Locale with the esteemed Jan Van Sickle leading the discussion. Additional speakers are being lined up for the rest of the year. Keep an eye on the CCPS online calendar for updates.

September 13, 2024, the CCPS will be holding its 2nd Annual Summer Seminar on the Arapahoe Community College campus. John B. Stahl, PLS will be discussing the Pillars of Land Surveying. The seminar will be held in-person and virtually. Watch for an email invite coming soon.

And if you haven't already, please sign up for the 5th Annual CCPS Golf Tournament taking place June 9 at Homestead Golf Course off Hampden Ave in Lakewood, CO. First place is \$1,000, so get your team together!

Justin C Scheitler

NORTHERN CHAPTER

Hello PLSC Membership,

Here is a brief breakdown of our activities since December, 2023:

On January 10, 2024, the Northern Chapter held a virtual meeting to discuss Chapter business only. The meeting revolved around upcoming content and meeting locations. We also discussed Chapter finances, possibilities for fundraisers, expectations for the 2024 RMSS, needs for the Sandbox from Laine Landau and expired director positions.

On February 7, 2024, we were fortunate to have Wally Muscott and John Von Neida provide detail on expectations for plat submittals for the City of Fort Collins, CO. The detailed information provided by both Wally and John was outstanding and evolved into further conversation about general expectations, suggestions for platting in general, and our responsibilities as Professional Land Surveyors. We were also able to confirm volunteers for speaker liaisons for the 2024 RMSS including Tony Fendick, Katherine Rocha, Celine Bromley (formerly LeBeau-congratulations Celine), Steve Varriano, and Laine Landau. We also discussed finalizing a fundraiser for the Summer of 2024.

On March 6, 2024, we met with the intent of reviewing the third part of a presentation by Gary Kent (the previous two parts had been presented at meetings in 2023). Due to some technical difficulties and an off the cuff question that arose about irrigation ditches and their ramifications on past, present, and future development, we spent most of the meeting discussing previous and existing project work and how members dealt with vague or incomplete record and physical evidence. We spent some time discussing Land Survey Monument Records and the current systems being used to file, research, and view the information.

At the RMSS on March 25th through the 28th, we had the opportunity to meet and experience some excellent content as well as catch up with friends and colleagues from throughout the region. The facility and content were well received, and we feel the Summit went well. Wendy Lathrop was our keynote, and she had a great 2-day session.

Due to the RMSS, we do not plan to meet in April. Our meeting on May 1, 2024, will be at Flatirons, Inc. at 655 4th Avenue, #200, Longmont, CO 80501. Currently we are planning to circle back and review the Gary Kent

presentation that was scheduled for our March meeting. We are also attempting to coordinate with Tom Sylvester on the possibility of working with us on a stellar observation refresher (or a first time) in May. Final details are not in hand, so keep an eye out for more information to come. May will be our final meeting prior to our hiatus from June through August.

Please consider joining us for upcoming meetings and events as they occur. This is an excellent opportunity for members of the Northern Chapter or individuals interested in becoming involved with the PLSC to join us to discuss Chapter business and help determine our direction for the future. If you know anyone who would like to attend a meeting or become involved with the Chapter, please reach out and we will make sure they are included.

Looking forward to seeing you soon!

Respectfully,
Dave Berglund, PLS
(970) 590-8666 • Djib081493ajb@gmail.com

NW1/4

The most entertaining of all the Chapters, the Northwest1/4 PLSC met at the Creekside Café in Hayden, Colorado on February 25th. We had the usual reading of the minutes from Walter Magill, then the all important Treasurer's Report from AJ Summers. We're in good shape financially as Covid limited our meetings and we built up a reserve. AJ also did a remarkable job of retrieving all resources from Wells Fargo as our previous Treasurer, Willy Whelan, passed away and we did not have a backup signatory. Shame on us! But we have sworn not to repeat that mistake! We are the smallest chapter of the PLSC, but I am hoping the other Chapters were better prepared than us.

Our four items of New Business were the Downtown Steamboat Survey, Monument Records, Conflicting Boundary Evidence on Plats and Routt County Plat Review. Starting with the Downtown Steamboat Survey, CDOT is now actively underway with a concrete repair and ADA Ramp job. US Highway 40 goes right through the heart of Steamboat Springs and there are centerline Monument Boxes at every intersection: 3rd, 4th, 5th, etc. Everyone agreed that going out in the middle of a US Highway with a vehicle count of 23,500 a day was bordering on insanity, so we discussed other options such as the ROW line. The CDOT engineer is in agreement, so we have probably worked that one out.

We all know the Monument Records digital solutions have been problematic for a couple of years now, but for the time being it seems to have resolved itself through the sheer persistence of the private provider. At least

in Routt County, they still receive hard copies of the Monument Records and post them in the books in the Fireproof Vault. I personally checked on them a month ago and they were in order.

Tom Effinger, Routt County Surveyor, was concerned that some surveyors in filing plats do not show conflicting boundary evidence as required by State Statute. We had a discussion on that matter and I suppose we all miss something at some point, but deliberately or consistently not showing Conflicting Boundary Evidence is not professional. That doesn't even address the legal matters. We as surveyors are hired and trained to gather the information and show the evidence on the ground that you found on your plats.

The last item, Routt County Plat Review, got interesting. Tom Effinger is the County Surveyor as mentioned above. He is reviewing plats shortly before recording to make sure they meet statutory requirements. Some of the Surveyors thought this should be on a checklist. Others thought it already is as they are statutory and regulatory and already in writing. No consensus on this one. And then we adjourned.

Respectfully submitted,
Brian T. Kelly, President
PLS in New Mexico, Arizona, Colorado and Utah

SOUTHERN CHAPTER

Southern chapter had a large meeting at El Paso Department of Public Works, May 21st with the NGS's Brian Shaw. Numerous GIS folks joined the meeting and added a great deal of feedback regarding the new coordinate systems. We plan to have Charlie Tucker in the summertime. Our golf tournament is a go for August, more to follow. We will have an attorney to present regarding land surveyor right of entry and concealed carry. And our Christmas party is scheduled for Friday December 6th at 6:30pm at the Flying W Ranch, and the World-Famous Flying W Wranglers!

Steve Parker
719-641-3355

SWC-PLSC

The SWC held an in-person-only meeting on March 19th at the La Plata County Clerk and Recorder's office. We had the pleasure of seeing some new faces in the room as well as the same seasoned surveyors of the past. The La Plata County Surveyor Steve McCormack had been working with the LaPlata county clerk and recorder Tiffany Lee and deputy clerk Arielle Ferguson. They set up a presentation that detailed research using the online system for plats and the new process of

uploading monument reports as a viewable image on the county GIS system. Mrs. Lee answered many questions from the meeting attendees, provided interesting conversation, and offered valuable insight. She proved to be a vital resource in the continuing and ever-changing network of online documents and in preserving the history of the county's plats.

On other regular business-related issues, the treasurer's report and acceptance of the December meeting minutes were postponed until our next regular business meeting to accommodate the usage of the clerk's office.

Our next meeting is scheduled for June 18th, 2024 with the location to be determined.

Brian Boniface
President, SWC

WESTERN COLORADO

President: Sean Mullen
Vice President: David Holmes
Secretary/Treasurer: James Combs
Directors: Ted Juntilla, Renee Parent, Kurt Shepherd, Alec Thomas, Tom Sylvester, and Scott Thompson

I would like to thank the previous officers, Brian Bowker, Chris Ransier, and Alex Lheritier, for their service and guidance they have provided the newly-installed officers. The March chapter meeting held at Grand Junction City Hall was well attended and included some younger professionals. Trent Howell provided an update regarding the Mesa County Real-Time Virtual Reference Network. The chapter is planning for the Fall Seminar which has been tentatively scheduled for late August. I look forward to seeing everyone at the next chapter meeting in May.

Sean Mullen
WCLS President

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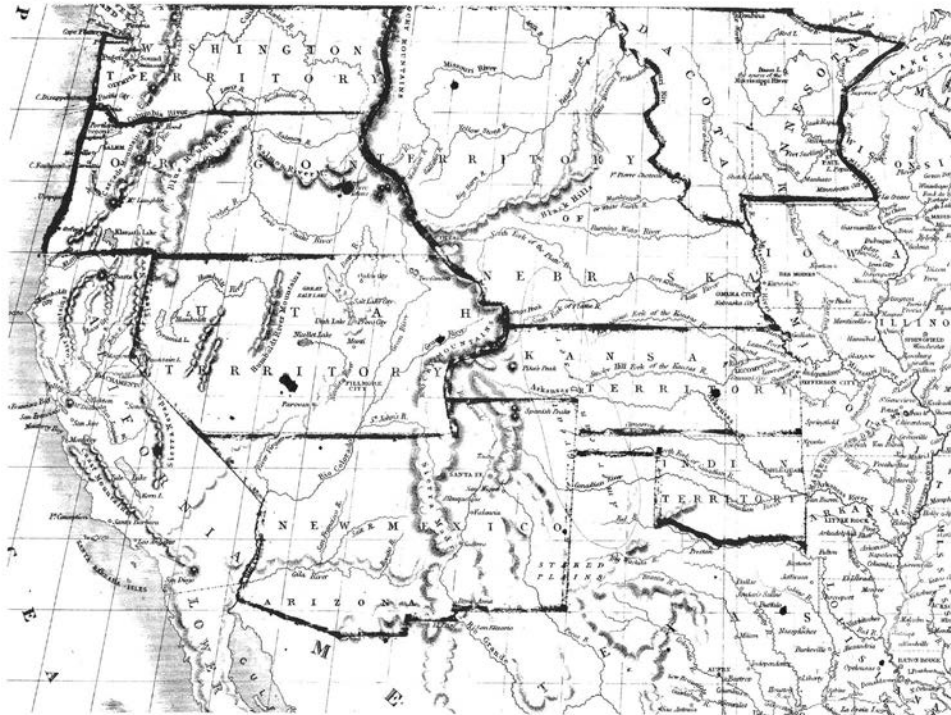
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Image VI-B-2



“snakes”. And the Green and Grand Rivers join into one river that is not labeled.

Image VI-B-2 is a portion of Cornell’s map of the United States from 1855. Note how many of the large territories from the Sage map have been divided into smaller territories that are more defined. This may be partly because California became a state in 1850 and Texas became a state in 1845, both with smaller more defined boundaries than are shown on the Sage map, leaving the remaining portions of those territories as territories but now with different names. Arizona is the southern portion of the New Mexico territory. The Utah territory now extends to the continental divide. And the Rio Colorado begins at the intersection of the Green River and the Grand River.

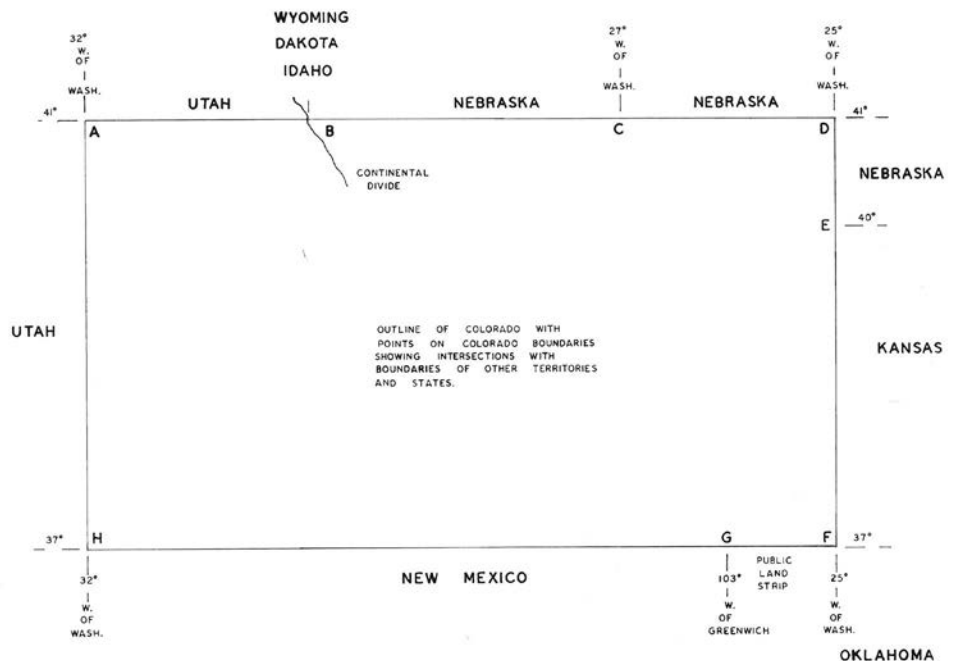


Image VI-A-2

In 1859 some of the citizens of the area proposed a constitutional convention for the purpose of creating the State of Jefferson, but the vote of the populace was against it. So

instead, the temporary Territory of Jefferson was created in late 1859, which existed until The Enabling Act of 1875 which authorized the formation of the State of Colorado resulting in Colorado being admitted as a state on August 1, 1876.

The State of Colorado was defined in Section 2, Boundaries, of the Enabling Act as:

“That the state of Colorado shall consist of all the territory included within the following boundaries, to-wit: Commencing on the thirty-seventh parallel of north latitude where the twenty-fifth meridian of longitude west from Washington crosses the same; thence north, on same meridian, to the forty-first parallel of north latitude; thence along said parallel west to the thirty-second meridian of longitude west from Washington; thence south on said meridian to the thirty-seventh parallel of north latitude; thence along said thirty-seventh parallel of north latitude to the place of beginning.”

These boundaries are depicted in image VI-A-2. Note how the east and west lines of Colorado are defined

by longitude west from Washington. At that time the Greenwich meridian had not been accepted as the universal prime meridian to measure longitude. Individual countries were establishing their own prime meridians for their own usages. For fans of *The DaVinci Code*, you'll remember how the French prime meridian was marked by monuments along the rose line at the end of that movie. For fans of my prior writings, Figure 1 shows the various locations, both proposed and used, in Washington, DC, where a US prime meridian was established prior to the USA accepting the Greenwich meridian as the prime meridian. This issue will come up again when we discuss the Four Corners Monument.

Now that we have a clear understanding of the theoretical location of Colorado, we can begin to retrace the original surveys of the state boundary lines to understand where Colorado actually lies.

Stay safe out there.



Figure 1

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“Sometimes, Proportioning is Dumb”

Dennis J. Moulard, PLS

Yes, you read that right. One of those fundamental principles in boundary surveying might not be the best solution to a “lost” corner problem. Whether it is on Grandma Jones’s lot in town, a large odd-shaped parcel in the woods, or a public lands survey system (PLSS) parcel retracement about to be developed, we need to take off the blinders of “the rules” when the circumstances tell us some other solution needs to be considered.

We are not licensed just to force us to always use the rules. We are licensed and regulated to be sure we have exercised the proper professional judgement in a boundary retracement problem. Conditions on the ground, the history of surveys, and the nature of evidence can sometimes dictate other more applicable solutions to complete a boundary survey satisfactorily.

When we think we are faced with a lost corner, there are a few things to consider first. Textbooks, even the BLM 2009 Manual, all warn us that proportioning is to be the last resort. This instruction seems to have been lost by some surveyors who quickly apply the math to a corner problem...it’s so easy while you are standing there with an RTK-GPS solution at your instant command. As we have transitioned over to our high-tech measuring devices (which is not a bad thing), we often forget that finding evidence of the corner is more important than a precisely set proportion.

Our goal is not precision, but to be correct....to put it where it was. Not where it should have been. Not where our client would like it to be. Not where we wish it was.

“It is far more important to have a somewhat faulty measurement of the spot where the line truly exists than it is to have an extremely accurate measurement where the line does not exist at all”. -A.C. Mulford, Landmarks and Boundaries.

Interestingly, Mulford wrote those words in 1912, long before we had electronic distance meters, total stations, or GPS. It was a problem even with the “primitive” abilities to survey of that time. We have always been plagued by people who do not bother to look for the only real sign of a corner’s location; the physical evidence at the corner point or at other evidence that points us to the corner position. In essence, some just don’t realize how inferior (and incorrect) their measurements can be. Many corners have been proportioned, which were not truly lost. The evidence was there just begging to be recognized and used by a truly professional surveyor.

Let’s look at a few situations where a monument may not be present, but a corner should not be considered lost.

1. Are there any original or subsequent accessories present? The definition of an existent corner is one where either the monument or its accessories are present and identifiable. These may be bearing trees, bearing objects, RMs, off-line witness corners, or other references, from the original survey, subsequent surveys, or perpetuations by other surveyors (the county surveyor?), other private surveyors, or other governmental retracements.
2. Have any further surveys been performed which tie to your “lost” corner? Those ties may often offer a better solution to your corner position than a proportion. For example, a GLO section corner monument which has disappeared may have been used by someone to further subdivide the area. Lot corner pins at 100-foot intervals leading away from your corner would be better to use to restore the corner. A proportion will rarely fit anything that had been surveyed subsequently. The rules say a double proportion is the method; but perhaps this corner is not lost.
3. Has a previous surveyor established coordinates on a corner point you cannot now find? While we should be cautious about just using coordinates, we should put some effort into what system they used, plus check some of their other corners for correct orientation. I have found that many a PLS does not know how to use the state plane coordinate systems, so I am extra cautious before using their data. Ask what corner evidence they found or tied at the time of establishing the coordinates. I’d rather use their valid coordinate positions before I proportion that corner.

What if the corner is truly lost, but a proportion introduces errors that should not be present? One of the major assumptions that proportioning makes is that the difference between the record and measured is equitably distributed along the line. This is often not the case. Here are a few examples of this situation.

- A. Is part of the line across some distance the result of triangulation? Often, water bodies, canyons, or other physical interruptions were triangulated. Most likely the source of error between the overall record and measured distance is different on triangulated lines. Imagine a straight line on a

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- metes and bounds survey crosses the wide finger of a lake. The difference across the water will be different from the difference over the land, which was actually chained. Some adjustment might be appropriate, like holding record on one side or the other of the physical interruption or by holding a good topographic or cultural feature tie.
- B. Was part of the line being retraced actually run on offsets? Errors in the offset work could sometimes be enlarged or shrunk by the offset effort? Solutions similar to “A” above might be appropriate.
- C. Is the terrain over which the line runs significantly different on one end of the line from the other? Imagine part of the line was run along good flat land, but the rest of it was over rough and difficult terrain. The sources and magnitudes of error will be different and should perhaps be factored into the computation. I had a corner on a boundary that was apparently lost, but a topographic call said the corner was 30 feet back of the edge of a cliff. A pure proportion placed it some 40 feet out into thin air. The error was different up the cliff than on the flat lines on both ends of the line.
- D. Proportioning also assumes you are at both of the exact same places on the ground that the original line was measured to and from. This may not be true in certain cases, such as:
- a. One end of your line being retraced is the result of another proportion. Proportions off of proportions are usually foolish and result in math comfort, but little relation to the original corner position. Is there some other form of evidence that could be considered?
 - b. Are you having to proportion to an actual point of intersection instead of the off-line closing corner position? This results in very little protection of the bona fide rights of property owners. Perhaps record or an indexed form of record would be more appropriate.
- E. The record from which you might be working may have been done by different surveyors with different “chains”. Imagine a PLSS township corner which has two lines done by a chain, and the other two by GPS. It would be illogical to perform the rule of a double proportion on such a case, as the assumption of the errors being equitably distributed along all four lines is not possible. Perhaps a two-point control would be better using just the GPS data.
- F. Is there a significant “bust” you have found in the record? A bust is a large error in the record distance which you have discovered, often coming in increments of the length of the record measurement device. A 100-foot bust or a 1 chain bust can drastically affect your proportion because the bust usually occurs in one place, but a proportion will spread it over the entire line. I had a section in Arizona whose east line was measured at 85 chains, not the 80 chains in the record. I knew the last place that midpoint quarter corner would be was midpoint. The 5-chain bust occurred in one stretch of that line, not equitably along the entire “mile”. I used topographic calls to identify which side of the lost corner the bust occurred.
- G. A very important principle is about retracing the chain or tape where it was used. But in the event the line being retraced was never actually measured due to fraud and/or fictitious field notes and/or plats, we should not even think of proportioning along such a line. I know of several PLSS townships that were totally fraudulent; no chain went over that line. But a proportion across the township is worse than meaningless in such a case. A corner never measured or monumented was NEVER existent. To apply the equity principles of proportioning on such lines is a complete failure to protect the bona fide rights of the landowners.
- In conclusion, almost any boundary survey we may face can require corner restoration. The real questions we should ask ourselves are:
1. Is the corner really lost? Remember: we do not proportion lost monuments.
 2. Did the record measurement device really go over the line in question?
 3. Has there been competent retracement and use of the corner before you arrived, but since the original survey?
 4. Are you able to clearly identify the same two points they measured between?
 5. Are there any significant features over which the line was run?
 6. Is there evidence of a bust in the record distance?
- Remember: Professional judgement is needed when the exact circumstances for a rule are not present.



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Book review:

Ethics for the Professional Surveyor: A Collection of Thoughts by Dennis Mouland

By Laine Landau

I took Dennis Mouland's course on ethics in 2023 and one of the benefits was winning a copy of this book. I can't recall if I won it for asking the best worst question, or the worst best question.

Topics like theft, conflict of interest, moonlighting and advertising are covered in other ethics courses, but here all examples given are pertinent to land surveyors. Other topics are specific to the peculiar issues faced by land surveyors. Every chapter made me think about how I practice land surveying and to reevaluate what I do, why I do it and whether I should continue to do so, or whether I should change my practice. Rather than smugly reading the examples of others' shortcomings I tried to follow Dennis's example and admit where I have fallen short, where I have taken short cuts, and where I have allowed financial pressures to dictate the quality of work I have done.

Key Takeaways:

"Flying Over Kansas, Continuing Education, and Specialization" - Being honest with yourself is as important as being honest with others. We all have holes in our education, training, procedures, or specialty areas of our profession. Getting a license is just the first step in a lifetime of learning. We must ask ourselves, "Do we know our own limits? Are we taking steps to expand our limits?"

"Just Say No" - Taking work when you are too busy shortchanges your client and your reputation. For those of us who scrabbled through 2009-2012 it is hard to ever say "no". This chapter helped me to see that by saying "no," I am saying "yes" to giving my existing clients the quality they deserve.

"Terrorists Hold Hostages" - Making your survey data available by recording it, including explanations of your reasoning, and lists of what you researched does not diminish the value of your survey by "giving it away", but rather increases the ability for the next surveyor to agree with you.

"Thence" - A reminder that bounds should not be left out of descriptions in favor of a sanitized metes and bounds description.

"Double Monumentation" - I had a hard time considering this as an ethics issue at first but failing to do the work of evaluating the evidence in context of the time it was set, the methods by which it was set and holding math as the supreme decider of "correctness" is a short-cut that is a disservice to the bona fide rights of the property owner and the adjacent property owners.

"Ethics in the Courtroom" - Avoid court if you can. The best way to do that is to communicate with your client. If you cannot avoid it, "Be honest; always tell the truth. Be a true expert witness, very professional, and very humble." ¹

"Price Fixing" - Do not let others determine your fee.

"Beyond Your Boundaries" - Belonging to a professional association will help you continue your education, give you a group of potential teaming partners, establish a peer network, and give you an opportunity to participate and give back to the profession.

"Conflicts of Interest" - The new twist introduced was thinking about reviewing your old work when new work abuts it. Rather than saying this is half done already, treat your old work like it was done by someone else.

"It Does not Apply Here" - The examples were from Indian lands and made me glad that the CFedS program should be making more qualified surveyors available for surveying those areas. I have been told the same thing in an area of Texas when the boundary of the ALTA survey I was reviewing was not retraced through a dense thicket and "record" was reported for 7 courses rather than measured. Because I was not licensed in Texas, I was told I did not understand that that was not how it was done in Texas. I believe Texans, as well as Indians deserve a proper survey.

"Who Is the Neighbor" - "A survey should be a real survey, regardless of who the client is, no matter who the adjoiners may be." ²

"Evidence Destruction" - Outright destruction is obviously wrong, but not upgrading and rehabilitating monuments or recording surveys is described in this chapter as subtle destruction.

“It Isn’t There” – If that’s your attitude, you probably won’t find it! So much research is available digitally now there is little excuse for not preparing good research packets including the original GLO notes, the map prepared from those notes, the monument records through time, plats, surveys, aerial images etc. before going to the field. The section of this chapter that resonated with me the most was this:

“Many of us have turned surveying into an assembly line type of work; no one can take too much time on any aspect, or it messes up the whole procedure. The conveyor belt cannot be slowed or stopped.”³

I love the puzzle pieces of research, layers of history, contrary elements of field work that all add up to a survey that tells a story of the land and its ownership. I spend the time on the front end because I know it is my best chance to get the information I need before turning in the package to my client or engineer.

“The Library” – Build your own and give away books to others to help them build theirs. I admit I just bought my

own copy of *Wattles Writing Legal Descriptions*. I have always borrowed one from a boss or co-worker. Mine arrived today.

This book has impacted me by reminding me that my obligations to my clients, my company, myself, and my profession extend farther than the mill of everyday business may demand. The resulting introspection has encouraged me to reevaluate my habits and to prioritize the ones that produce a quality survey. The public deserves nothing less.

¹ *Ethics for the Professional Surveyor: A Collection of Thoughts* Second Edition, 2020 by Dennis Mouland, Witness Tree Publishing, Chapter 9, page 34.

² *Ethics for the Professional Surveyor: A Collection of Thoughts* Second Edition, 2020 by Dennis Mouland, Witness Tree Publishing, Chapter 24, page 73.

³ *Ethics for the Professional Surveyor: A Collection of Thoughts* Second Edition, 2020 by Dennis Mouland, Witness Tree Publishing, Chapter 26, page 80.



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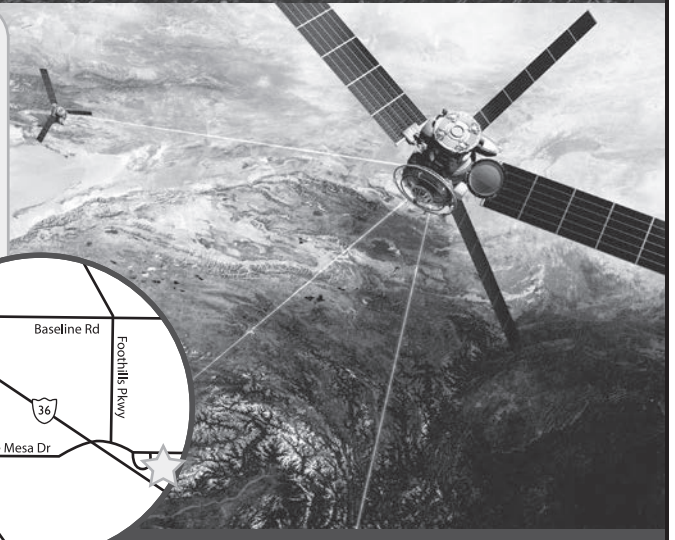
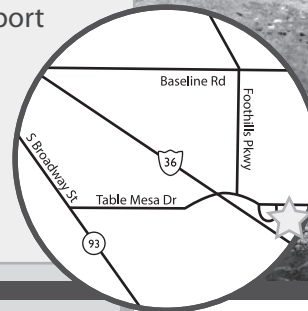
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WFPS REPORT

Highlights from the Western States

The Western Federation of Professional Surveyors (WFPS) held a Board of Directors meeting on March 22, 2024 at the Horseshoe in Las Vegas, Nevada.

ALASKA (ASPLS) Gary Gervelis – ASPLS Conference was held February 22-24, 2024 in Anchorage. More information about APLS can be found on their website AlaskaPLS.org

ARIZONA (APLS) Mike Fondren – Current membership is 396. APLS has approved bylaw amendments which changes the composition of the Board of Directors and changes the Officer to be elected by the membership. The change also allows for the Young Surveyors Network to be chartered as a Chapter. The Board of Technical Registration (BTR) is going through sunset review. The Senate did not accept the House bill extending the BTR for 8 years. Instead, they have introduced a bill to extend only 2 years and amends the authority of the BTR. APLS has launched a grassroots effort to support the continuation of the BTR. APLS received a proclamation from the Governor declaring Land Surveyors Week. The Young Surveyors Network is active and participating in multiple outreach efforts. More information about APLS can be found on their website AzPLS.org

CALIFORNIA (CLSA) Kevin Nehring & Kristie Achee - CLSA received a resolution from the legislature declaring Land Surveying Week. CLSA is working to find a sponsor to introduce a bill to require continuing education. More information about CLSA can be found on their website CaliforniaSurveyors.org

COLORADO (PLSC) Todd Beers – Current membership is 345. PLSC has introduced an amendment to the sunset review bill to require continuing education for land surveyors. Additional legislation is being tracked includes state plane coordinate system and a requirement to reference the current deed on a Land Survey Plat. PLSC has developed a list of volunteers to serve as CST proctors. The GIS in the Rockies planning is underway. The event will be held in-person in September. PLSC remains active in outreach activities. More information about PLSC can be found on their website PLSC.net

HAWAII (HLSA) Alika Garo – More information about HLSA can be found on their website HLSA.hawaii.org

IDAHO (ISPLS) Austin Ishino – Current membership 288. The 2024 ISPLS Conference was held at the Shoshone Bannock Hotel in Fort Hall, Idaho on February 27th – March 1st. The conference was held hybrid with 213 in-person and 68 virtually. ISPLS raised \$19,000 for scholarships at the Conference. Austin Ishino is the new editor of the Gem State Surveyor magazine. The state-specific portion of the exam has been removed. ISPLS has introduced legislation to get the

state-specific exam mandated again. Legislation to eliminate mandatory continuing education failed. More information about ISPLS can be found on their new website IdahoPLS.org

MONTANA (MARLS) Russ Kluesner and Dick Smith – Flathead Valley Community College is still searching for a professor. Some of the program has moved to an online platform and volunteers are needed to run labs with the students. Young Surveyors Network has expanded and there was a large attendance from YSN at the Conference. MARLS is currently working on updating their bylaws. The Surveyor Assistance Fund has been renamed More information can be found on their website MARLS.com

NEVADA (NALS) Trent Keenan & Greg Phillips – Current membership is 302. The new four-year degree program at Southern Nevada (CSN) is scheduled to begin this fall. NALS continues to publish, print, and mail four issues a year of the Nevada Traverse. NALS is working to introduce legislation to address the 2022 datum. In addition, NALS is looking at Right of Entry laws. NALS continues to focus on outreach and has participated in multiple job fairs, STEM fairs, and career technical education (CTE) events this year. More information about NALS can be found on their website NvLandSurveyors.org

NEW MEXICO (NMPS) Darryl Coster & Amanda Allred – More information about NMPS can be found on their website NMPS.org

UTAH (UCLS) Mike Nadeau – Current membership is 335. UCLS 2024 Conference was held in St. George Feb. 21-23, 2024. The program at Utah Valley is averaging 8 students a year and is in jeopardy of closing. UCLS has increased their outreach efforts but participating in STEM events. More information about UCLS can be found on their website UCLS.org

WASHINGTON (LSAW) Ben Petersen and Luke Lymangrover – Current membership is 796, an increase over last quarter. The LSAW Conference was held at the Tulalip Resort & Casino on February 28th – March 1 and was well attended. LSAW continues to publish the Evergreen State Surveyor magazine in both print and digital formats. LSAW held an in-state Lobby Day and met with 11 legislators to discuss monument preservation, recording fees, and deregulation issues. One of the Land Surveyor Members of the Board of Registration will have expired their term in July 2024. LSAW is currently promoting the position and upon request will consider endorsement of a candidate. Professors at Clark College, Bellingham Tech, and Renton Tech are all retiring this year. More information about LSAW can be found on their website LSAW.org

WYOMING (PLSW) John Lee – Current membership is 111. PLSW held a fall forum in November featuring Wendy Lathrop. Legislation revising the state plane coordinate system passed and was signed by the Governor. Information about PLSW can be found on their website PLSW.org

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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

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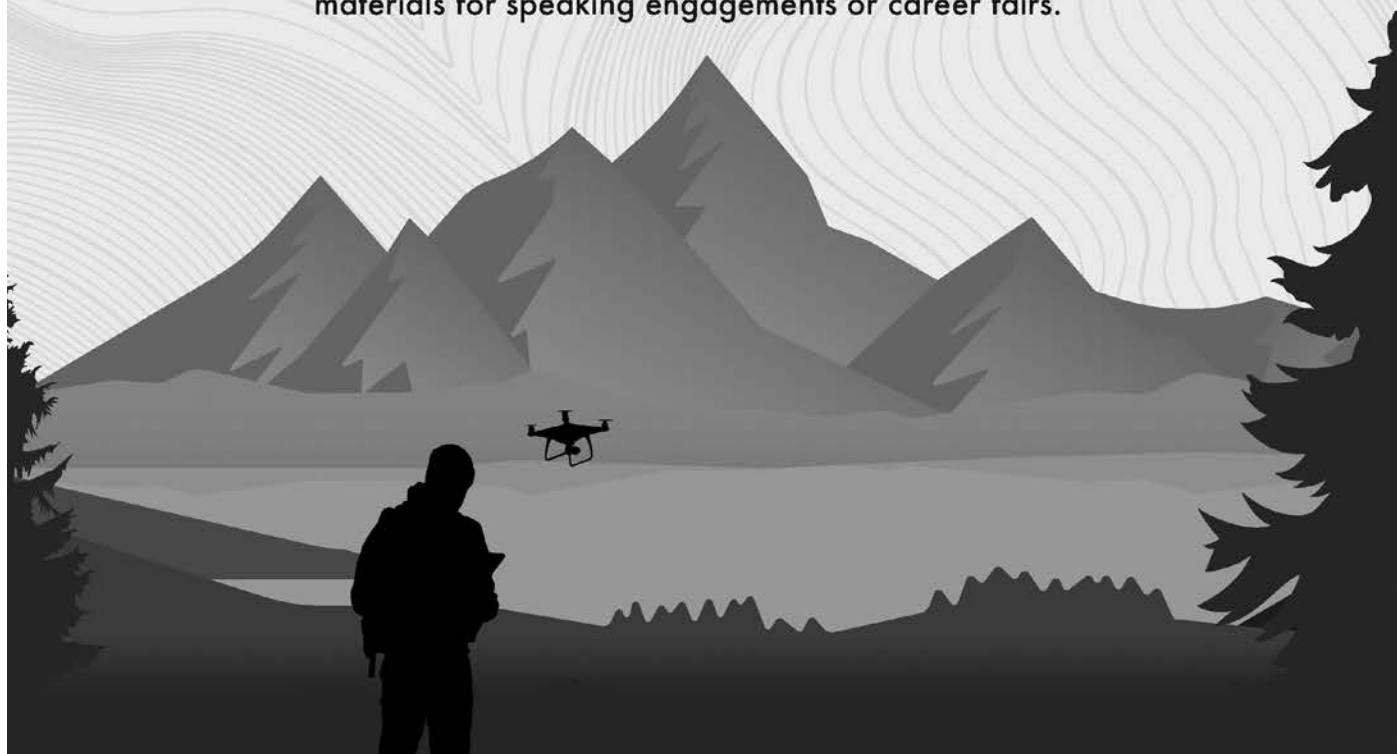
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In Reply Refer To:
9600 (CO-956)
Colorado

March 18, 2024

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 October 11, 2023, through January 19, 2024, 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://gloreCORDS.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>
T. 9 S.	R. 77 W.	Sixth	1754	Plat & Notes	10/11/23	1
T. 13 S.	Rs. 86&87 W.	Sixth	1769	Plat & Notes	11/02/23	1
T. 14 S.	R. 86 W.	Sixth	1769	Plat & Notes	11/02/23	1
T. 6 N.	R. 75 W.	Sixth	1757	Plat Only	11/27/23	2
T. 5 N.	R. 73 W.	Sixth	1757	Plat & Notes	12/27/23	1
T. 11 N.	R. 85 W.	Sixth	1762	Plat Only	01/11/24	2
T. 2 N.	R. 84 W.	Sixth	1763	Plat Only	01/19/24	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: 2024.03.18
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David W. Ginther
Chief Cadastral Surveyor for Colorado

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