

SYNOPSIS OF EDUCATIONAL SESSIONS AT THE LSAW 2010 ANNUAL CONFERENCE

Survey Standards and Specifications - WA PLS Refresher and Test Preparation

Brian S. Blevins, PLS, is a Principal Surveyor, Survey Business Development Manager at INCA Engineers, Inc., in Bellevue, Washington. He is an internationally recognized surveyor & regularly presents workshops on a wide range of topics from Standards and Specifications to LiDAR to Survey History. Brian has presented at the LSAW, UCLS, MARLS, WFPS, ACSM, LCI, PLSO and APWA Conferences and has been featured in POB and Professional Surveyor Magazines. He has been invited to present at this year's FIG conference in Sydney, Australia where he will be speaking alongside Surveyor Generals and Chief Surveyors from around the world, including Don Buhler, Chief Surveyor of the United States.

This workshop will examine the NCEES Standards and Specifications exam knowledge required for the Principles and Practices national and state-specific exams. We will explore U.S. National Map Accuracy Standards, ALTA/ACSM Surveys, and Geodetic Control Networks and Mapping Accuracy Standards. Resources will be Washington State RCW's and WAC's, United States Geological Survey, Federal Geodetic Control Committee, National Society of Professional Surveyors, American Congress on Surveying and Mapping and the National Council for Examining Engineers and Surveyors.

Instructor: **Brian Blevins, P.L.S.**
Inca Engineers, Bellevue, WA

Basic Math Refresher for Surveyors – WA LSIT Test Prep

Julie Csisek, PLS hails from western Oregon, where she earned her bachelors degree in business administration. After spending a decade languishing as a bookkeeper, Julie chose to do a career change and obtained her Associates degree in Civil Engineering Technology-Land Surveying from Renton Technical College in 1994. During the years she worked for the City of Seattle she was active in LSAW and ACSM, and stayed in touch with the teachers and surveying program at RTC. In 2003 she obtained her Washington State Surveyors license, and served as President of the North Puget Sound chapter of LSAW in 2005. She joined the Survey Advisory Committee for the program at Renton Technical College in 2003, and became a teacher there in the Fall quarter of 2006. Her long ties to the school have allowed her to bring a combination of continuity and freshness to the program.

Yes, it's true, you can actually survey without batteries. Learn about the math behind the "buttons". This class is intended as an overview of the basic math employed by surveyors and will include topics such as Functions, Equations, Algebraic Operations, Plane Geometry, Right Angle Trigonometry. Law of Sines and the Law of Cosines.

Instructor: **Julie Csisek, P.L.S.**
Renton Technical College

The New Washington State Common Law of Surveys and Property Boundaries by Jerry Broadus, PLS

Jerry's new book is hot off the presses and on sale by LSAW!!!! No surveyor should be without it. **Books available for purchase at the LSAW Booth next to the conference registration desk.** Jerry will present the book and discuss some of the more interesting cases and the thought that went into the book.

Although the book covers more material than can be described in a single lecture, some topics lend themselves to a close examination of specific case examples. These include the Washington court's view of the use and interpretation of the federal rules, the need to link the description with ground evidence, the effect of recording on seniority, the understanding of real estate contracts, the control of intent over the reliance on surveying "rules," the importance of tax descriptions, issues surveyors need to understand concerning practical boundary location doctrines, and understanding trespass, easements, road establishments, and water boundaries. Jerry learned a lot of valuable information researching this book for LSAW, and will try to cover as many of the high points as possible. **Jerry will be available following his presentation to sign your book.** He'll let you know where and it might involve refreshments.

Instructor: **Jerry R. Broadus, P.L.S.**
Geometrix, Puyallup, WA

Five Surveyors Of The Gods and Pyramids To Pythagoras: Surveying From Egypt To Greece – 3000 BC To 100 AD and Laying Down The Lines: The Set Out Of The Sydney 2000 Olympic Games Track

John Brock is a private land surveyor since 1973, with a Bachelor of Surveying from University of NSW. Now Director of Brock Surveys at Parramatta (near Sydney) he has presented papers all over world. He is a dedicated contributor to the FIG Institution for the History of Surveying and Measurement, is the first international Life Member of the Surveyors Historical Society (USA), and a Life Member of Rundle Foundation for Egyptian Archaeology.



John Brock has travelled all the way from Australia to entertain us with his always interesting stories about famous surveys and surveyors including this trio of surveying history.

Five Surveyors of the Gods: Have you heard other surveyors say that no one ever knew who the Surveyors of Ancient Egypt were? Well I can assure you that this is totally incorrect because in this presentation you will meet five Scribe Surveyors from the New Kingdom in around 1400 BC of this fascinating ancient civilization by name. You will also meet some of their families witnessed from the funerary art which still exists in their own private tombs in the cemetery of the nobles nearby to the Valleys of the Kings and Queens in which some of their contemporary Pharaohs such as Tutankhamun and Hatsephut, the female "King" were laid to rest.

Pyramids To Pythagoras: Surveying From Egypt To Greece – 3000 BC To 100 AD: Legendary ancient Greek mathematicians Thales and Pythagoras travelled to Egypt in the 5th century before Christ where they learnt the secrets of the Scribe Surveyors who had become renowned all over the known world for their skill in applied mensuration as it had been adapted to relocating boundaries and controlling the construction of such marvels as the only surviving Wonder of the Ancient World – The Great Pyramids ! It was indeed the Father of Modern History, Herodotus, and just over 400 years later one of the later Greek historians, Strabo, who chronicled how these two ancient philosophers had adapted the practical surveying of the ancient Egyptians to create geometry, literally translated as the measurement of the Earth. Come and find out about the many characters during this period that were responsible for the various formulae and theorems learnt by we modern surveyors to provide us with the art and craft of measuring and calculating anywhere we choose to be on the surface of our planet and beyond.

Laying Down The Lines: Setting Out The 400 Metre Track For The Sydney 2000 Olympic Games: During the twentieth century there were only two surveyors who set out and certified Olympic tracks in the Southern Hemisphere – Archibald Hugh Campbell and me, John Francis Brock, both in Australia - Melbourne in 1956 and Sydney for the year 2000. An introductory DVD will entertain the audience with a satirical look at the way the Olympic track was set out in an edited version of one of the episodes of the series “The Games” with John Clark and Brian Daw which will have you in stitches. Following this comedic interpretation of how the contractor bungled the lengths for the athletics arena I will then explain how it was actually laid down to a very high standard of accuracy illustrated by eye witness images of the stadium and running surface as it was being constructed.

Instructor: **John Brock, P.L.S.**
Director of Surveys, Brock Surveys

PS – Don't miss Johns' very entertaining presentation of film clips showing how surveyors have been portrayed in over 75 films, on TV and in advertisements – Thursday following the Exhibitors Reception.

Where's My Money? Collecting From Deadbeat Clients

Cash flow is critical to the survival of any business, and has become increasingly important for firms in the real estate and construction industries. It is vital for businesses to develop systems that promote payment for work performed. With this presentation, learn how to structure your contracts, processes and communications to maximize collected revenues for your business. Learn how to get paid.

Instructor: **Stuart Carson, Attorney**

Instructor: **Stacy Goodman, Attorney**
Carson Noel, Issaquah, WA

PLSS 21st Century – Parts 1 & 2

A full day course that evaluates the intent of the PLSS and the issues we must now deal with to try to make it work. Reviews all major aspects of PLSS work including unwritten rights issues.

Dennis Mouland is the Bureau of Land Management's Cadastral Training Coordinator, managing their cadastral survey educational program at the National Training Center in Phoenix,



AZ. He also teaches outreach classes on survey law through the Department of Civil and Architectural Engineering at the University of Wyoming. He is a registered professional surveyor in Arizona, New Mexico, and Colorado. He has a BA degree in Organizational Management, & has been surveying since 1972. His experience is evenly split between the private sector, including his own surveying firm, and federal government employment.

In addition to having over 300 technical articles published in the U.S. and Canada, he was a contributing author to the textbook "The Surveying Handbook", and authored "Ethics for the Professional Surveyor" in 1996, now in its third printing.

Instructor: **Dennis Mouland, BLM**

**Vendor Showcase
Lynx Mobile Mapping**

**Vendor Showcase by PacificCAD
Solutions for Surveyors – Civil 3D**

**Washington Board of Professional
Registration Activities Update**

Various staff members and appointed members of the Washington State Board of Registration for Engineers and Land Surveyors will update our members on recent board activities, rules, concerns, etc....

Panelist: **George Twiss, P.L.S.**
Panelist: **Robert Fuller**
Panelist: **Mel Garland, P.L.S.**
Panelist: **Scott Valentine, P.L.S.**

**The Public Land Survey System - WA PLS
Refresher and Test Preparation**

Rich Lang, PLS is a licensed surveyor in Washington, Oregon and Alaska and survey instructor at Bates Technical College.

This seminar will touch on the basics of the United States Public Land Survey System. It will discuss: how to identify PLSS lines, identify the various PLSS corners and aliquot parts, explain how to subdivide a regular and irregular section, determine the parenthetical distances to subdivide a section; State the types of evidence that are acceptable to restore an obliterated corner; and the proper restoration procedure to restore a lost PLSS corner.

Instructor: **Rich Lang, P.L.S.**

Survey Math – Parts 1 & 2 – WA LSIT Test Prep



Jim Coan, PLS is licensed surveyor in Washington and Oregon with over 40 years of experience. For 23 years he served as the lead instructor for the Land Surveying program at Renton Technical College, Washington States' largest and most prestigious land surveying program. Hundreds' of his graduates, including many now licensed as Professional Land Surveyors, are employed at survey firms

throughout Washington State and USA. Jim has served as a consultant for many private surveying and engineering firms, providing in-house training for their personnel with regard to surveying theory, new instrumentation and industry software.

This class is intended as an overview and will include topics such as Bearing, Bearing; Bearing Distance; and Distance, Distance Intersections; curves (horizontal and vertical); Coordinate Geometry; Rotation and Translation; and passing curves through a point (horizontal and Vertical)

Instructor: **James Coan, P.L.S**
PLS, Inc., Issaquah, WA

Surveyors: Unsung Heroes or Out of Touch?

We're not entirely sure what **Curt Sumner** has on his mind but you know it will be interesting.

Instructor: **Curt Sumner**
Executive Director ACSM

Using the WA DNR Online Records Research Website

The seminar will demonstrate how to conduct research on the Washington State DNR web site. The Public Land Survey Office's online database was originally created for internal use for Office staff to quickly and efficiently search and retrieve boundary information. This database has been made public through a subscription service. Since it was originally created for internal use only, external users require some training to ensure their searches are productive and return all of the available results.

Instructor: **Mick Sprouffske, P.L.S.**
WA DNR Public Land Survey Office

Instructor: **Ted Smith, P.L.S.**
WA DNR Public Land Survey Office

VRS GPS Roundtable – Panel Discussion

This panel brings to together several VRS GPS gurus and everyday users talking about their experiences and some of their problems, tips and tricks..

Moderator: **Gavin Schrock, PLS**
Seattle Public Utilities

Panelist: **Jim Mclefresh, P.L.S.**
Spokane County

Panelist: **Doug Casement, P.L.S.**
Casement Land Surveys

Panelist: **Erick Gakstatter, P.L.S.**

Panelist: **Larry Signani, P.L.S.**
WH Pacific

GNSS Data: Which GPS/GNSS data is right for my project?

Bobby Wildrick, PLS earned his Bachelor of Science in Survey Engineering from New Mexico State University (NMSU) in 1995. He has been surveying in Washington State since 1996. Bobby

teaches Basic Surveying as a part time instructor at Renton Technical College. He is the Technology Lead for CH2M HILL, inc. where he applies his extensive knowledge and skills with GPS/GNSS equipment and techniques on a global level. He also regularly conducts training courses and provides technical support in all aspects of Geospatial technologies.

Imagine creating a basemap with Global Positioning/Global Navigation Satellite System (GPS/GNSS) collected data, only to find that the coordinates do not relate properly to the actual features!

Because each type of GPS/GNSS instrument derives solutions at a different positional accuracy level, data that is combined from them will create features that do not scale correctly. Therefore, it is crucial that all users of GPS/GNSS data are knowledgeable about this concept.

This presentation will give a clear explanation of the differences between GPS/GNSS instruments and how they can be used more effectively.

Instructor: **Bobby Wildrick, P.L.S.**
CH2M Hill

The History of Surveying: Einstein and Leonardo by Brian Blevins, PLS

This colloquium will highlight the contributions to surveying and mapping made by two of the greatest icons in human history, Albert Einstein and Leonardo da Vinci.

The paper 'Albert Einstein, The Godfather of Modern Land Surveying Technology' will explore Einstein's 1905 paper on quantization of the radiation field (photoelectric-effect), his famous 1915 presentation of the theory of general relativity and his 1917 theory of radiation and the consequences on the development of modern land surveying tools and technologies, including the EDM, Laser Scanners and GPS. We will see that our art of land surveying & the tools we rely on today would not be possible without his famous theories discoveries.

The presentation, 'Leonardo da Vinci, Military Engineer, Land Surveyor and Cartographer' will detail how Leonardo advertised himself first & foremost as a military engineer & how he substantiated his claims through his surveying and cartographic art. Join us as we explore Leonardo's vast surveying & mapping career that includes inventions of surveying tools & techniques & the creation of many beautiful & elaborate maps. We will see that Leonardo, like so many great people before & since, secured his livelihood and freedom through the art of surveying and mapping.

Instructor: **Brian Blevins, P.L.S.**
Inca Engineers, Inc

Vendor Showcase ESRI – Arc GIS Desktop Parcel Editor

Vendor Showcase by Trifide Group Accurate Surveying from your PC – A New Standard in 3D Mobile Mapping

See the major technology advancement in street level 3D Mobile Mapping. With 360° georeferenced 3D high resolution video images, integrated with your existing CAD/GIS software, take measurements of any point with the same absolute accuracy

(x,y,and z) as traditional survey techniques. Significant for Surveying, Engineering, Asset Management, Urban Planning, Disaster Recovery, Public Claims, Security, etc.

Trifide Group specializes in Land and Marine Geomatics, providing leading edge technology services internationally, including highly accurate street level Mobile Mapping, Photogrammetry, Satellite Imaging, and more.

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The Law Of Easements by Earl Morris



Earl Morris, Esq., PLS received his B.S. in Urban Studies from Georgia State University and his J.D. from Seattle University School of Law. He is a Partner at Land Law Washington, PLLC -with offices in Seattle and Everett- his practice focuses on Real Property and Land Use. He is a State of Washington Professional Land Surveyor. Mr. Morris has been a land surveyor for 25 years and is an active member of the Land Surveyor's Association of Washington.

This is a half-day presentation on the legal principles relating to easements. This advanced session is designed to discuss easement law through the examination of illustrative Washington court cases. The session will begin with cases illustrating the types of easements, the different ways easements are created & the legal requirements to create easements, the various ways that easements may be terminated, & the rules courts apply in interpreting easement documents. Discussions will include Easements by Prescription, easements by Implication & easements of Necessity & the Washington Declaratory Judgment Act & its use to litigate the meaning & intent of easements.

Instructor: **Earl Morris, P.L.S.**
Land Survey Law

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**State Plane Coordinates and Geodesy - WA
PLS Refresher & Test Preparation**

Martin Paquette, PLS is licensed and has survey experience in California and Washington. Educated at California State University, Fresno in Surveying and Photogrammetry in 1980 and completing Masters studies in 2007. He has licensed survey experience in multi-disciplinary surveying and photogrammetry. He has taught full-time at Renton Technical College in Land Surveying since 1991 with some specialization in the areas of GPS and adjustments. He is a past president of the North Puget Sound Chapter of LSAW and has been active in the organization since 1991. He has taught seminars in GPS, network adjustments, and instrument adjustments.

This session will cover State Plane Coordinates, Geoid, Ellipsoid and orthometric heights, Control Network Calculations, analysis and adjustment. These subject account for 7% of the WA PLS exam.

Instructor: **Martin Paquette, P.L.S.**
Renton Technical College

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**Public Land Survey System, Dependent
Resurvey Case Studies and the New Manual:
BLM Case Studies**

Mary Hartel is the Chief Cadastral Surveyor for Oregon and Washington and **John Farnsworth** is a Cadastral Survey Senior

Technical Expert. With the combined 60+ years of specialized Cadastral Survey experience, they provide direction and technical guidance for the title, land status, and boundary management of all federal interest lands for the Bureau of Land Management, Oregon State Office.

Land Surveyors often write the BLM Cadastral Survey program requesting an opinion on the method(s) which should be used to restore lost corners of the Public Land Survey System or how to break down a section in accordance with the official record. This session will use examples from these inquiries as case studies and highlight areas of different treatment between the 1973 and 2009 versions of the Manual of Surveying Instructions.

Instructor: **Mary Hartel, BLM**

Instructor: **John Farnsworth, BLM**

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**Washington State Monument Preservation
Laws and Efforts and Legibility Issues
Associated with Records of Survey**

Mick Sprouffske, PLS is the manager of the Public Land Survey Office at the Washington Department of Natural Resources. The office runs the program that permits monument removal and is a statewide repository of survey records and historical boundary information. Mr. Sprouffske also works directly with the Survey Advisory Board and assists in updating the Washington Administrative Code. He is the President Elect of the Land Surveyors Association of Washington and has served two terms as Chapter President of the SW Chapter. Additionally Mr. Sprouffske is a past Vice President of the Washington Council of County Surveyors. He is a frequent contributor to the Evergreen State Surveyor publication.

Laurie Owens is an Imaging Specialist in the Public Land Survey Office of the Washington State Department of Natural Resources. She works in Olympia scanning/imaging both current and historic land survey records. She also provides training and consulting services to auditor's offices around the state on proper scanning techniques.

We are in an era in which the "final product" available to the public and the professional surveying community will usually be a digital image. This situation causes some unique issues pertaining to legibility of data. The presentation, titled "Survey Maps for the Ages" addresses the issue of how drafting decisions can affect legibility and uniform contrast when a map is translated into a digital image. Laurie Owen, Digital Imaging Specialist working for the Public Land Survey Office, presents graphic illustrations of what can happen when there is not a good fit between the drafted document and scanning equipment. Based on her experience, she makes some specific suggestions for those who influence drafting decisions.

Instructor: **Mick Sprouffske, PLS**
WA DNR Public Land Survey Office

Instructor: **Laurie Owens**
WA DNR Public Land Survey Office

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**Survey Business Panel: The Worst Is Almost
Over, That's My Opinion and I'm Sticking With It and
Crystal Ball Time – What the Future Holds**

This years' panel brings together several long-time and respected survey business owners and managers to share their perspectives and speculations regarding: 1) The Worst Is Almost Over – Hear about the impact of the recent and continuing economy and the steps they've taken to mitigate the misery; 2.) That's My Opinion and I'm Sticking With It – We all have opinions about the survey industry and where it's going. In this interactive session the panel will throw several common perceptions about our industry up for discussion. Using cards, you the audience get to agree or disagree with their views; 3.) Crystal Ball Time – What The Future Holds – Hear about industry trends, lessons learned and how good leadership handles crisis.

Panelist: **Tom Service, P.L.S.**
David Evans & Associates, Bellevue, WA

Panelist: **Greg Juneau, P.L.S.**
Triad Associates, Kirkland, WA

Panelist: **Mel Garland, P.L.S.**
Apex Engineering, Tacoma, WA

Panelist: **Ben Petersen, P.L.S.**
PLS, Inc., Issaquah, WA

Survey Safety



R. William Glassey, P.L.S. is a Project Manager for PLS, Inc., in Issaquah, Washington with over 35 years of experience. He is a licensed surveyor in Colorado & Washington, past President of the North Puget Sound Chapter of LSAW, and past-President of the Land Surveyors' Association of Washington (LSAW). He attended the Georgia Institute of Technology and the University of Colorado. He currently serves as the Governor from Washington to the NSPS Board of Governors.

Survey safety is, admittedly not the most glamorous of topics, though arguably the most important! We will cover all major aspects of survey safety in a fast-paced and lighthearted manner, and give multiple insights into common mistakes and misconceptions. The intent is to entertain, as well as enlighten. This presentation might literally save your life!

Instructor: **Bill Glassey, P.L.S.**
PLS, Inc., Issaquah, WA

BIM and Integrated Delivery: Tools and Processes for 21st Century Practice



Dace Campbell, AIA, LEED AP, is an Integrated Delivery Specialist with BNBuilders, where he manages the implementation of new processes (Integrated Project Delivery) and associated technologies (Building Information Modeling) to support collaborative, efficient design and construction. Dace is a licensed architect

with over 20 years experience in design, construction, and computer visualization. He has won two AIA BIM awards, and his work and writing about BIM and Integrated Delivery have been published internationally. He is an active member of local and national BIM communities, holding positions on the Boards of

Direction for the Lean Construction Institute Cascadia chapter, the Seattle BIM Forum, and the BuildingSMARTalliance.

This presentation will introduce and discuss Building Information Modeling tools & Integrated Project Delivery processes changing the construction industry. We will provide an overview of various uses, examples, & applications of BIM tools in construction, from the viewpoint of a GC/CM heavily involved in collaborative, at-risk, negotiated, & design build work. We will share lessons learned with BIM in construction, & introduce recommended "rules of engagement" for project team members wishing to engage in collaboration with BIM tools, leading towards true integrated delivery processes. Finally, we will discuss what's working, what's not, & what's next in the 21st century industry.

Instructor: **Dace Campbell, AIA**
BN Builders

Cinematic Survey Spectacular: From Moses To MGM: Silver Screen Surveyor Heroes

How many Hollywood style movies can you name which have anything at all about surveying in them? Well this super special will show you over 75 movies, 9 television shows and 7 TV ads which do, and there's not a documentary amongst them.

So come and marvel at the number of such cinematic efforts that do feature surveyors and surveying; feel proud and astonished at how many there actually are and who the characters and movies really are which showcase your own profession in a most unusual fashion but leave the children with the babysitter because some of these flicks are most strictly "adults only" !?!

Presented by: **John Brock**

Thinking Beyond Technology by Dennis Moulard

This is a half day course on the negative impacts technology has had on society and on the survey profession in particular. It forces us to examine how we do things in the field and office versus how we should be doing things.

Instructor: **Dennis Moulard, BLM**

Vendor Showcase Kuker Ranken

Vendor Showcase Carlson Software

The Surveyor in Court – Parts 1 and 2



Steve Parrish, PLS began surveying with the U.S. Forest Service in 1963, acquired his Utah PLS in 1973 and worked in a variety of land surveying positions with the USFS through 1984. In early 1985 he began working for the U.S. Bureau of Land Management and eventually served as the BLM Nevada Cadastral Chief. Steve left the government in late 1995 to pursue private surveying experience. He is licensed in 7 western states, a Nevada water rights surveyor and contract county surveyor for Inyo, Modoc and Mono Counties in California. Steve is one of the 34 contributors to "The Surveying Handbook"

edited by Brinker and Minnick, has presented workshops in 27 States and Canada, and was an instructor for the BLM/FS Advanced Cadastral Survey Courses for 12 years.

Steve shares his 45+ years of land surveying knowledge and experience through participation in state association land surveying workshops, consulting, and expert witness testimony. He joined Tri State Surveying in Sparks, Nevada in 1999, is an adjunct professor in the 4-year survey program for Great Basin College (Elko, NV), acquired his Certified Federal Surveyor (CFedS) certificate in 2007 and will receive his Bachelor of Applied Science degree in May 2009. He is active in state and national surveying organizations and enjoys travel with his family, photography and fishing.

This 7-hour course will include actual survey situations to demonstrate real life conditions. Examples are derived from actual court experience, depositions, and surveys that were headed to court but ultimately settled without court intervention. The latter is the more desirable solution to a survey problem. This course will cover objective & introduction, evidences - written, testimonial, physical, corner pedigree, "brown" on principles, twelve rules for land surveyors, material discrepancy - cover your basis, intent vs. record vs. monument, retracement & evidence - 8 case studies, deerfield subdivision, resurvey differences - precision v. procedure, robinson bar, poverty flat, Leonard Creek, 4th of July Creek, legal descriptions, the dangers of surveying, to the witness who is about to be deposed (J. Briscoe), preparing to testify, finding the law, boundaries & landmarks (A.C. Mulford), quotes worth quoting and document your footsteps.

Instructor: **Steve Parrish, PLS**

Ethics and Business Practice – WA PLS Refresher & Test Preparation

Jon P. Warren, PLS is a Senior Associate and Puget Sound Region Survey Manager for David Evans and Associates (DEA) with more than 36 years in the surveying profession, 26 years as a Licensed Professional Surveyor, with extensive experience in all elements of surveying and mapping for roads, bridges, airports, and other public works and private projects. His experience includes 24 years in the Private Sector, and 12 years as the Snohomish County Surveyor. This Hybrid blend of private and public sector has provided Jon a well balanced perspective of the different, yet similar sectors of practice.

Currently, Jon is serving as Chair of the National Society of Professional Surveyors (NSPS) Membership Development Committee, and the LSAW Representative to the Architects and Engineers Legislative Council (AELC). He has served through all offices of the chapter and state of LSAW, and received Awards of Merit and the LSAW Surveyor of the Year (1991), as well as a National Surveying Excellence Award and several NSPS Presidential Recognition Awards. He has been active in the Land Surveyors Association of Washington (LSAW) and the Washington State Section of the American Congress of Surveying and Mapping (WSS/ACSM) for the past 26 years, and the NSPS for the past 16 years.

This is presented as a refresher course for the Ethics and Business Practice as a preparation for the PLS exam and as a preparation for true Business Practice in the "real world cost of doing business. The Ethics portion will provide an in depth review of the origin and practice of Ethics as it is viewed by the Board of

Registration for Professional Engineers and Land Surveyors, and for your own practical use in your everyday business.

The Business Practice portion is targeted to provide the new practitioner, or those contemplating beginning their business as a Professional Surveyor, with the background necessary to set up and run a professional and profitable business. Providing a look at how to be Professional and Profitable, the Cost of Business (overhead costs, etc...), Proposals not Bids, Examples of Good Practice, and your Professional Image.

Instructor: **Jon Warren, PLS**
David Evans and Associates

State Plane Coordinates – WA LSIT Test Prep by Martin Paquette, PLS

The basics of Geodesy, datums and State Plane Coordinates—with illustrations, descriptions and light mathematics. Starting from ancient history and basic vocabulary and moving through spherical, ellipsoidal and geoidal considerations of the Earth's shape, definitions of horizontal datums, vertical datums and geoid separations. The course also discusses classical considerations such as EDM slope reduction. State Plane Coordinates and UTM are explained, including transformations, scale factors, unit conversions and good versus bad applications of SPCS. This course puts more emphasis on history and less on history and less on datums than the PLS course.

Instructor: **Martin Paquette, P.L.S.**
Renton Technical College

Get On My Case! – A DNR Casebook Study

Washington State Department of Natural Resources is steward of about 5.6 million acres of state-owned lands. These lands include forest, aquatic, agricultural, range and urban lands that provide for long-term economic, ecological and multiple-use benefits, and natural areas that protect the state's ecological diversity.

This session features a discussion and exploration of DNR's more interesting and challenging not so standard GLO retracement surveys from a compilation assembled by Frank Fischer, PLS. This is an interactive seminar and the audience is requested to participate.

Larry Pederson, PLS is the Division Surveyor in the Chehalis office of the Washington Department of Natural Resources. Mr. Pederson's interest in navigation at an early age propelled him into a surveying career. Mr. Pederson's has extensive experience retracing GLO surveys. He has encountered many nonconforming and challenging situations.

Gary Herrick, PLS is the Northwest Region Surveyor for the Washington Department of Natural Resources. Mr. Herrick has an extensive career with the Public Land Survey System in survey research and GLO retracement. Mr. Herrick's 32 years with the Department have made him an adept in GLO retracement.

Gwen Gervelis, PLS is the State Surveyor and Survey Manager for the Washington Department of Natural Resources. She oversees the management of the Public Land Survey Office, State Land Survey Unit, and Geodetic Survey and administrates the Survey Advisory Board. She has been a presenter at LSAW Conferences and various professional outreach seminars.

Instructor: **Larry Pederson, P.L.S**

WA DNR Public Land Survey Office.

Instructor: **Gary Herrick, P.L.S.**
WA DNR Public Land Survey Office.

Instructor: **Gwen Gervelis, P.L.S.**
WA DNR Public Land Survey Office.

The History Of Surveying by Brian Blevins, PLS

The history of surveying is as rich and as deeply woven into the fabric of Western Civilization as any other profession. The oldest found evidence of writing, for example, the Palermo Stone, is found on an ancient Egyptian boundary stone. It can be speculated that surveying does indeed monument the very beginning of civilization itself.

Every great kingdom, every great empire, and every great monument ever created has profited from and demanded the development of the art of surveying and mapping. From the early Sumerian and Akkadian cultures to the Egyptians, Greeks and Romans and into the growth and development of the European and American cultures, surveying is an integral part of Western Civilization.

Following in the footsteps is a most common saying amongst surveyors. This presentation will explore the beginnings of our legendary art and the perpetuation and development of the surveying and mapping knowledge and skills that have passed down through the millennia. The great Kings, Warriors, Poets and Philosophers that have had a deep and lasting impact on the art of surveying and mapping will be highlighted and explored with particular attention being given to the transfer of knowledge, to the following of footsteps.

Instructor: **Brian Blevins, P.L.S.**
Inca Engineers, Bellevue, WA

A History of Washington State Record of Surveys

This 3-part session will cover: 1.) Survey practices before recording. How the Survey Recording Act came to be. How it was originally envisioned and the changes that occurred before it became law. 2.) WAC 332-120 – Minimum standards for land boundary surveys, etc..., AGO No. 1 – 1989 and subsequent amendments to the Survey Recording Act; 3.) Record of Surveys today and continuing issues associated with recording.

Instructor: **Leroy Middleton, P.L.S.**
Surveying Consultant

Instructor: **Ben Petersen, P.L.S.**
Director of Surveys, PLS, Inc. Issaquah, WA

Boundary Line Agreements vs Boundary Line Adjustments by Earl Morriss, PLS, Esq.

This is a half-day presentation on the legal principles relating to easements. This advanced session is designed to discuss easement law through the examination of illustrative Washington court cases. The session will begin with cases illustrating the types of easements, the different ways easements are created and the legal requirements to create easements, the various ways that easements may be terminated, and the rules courts apply in

interpreting easement documents. Easements by Prescription, easements by Implication and easements of Necessity will all be discussed. There will also be a discussion of the Washington Declaratory Judgment Act and its use to litigate the meaning and intent of easements.

Instructor: **Earl Morris, P.L.S.**
Land Survey Law LLC

3-D Laser Scanning



Sean Douthett, PLS is Survey Discipline Leader of DEA's Tacoma office and has been with the firm for over 17 years. He is a registered professional land surveyor in Washington. DEA has been providing laser scanning services for nearly 10 years and has completed hundreds of projects using a variety of lasers systems. Sean is a leader in the field of laser scanning and has developed processes to generate

client specific standards for laser scanning. He developed DEA's laser scanning techniques, procedures, and quality controls for our field and office workflows.

This presentation will be split into two halves. The first half of the presentation will demonstrate how laser scanning has evolved from a unique measurement tool for special mapping projects to an everyday measurement system. Attendees will see how the innovation of laser scanning systems are expanding beyond the tripod and moving to a variety of mobile scanning systems mounted on vehicles and boats. Industry applications will be demonstrated and discussed, covering how and when to use the various laser scanning systems. The presentation will cover what could be next for laser scanning and how these innovations may impact the land surveying profession. The second half of the presentation will include laser fundamentals and explore in-depth specific projects that DEA has recently completed.

Instructor: **Sean Douthett, P.L.S.**
David Evans and Associates, Inc.

Indian Reservation Surveys

Leroy F. Middleton, PLS, retired from Reid Middleton, Inc., is a licensed surveyor in Washington, Oregon, Idaho and Alaska. He received his BS in Civil Engineering & Associates from the University of Washington in 1949. His 46 years of private survey practice have involved him as an expert witness in Federal Court on numerous Indian reservation boundary surveys.

Most surveyors who are engaged in the resurveys of the public land of Oregon and Washington Territories are not as a general rule called upon to provide surveys on reservation lands or to even re-establish reservation boundaries. Surveyors who may be called upon to perform these types of surveys should be thoroughly familiar with the proper procedures to be applied. Unfortunately most of the required procedures are not readily discovered or even covered in the Federal Manual of Surveying Instructions.

This session will cover how the General Land office conducted their original surveys of reservations & how to retrace their steps.

Instructor: **Leroy Middleton, P.L.S.**
Surveying Consultant

LSAW Leadership Boot Camp

Just got elected to an officer position in your chapter? Or think you might want to get involved someday? This session will help outline the basic responsibilities of LSAW officers at the chapter and State level.

What's Parliamentary Procedures? What's Roberts Rule of Order? Learn how the LSAW is structured, how chapter and Board of Trustee meetings are conducted and each officers responsibilities.

Instructor: **Anne Koenen**
Executive Director LSAW

Instructor: **Ben Petersen, PLS**
LSAW Immediate Past-President

An Overview of the New BLM Manual of Survey Instructions by Dennis Moulard

A one-hour session on the highlights of the Manual's changes and new directions.

Overview of the Certified Federal Surveyors Program by Dennis Moulard

A one hour session on the CFedS training, goals of the program, and the impact it is already having on the profession.

Instructor: **Dennis Moulard, BLM**

Vendor Showcase The PPI Group

The Art of Writing Legal Descriptions

Eileen Forrester, PLS began surveying in 1979 in Northern California. She graduated from California State University Fresno with a BS degree in Surveying and Photogrammetry in 1988. She has been a licensed surveyor since 1990 and is licensed in the states of Washington, California, Oregon and Idaho. She specializes in boundaries, boundary disputes/conflicts, research, right-of-ways, and writing clear concise legal descriptions. She has taught surveying at University of California Irvine and Fullerton College. She has also taught a class on writing legal descriptions at Renton Technical College and has given talks on the subject at state conferences. She is the co-owner of True North Land Surveying in Seattle.

Writing legal descriptions should be about getting your intent across and not just about writing out the bearings and distances. Descriptions should be clear and concise and not confusing and ambiguous. The seminar will focus on the structure and components of the description. There will be several examples and a writing exercise.

Instructor: **Eileen Forrester, P.L.S.**
True North Land Surveying

Random Error Theory - WA LSIT Test Prep

This class is intended as an overview and will cover such topics as Systematic and Random errors, Error Propagation, Precision and Accuracy, Basic Statistics, Standard Deviation, and weighted measurements.

Instructor: **James Coan, P.L.S.**
PLS, Inc., Issaquah, WA

Washington State Riparian And Littoral Boundary Laws Practice – WA PLS Refresher & Test Preparation

Understanding the various laws and regulations that govern surveying of the tidelands and shorelands in the state of Washington is a somewhat complex subject. This session will cover the basics as well as actual cases and situations that should help guide the surveyor in his every day practice in dealing with water boundaries.

Instructor: **Leroy Middleton, P.L.S.**
Surveying Consultant

Double Monumentation – Physical and Inferred by Steve Parrish, PLS

My monument is better than yours.” We seldom actually verbalize this thought, but it is frequently inferred in varying ways. The task of determining which (if any) of two or more existing monuments will be accepted as the single corner point is a major task associated with most urban boundary surveys.

Project costs are seldom estimated on the basis of the depth of research required to verify the pedigree of existing monuments and records. The act of calling for a corner position, a mere 2 to 4 hundredths of a foot from an existing monument, verges on insanity. In actuality it is near impossible to duplicate even our own angular and distance measurements on a consistent basis. Principles, rather than math, should govern our decisions. This workshop will highlight a variety of “real” double (or more) monument situations, solicit audience comment, and then provide the actual decision – right or wrong.

Instructor: **Steve Parrish, PLS**

How To use the HP 33 and HP 35 Caluclators – WA LSIT Test Preparation

Jon Purnell is a licensed Professional Land Surveyor in Washington State and has been the instructor of the Land Surveying and GIS programs at Peninsula College since 1997. Previously, he spent 15 years retracing General Land Office surveys on Washington's Olympic Peninsula for the state's Department of Natural Resources. He is a contributing writer for Professional Surveyor Magazine.

This session show you How to prepare for the test, strategies for taking the test and practical instructions on using one of the approved calculators, the HP33

Instructor: **Jon Purnell, PLS**
