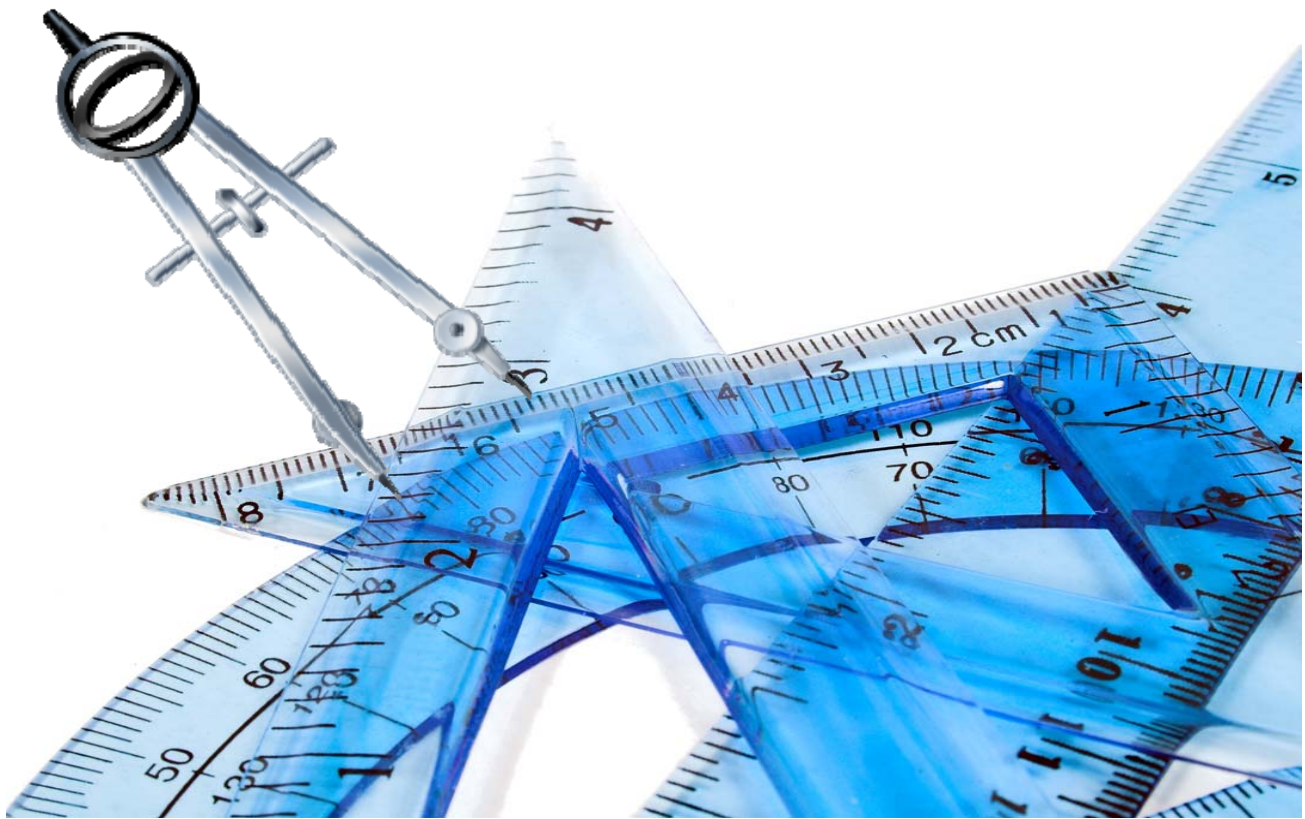


# Spring Workshop

Lodge of Four Seasons, Lake Ozark, Missouri

May 6-8, 2010

# Accuracy versus Precision



## Missouri Society of Professional Surveyors

722 E. Capitol Avenue, PO Box 1342

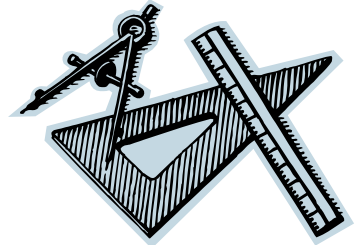
Jefferson City, MO 65102

573.635.9446 — fax 573.635.7823

# Workshop Agenda

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This workshop will teach us why we can be precise but not accurate and what is the difference. Also why and how to find the evidence that makes you accurate and how to portray that accuracy in our writings of descriptions.



## Thursday, May 6, 2010

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1:00 p.m. Golf Tournament Fundraiser at the Cove Golf Course at the Lodge

## Friday, May 7, 2010

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7:00 a.m. Registration & Continental Breakfast

8:00-10 a.m. Research (Recorded and Unrecorded)

**Speakers: Gary Bockman and Mike Freeman**

This session will present recommendations for improving research methods for both records and field evidence searches. The actual experiences of the speakers will be used to illustrate the problems created by less than desirable research and what might be required to correct the problems. Field procedures will include the recommended field search details utilized by a Missouri Circuit Court judge.

10-10:30 a.m. Break

10:30-12 noon Finding the Evidence We Are Missing in the Field

**Speaker: Robert Ross**

Evidence of the prior surveyor and his footsteps on the ground is (or should be) the focal point in a majority of the work that Land Surveyors undertake today. Recent advances in technology have significantly changed the way that measurements are obtained, which should improve our chances in recovering this evidence; or do they?? We'll discuss different types of evidence, the "art" of evidence recovery, and methods to help find the evidence that boundary surveys rely on.

12-1:00 p.m. Lunch Provided & Exhibits

1:00-5 p.m. Writing Legal Descriptions

**Speaker: Larry Phipps**

We've all done it. Try to take a highly complex survey and turn it into a comprehensive, clear legal description. This class will take a look at legal description writing and reading. We'll discuss do's and don'ts for making sure your description meaning is unambiguous and reproducible. There are traps out there waiting for the unwary surveyor to step in. Let's keep you out of them.

5-6:00 p.m. Reception with Exhibits

## Saturday, May 8, 2010

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7:00 a.m. Registration and Continental Breakfast

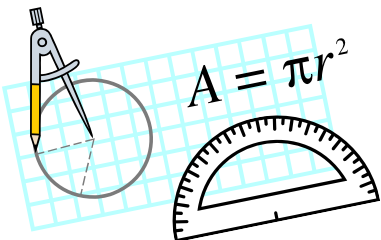
8-12 noon Accuracy and Precision

**Speaker: Larry Phipps**

Ever wonder about the relative accuracy of various survey tools and techniques? This is the class for you. We will take a sample project and analyze it using various survey technologies from compass and chain to Robotic Total Station to GPS. Along the way we'll discuss error vs. blunder, accuracy vs. precision, and various adjustment rules. We'll end the day with an in-depth discussion of least squares, positional tolerance and the role they play in the new ACSM/ALTA standards. If you gather and process survey data, this is a do-not-miss seminar.

12-1:00 p.m. Lunch Provided

1-5:00 p.m. Accuracy and Precision (continued)



# Workshop Information



## Registration Information:

Registration fee is \$175 for MSPS Members and \$300 for Non-members. Deadline for registration is April 25, 2010. After this date, a 10% processing fee will be added to registration fees. The fee includes instructional materials, refreshment breaks, luncheon on both days, cocktail reception and two continental breakfasts. To register, complete the attached form and mail it with your check to: MSPS, 722 East Capitol Ave., PO Box 1342, Jefferson City, MO 65102. For more information on this course, call Sandra Boeckman at 573-635-9446.

**SPECIAL RATE for Technicians:** A special rate of \$150 is available for non-licensed technicians (Associate Members of MSPS). Registration fee plus 2010 Associate Membership is \$185.00. Call MSPS for details at 573-635-9446.

## Golf Tournament: (Scholarship Fundraiser)

Register to play in the Golf Tournament Fundraiser for the MSPS Scholarship Fund to be held at The Cove Golf Course, Lodge of Four Seasons beginning at 1:00 pm. \$85 per person which includes two mulligans per person.

## Location and Lodging:

The Lodge of Four Seasons in Lake Ozark is the location for the 2010 Spring Workshop. A block of rooms has been reserved at the Lodge at a rate of \$93.00 for single or double occupancy. **Deadline for reservation is April 5, 2010.** Make your reservation by calling the Lodge of Four Seasons at 888-265-5500.

## Cancellation Policy:

MSPS reserve the right to cancel the program and return all fees in the event of insufficient registration. A participant may cancel a registration up to two weeks before the course date and receive a full refund. **NO REFUNDS AFTER APRIL 25, 2010.**

## Registration Fees:

MSPS Members	\$175.00
Non-Members	\$300.00
Technicians ( <i>Associate Members</i> )	\$150.00
Techs + Associate Membership	\$185.00
Golf ( <i>per person</i> )	\$ 85.00

Please Type or Print

## Conference Registration

To register,  
detach and  
mail to:  
**MSPS**  
**PO Box 1342**  
**Jefferson City, MO 65102**  
Phone: 573/635-9446  
Fax: 573/635-7823  
Email:  
msps@missourisurveyor.org

Name: \_\_\_\_\_

Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Office Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

PLS No: \_\_\_\_\_

Credit Card Payment: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

Card Number: \_\_\_\_\_

Street Address: \_\_\_\_\_

Total Amount: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Registration Deadline:  
April 25, 2010

Make checks payable to MSPS — Advanced registration is necessary

## About the Speakers

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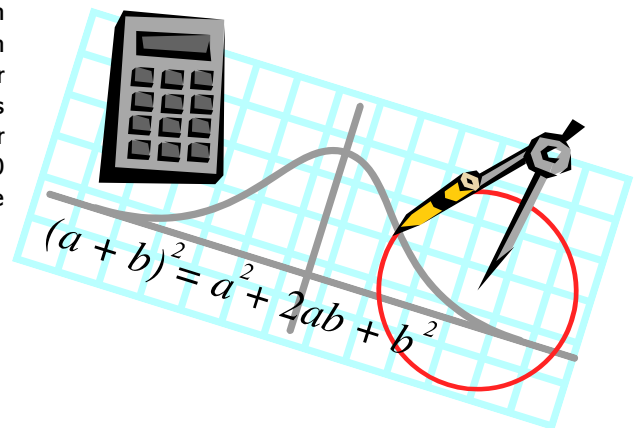
**GARY BOCKMAN:** Gary obtained his early construction surveying experience working in Missouri Highway Department District 8 the summer after graduating from Winona High School. While earning an engineering degree at the University of Missouri – Rolla, he received his initial land surveying education from Norman Brown. In 1989, he received his Land Surveyor's License certificate at a MARLS meeting. He serves as both the chief engineer and chief land surveyor for Bockman Engineering Services, LLC in Springfield, Missouri, with surveying experience involving boundary, topographic and photogrammetric control surveys as well as construction staking. He served as a per course faculty member teaching Legal Aspects of Boundary Surveys and Surveying. He is a member of several professional societies including: Missouri Association of Professional Land Surveyors – formerly a member of the board of directors; Ozark Chapter, Missouri Society of Professional Surveyors; National Society of Professional Engineers; Ozark Chapter, Missouri Society of Professional Engineers; Professional Engineers in Private Practice; and American Society of Civil Engineers. He serves on the Missouri Board for Architects, Professional Engineers, Land Surveyors and Landscape Architects committee to review the state-specific portion of the principles and practices examination for Professional Land Surveyors.

**MIKE FREEMAN:** Mr. Freeman holds degrees in both Business Administration and Accounting from Drury University. He has also obtained numerous surveying courses credits from University of Missouri, Columbia and Missouri University of Science and Technology (former UMR) as well as both soils and surveying courses from Missouri State University (formerly SMSU). Following graduation from college he enlisted in the U.S. Navy and was affiliated with both the Navy and Navy Reserve until retirement in 2007. Upon the completion of active military duty Michael worked as a loan officer at Bank of Hermitage from 1975 through 1979 when he joined the family Title/Abstract business which he still owns and operates. While learning the title/abstract trade Mr. Freeman developed an interest in surveying and actively pursued that career path to registration in 1987. In 1988 he was elected Hickory County Surveyor, a post he held until retirement from office at the end of 2008. In 2007 Michael was appointed to the Survey Division of the State Board for Architects, Professional Engineers, Professional Land Surveyors and Landscape Architects. In 2010 he was selected as Chairman of the Survey Division.

**ROBERT ROSS:** Robert is the Chief of the Cadastral Section at the State Land Surveyor's Office in Rolla, Missouri. He attended Missouri State University (formerly SMSU) in Springfield, Missouri, and received a Bachelor of Science degree in Cartographic Sciences, with an emphasis in Land Surveying. As Section Chief he oversees program staff, performs survey investigations and dependent resurveys, administers boundary project contracts and the Private and County Surveyor Cooperative Remonumentation programs.

**LARRY PHIPPS:** Larry is a North Carolina professional surveyor with more than two decades of fieldwork and business management experience. A dynamic trainer with expertise in C & G Software, traverse adjustments, map development and many other topics. Larry has been President of Land Surveyors Workshops since 2003. His seminars are consistently given excellent student evaluations. Since 1989 he is also the owner operator of Phipps Surveying. He manages field and office operations of a successful 20 year old land surveying practice. Larry holds B.S. degrees in both Forestry and Wildlife Biology from North Carolina State University.

**CONTINUED EDUCATION CREDITS:** This course has been approved for 15 PDUs or 15 hours of continuing education (7.5 each day) by the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Landscape Architects.



**MSPS**  
PO Box 1342  
Jefferson City, MO 65102