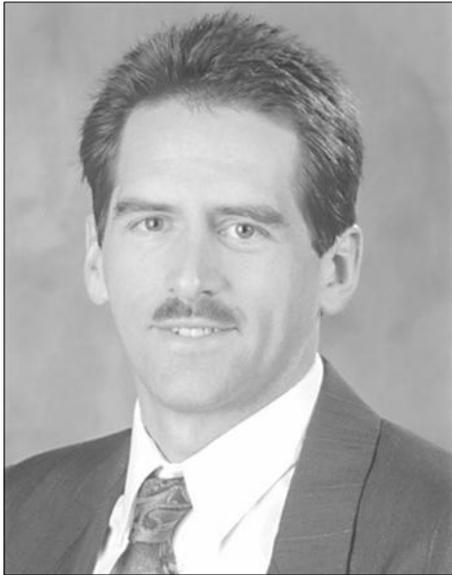


# Cleveland Surveying News

JANUARY 2005



## 2005 Surveyor of the Year

**Mark A. Yeager, P.S.** is the Director of Surveying at KS Associates, Inc. in Elyria, Ohio. He has been employed by KS since 1996. Under Yeager's leadership, KS Associates has built one of Northern Ohio's largest and most accomplished survey teams. The group is comprised of six field crews and has on its team six registered Professional Surveyors. Yeager's team provides a variety of services including topographic and boundary surveys, ALTA/ACSM Land Title surveys, roadway corridor/route surveys, GPS surveys and construction staking. With more than 24 years of land surveying experience, he has been involved with many large and interesting surveying projects. These are highlighted by surveys for the Euclid Corridor Transportation Project,

Cleveland Hopkins International Airport expansion, Cleveland Lakefront State Parks, Akron METRO rail corridors, Luis Munoz Marin International Airport (Puerto Rico), Philadelphia International Airport, NASA Glenn Research Center, NASA Goddard Space Flight Center, Bolling Air Force Base, the Pentagon, National Mall and Washington METRO in Washington, D.C.

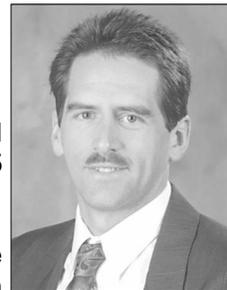
Like many surveyors, he decided on a surveying career to work outdoors. Mark became a registered surveyor in Ohio and Maryland in 1990 after taking exams in both states on back-to-back days. He was initially involved with the PLSO in 1979 through the Muskingum Technical College's Student Chapter. While living in Maryland from 1985 to 1996 he maintained a membership with the PLSO. Since joining the Cleveland Chapter in 1997 he has been an active member and an officer in each of the last five- (5) years. In 2004 he served as the Chapter President and the Finance Chairman for the State Conference. Mark is also a member of ACSM, NSPS, GLIS and a corresponding member of the Maryland Society of Surveyors.

A native Ohioan, he attributes his work ethic to his parents and values they provided while growing up in Carroll County. Mark resides in Medina with Janet, his wife of 20 years and daughter Jessica, who is a senior at Medina High School. In his "spare time" Mark always has some home improvement, woodworking or landscaping project in the works. He has spent a number of seasons coaching youth basketball, enjoys the outdoors (except for winter), and has interests in American History and sports.

Greetings Fellow Surveyors and Associates:

I hope everyone had a memorable holiday season and you weren't too hard pressed by some last minute ALTA/ACSM Survey shoppers. For me it's hard to believe 2005 is here. It seems like only yesterday we were worried about Y2K.

In the news, John Dailey, Past (as he likes to call himself) provided an article on the overview of the Ohio Lands and Survey Systems in the winter issue of the American Surveyor magazine. If you haven't seen the article or do not receive the magazine, check it out at [www.TheAmericanSurveyor.com](http://www.TheAmericanSurveyor.com). I'm a little bias on this (because the editor is a friend of mine), but I do believe the magazine is the best of the surveying related periodicals available.



Also of note, you may have noticed an increase in our membership dues of \$15 in the January "Ohio Surveying News". This was approved at the last State meeting of the year to help the strained budget. The Cleveland Chapter was in originally in opposition to this increase since there wasn't much opportunity for discussion. However, we do trust that the State officers have more knowledge of the "big picture" and we'll continue to support the goals and objectives of the organization.

Conference time is here again. The State conference hosted by the Miami Valley Chapter in Dayton is slated for February 10-12, 2005. For all of you "high rollers" the ACSM Conference will be held in Las Vegas, March 18-23, 2005. The airfare and hotel rates for "Vegas" are about as low as you'll see for this conference. Since the hotels/casinos make their money in "other ways". You can find more information on the web at [www.acsm.net](http://www.acsm.net).

As my final notes for the newsletter as Chapter President, I'd like to thank the all the other officers and members for volunteering their time and efforts over this past year. We had a good year, starting with the State Conference we hosted (only one to make money for the PLSO in recent years). It's been an honor to serve as the Chapter President this year. I'd also like to wish Sean Boland, P.S. the best, as he takes over as the 2005 Chapter President and hope that everyone will lend his or her support.

Sincerely,

**Mark A. Yeager, P.S.**

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## 2005 Executive Committee

### President

Sean A. Boland  
(440) 835-5632  
[Sboland611@aol.com](mailto:Sboland611@aol.com)

### Past President

Mark A. Yeager  
(440) 365-4730 x330  
[yeager@ksassoc.com](mailto:yeager@ksassoc.com)

### Secretary

Neil M. Juhnke  
(216) 348-3857  
[njuhnke@ameritech.net](mailto:njuhnke@ameritech.net)

### Communication

John G. Hoy  
(216) 476-3600  
[hoy7419@cs.com](mailto:hoy7419@cs.com)

### Professional Development

Peter D. Zwick  
(440) 235-2729  
[Zwick@eng.ohiocoxmail.com](mailto:Zwick@eng.ohiocoxmail.com)

### President Elect

Joseph F. O'Donnell, Jr.  
(216) 529-6809  
[Joe.o'donnell@lakewoodoh.net](mailto:Joe.o'donnell@lakewoodoh.net)

### Treasurer

David J. Bruckner  
(216) 664-2462  
[dbruckner@city.cleveland.oh.us](mailto:dbruckner@city.cleveland.oh.us)

### Chapter Delegate

Robert Hoy  
(440) 365-4730 x356  
[Hoyr@ksassoc.com](mailto:Hoyr@ksassoc.com)

### Education

John J. Bischof  
(440) 439-1999  
[bischof@cvelimited.com](mailto:bischof@cvelimited.com)

### Program

Kathleen A. McGervey  
(440) 925-0737  
[kmcgervey@rewarner.com](mailto:kmcgervey@rewarner.com)

**2005 Newsletter Advertising rates:**

**One-sixth page:** 3" h. X 3.6" w. .... \$80.00 yr.  
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 (accepting only two per issue)

11" x 17" both sides \$150.00 each issue  
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**Help Wanted or Position Wanted** up to 1/2 page:  
 \$30.00 per issue

Contact: John G. Hoy, Newsletter Editor  
 216-476-3600  
 hoy7419@cs.com

Individual members can support their newsletter by becoming a Sustaining Member with a donation (minimum \$50.00).

**SUSTAINING MEMBERS**

Mark A. Yeager, P.S., KS Associates  
 Robert G. Hoy, P.S., KS Associates  
 John G. Hoy, P.S., John R. Hoy & Associates, Inc.

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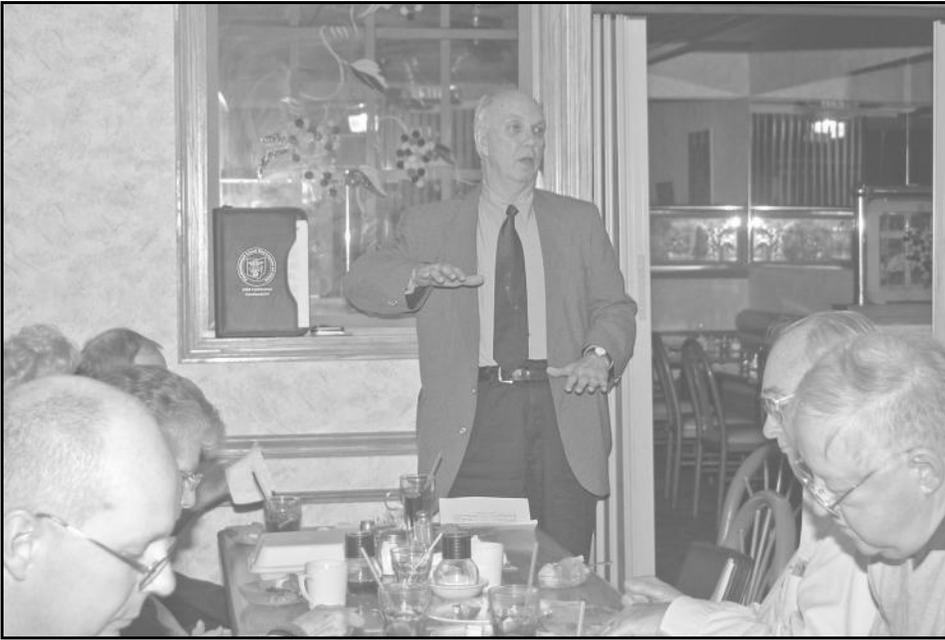
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The November General membership Dinner meeting was held at Frankie's Italian Cuisine in North Olmsted.

Program for the evening was a very informative and interesting presentation on the History and Future of the CRGS control monumentation presented by Jack E. McFadden and Tom Snezek. Thanks to both of them for sharing their expertise on the subject.

The Executive Committee Meeting was held on January 18, 2005.

Officers In Attendance: Mark Yeager, Jack Hoy, John Hoy, Bob Hoy, Joe O'Donnell, Sean Boland, John Bischof and Neil Juhnke.

Officers Absent: Rober Klaiber and Louise Veverka.

Also In Attendance: Pete Zwick, Kathleen McGervey, Dave Bruckner

### Highlights:

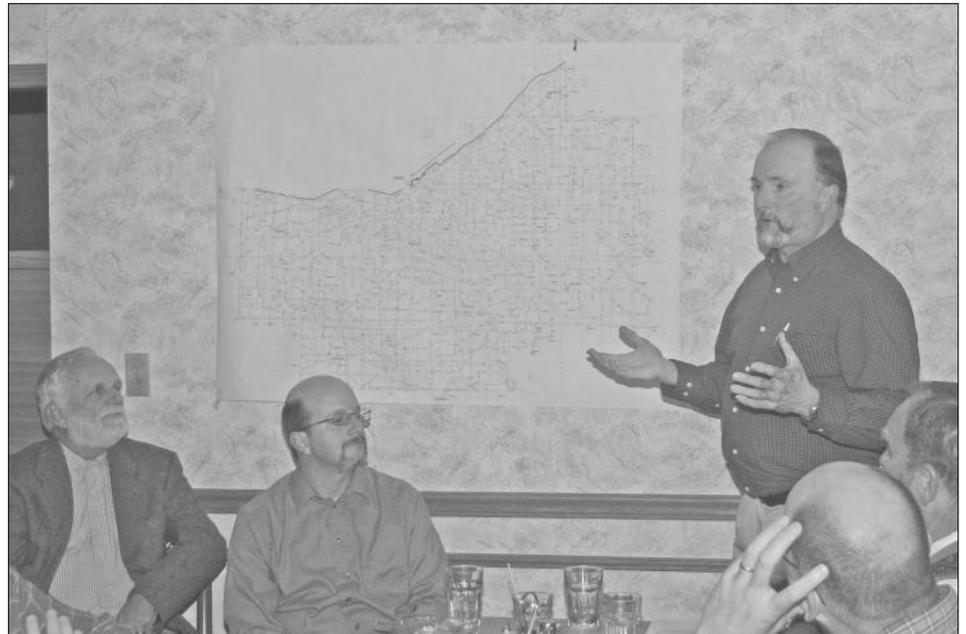
The plats for the Data Bank that are being scanned by Euclid Blueprint are almost complete. They will comprise of 6-7 CDs or 1 DVD. Bill Vondra is providing the indexing.

Sean Boland submitted a Summary Report for the questionnaire that was sent out with the ballots. Discussions ensued on how to better serve the Cleveland Chapter.

We received a drop list from Barb Jones and we will be contacting those people to find out if they still want to be a member of the Cleveland Chapter.

Bob Hoy gave the Chapter Delegate report, see his highlights in this newsletter.

The cutoff date to receive a discount for the PLSO Conference next month has been changed to January 21 2005.



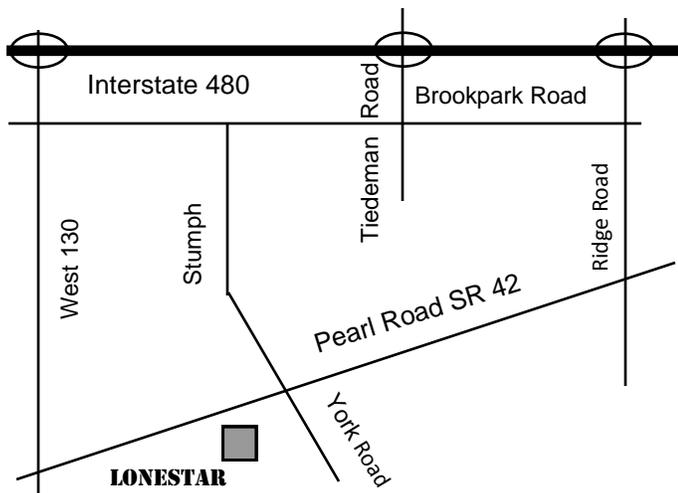
# Cleveland Chapter PLSO

## ANNUAL MEETING “JANUFEST”

Thursday January 27, 2005

### Location

**LONESTAR Steakhouse**  
**6355 Pearl Road**  
**Parma Heights, Ohio**



### Menu

Choice of: **12oz. San Antonio Sirloin, 8 oz. Smoked Prime Rib, 1/2 Rack of BBQ Pork Ribs, Grill Chicken Breasts, Shrimp Fettuccini Alfredo.**

Served with: Dinner salad, choice of Potato, coffee, tea & iced tea and soft drinks and Apple Cobbler for dessert.

**COST: \$25.00**

Includes tax & tip

{ CASH BAR AVAILABLE }

### Reservations:

Call John R. Hoy at (440) 877-1434 by Wednesday January 26, 2005. Please call on time, thank you.

RELAXATION HOUR 6:00 DINNER 7:00

INSTALLATION OF OFFICERS, SURVEYOR OF THE YEAR PRESENTATION

### PROGRAM

**President** Sean A. Boland  
**President-Elect** Joseph F. O'Donnell  
**Secretary** Neil M. Juhnke  
**Treasurer** David J. Bruckner  
**Delegate** Robert G. Hoy  
**Trustees:**  
**One year:** John J. Bischof  
 John G. Hoy  
**Two year:** Kathleen A. McGervey  
 Peter D. Zwick

### AGENDA

Items for Discussion:

Questionnaire Results  
 Akron University Request  
 Constitution Review

Items to review:

*Draft of 2007*  
 ALTA/ACSM Survey Standards

S. B. 115 Revision

THOSE NOT INTERESTED IN JOINING US FOR DINNER ARE ALWAYS WELCOME FOR THE PROGRAM AND MEETING

January 2005

Recently, I saw a survey crew working in Strongsville and I noticed something missing, which I have seen missing from a number of survey parties. Identification.

There was nothing on their vehicle to give any indication of who or what they were. The companies I had been associated with served as municipal engineers in quite a few cities and villages. In that position you become keenly aware of the thoughts, and sometimes fears, of the local population.

Consider this scenario. There is a mother with several small children at home. She looks out the front window and sees several scruffy looking individuals walking around the front yard. She sees a vehicle on the street but it has no identification on it. What would her thoughts be? Should she be concerned and should she call the police?

Second scenario. A person is driving along the street. On his mind is the thought that his neighbor is encroaching on his property. What should he do? He suddenly spots a vehicle by the side of the road with a surveyor's name and phone number on it. He also sees a survey crew working along the road and he gets an idea as to what has to be done.

Third scenario. A tax payer is driving along in their community and sees a city/county/state vehicle, properly marked, and a survey crew working on a project. Depending on their feeling about the impending project, they will either be happy or angry, but at least they will know that their governmental employees are at work for them..

What do these three scenarios say? They say that your field crews are your front line of public relations and that they are the only ones that the public sees. The general public very seldom sees the surveyor/proprietor/manager in the office. They do see the survey crew in the field. What does the appearance of that crew say about you and our profession. Look at you own crews. Are they neat? Are their clothes clean and in good repair? Are they personally neat or do they look like scruffy street people? Is the vehicle clean and in good repair? Is there a way of identifying who they are? How do they act in public? How do they talk in public?

Your survey crews are you. They represent you much more often than you do because they are in the public eye more often. Your survey crews are what the public judges you and our profession by. Take the time to impress on your crews how important their appearance and actions are to the success of your company, and eventually to themselves. Spend the money to get signs for your vehicles to identify who and what they are. If you are trying to hide your identity because of some nefarious acts, that is a different situation.

If you are proud of yourself, your company and your profession, show it. The Old Testament says that you should not hide your light under a basket. This holds true here. Let your profession shine.

**John E, Dailey, Past**

The Cleveland Chapter DATA BANK is located at the offices of Garrett & Associates, Inc. at 2030 West 19th Street in Cleveland. Contact Robert Hoy 440-835-9400 or Richard T. Garrett 216-696-6080 for information concerning the records or to arrange access. When you see Dick Garrett be sure to thank him for his generosity.

## DID YOU MISS THE CUTOFF?

The Cleveland Chapter PLSO  
Survey School

Is designed to prepare its students for the ACSM Certified Survey Technician Exam. Enrollment opens in August and classes begin in September.

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## November Meeting

From the September meeting, \$14,000 was set aside to reprint Ohio Surveying Laws books. The State Board fronted the money for the last printing, but with State budget problems they would not print them for this printing. The books will be printed within the next year and may also be put on a CD in a searchable format.

The Museum of Surveying in Michigan came to the meeting asking for \$12,000 to help purchase a rare solar compass. No P.L.S.O. money was donated, but individuals present donated considerable sums.

Lengthy discussion about raising Professional member dues. It was noted that Barb Jones is running out of office space and a different office may be considerably more expensive, plus there was a feeling of needing another employee.

Steve Hyde noted what other state organizations' yearly dues were ranging from \$50 to \$225 with most states being more expensive than Ohio. Barb Jones stated a few years ago the dues were voted to be raised \$5/year for 3 years but only increased for the first year. I asked to take information from the discussion back to our chapter, but a December State meeting was not wanted. A motion passed to raise dues \$15 for the 2005 year.

The 2005 proposed budget passed. A motion was passed to donate \$1,000 to the scholarship fund of Ben Buckner.

Don Friemoth asked for submissions to the Ohio Surveying News stating that the decision to move from 6 to 4 yearly issues was based upon lack of content and not to save money.

It was stated the 2004 Conference made \$21,000 profit for the State. The 2005 Conference was given and additional \$8,000 to purchase \$30 souvenir shirts for full registrants. The University of Akron Student Chapter was approved to chapter status.

## January Meeting

Mike Besch was announced as being elected to be ACSM/NSPS Governor for 2005, being the only contested office.

Bob Mergel was announced as being the Member of the Year award recipient. James Eaton was announced as announced as the only recipient of the Surveyor of the Past award. Barb Jones was approved as Executive Director for 2005 stating a past-president's retreat will be held this spring for long range planning as to the future direction of PLSO. Don Friemoth was approved as newsletter editor for the 28<sup>th</sup> time.

Mike Besch asked for donations to send his Akron students to the ACSM convention in Las Vegas. A motion passed to donate \$1,000 to the Akron chapter.

Tim Schram gave word that the next printing of the Ohio Surveying Laws book will have the P.L.S.O. logo on the cover and will include a forward by the executive director of P.L.S.O.

The State Line committee will exist for about one more year per Dean Ringle.

Kevin Stacy reported that on all future ODOT projects, the design consultant will be responsible for setting pins in monument boxes at the completion of construction along with re-setting all disturbed right-of-way corners. This is something that was well received.

The deadline for the Spring '05 Ohio Surveying News is March 1<sup>st</sup>. The Winter '05 OSN should arrive to members around January 29<sup>th</sup>.

The 2004 Conference committee needs to send official forms in to Barb Jones. The postmark deadline for the 2005 Conference has been pushed back to January 21<sup>st</sup>.

The 2007 Conference may be in Cincinnati or in a centralized location by that time. The 2007 Fall Seminar may also change format due to centralization and/or expansion due to CPD passing.

Mark Jones stated the Council of Professional Surveyors, a subset of Council of Professional Engineers, is trying to eliminate requirements for 4 year surveying degrees.

Mike Besch discussed his attempts to satellite his Akron program to Columbus State College.

Mark Jones stated the changing of subdivision acreage did not pass; however, a large lot subdivision clause did pass as part of S.B. 115 which should be looked at. He also stated the Condominium law changed this past year and that Continuing Professional Development passed the House and Senate on December 1<sup>st</sup> and there will be a signing ceremony with the governor.

The Central Ohio Chapter reported in their last meeting they agreed upon a maximum yearly P.L.S.O. due of \$150 provided that a portion go to advertising surveying and the organization.

The University of Akron Student Chapter asked for "basic funds" to start their chapter as stated in the constitution. Mark Jones added that funds had never been given out for this nature before. Motion passed to give the Akron Chapter \$500.

Barb Jones reported there will be an article in the Winter '05 OSN about the solar compass the Museum of Surveying asked for donations at the last meeting. They still need more money. Mark Jones added that the museum is now looking to move from Michigan due in part to a tourist attraction next door to them leaving soon. The museum has been fund raising to add a second floor to their building for a price of \$600,000 of which they are half way to raising. Mark stated they are considering having the museum as a small part of a large museum/attraction because a museum of their size cannot be a tourist stop by itself.

**Robert G. Hoy, Chapter Delegate**

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**DIGITAL ORTHOPHOTO MAPPING**

The following is excerpts from a draft of proposed revisions to the ALTA/ACSM Land Title Survey Specifications slated to take effect in 2007. PLSO (State) has requested the Chapters review the draft and submit written comments for the March meeting. For the sake of brevity, only the sections with proposed changes are shown here. Unchanged items have been omitted from this document.

## *MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS as adopted by American Land Title Association American Congress on Surveying & Mapping and National Society of Professional Surveyors*

It is recognized that members of the American Land Title Association (ALTA) have specific needs, peculiar to title insurance matters, which require particular information for acceptance by title insurance companies when said companies are asked to insure title to land without exceptions as to the many matters which might be discoverable from survey and inspection and not be evidenced by the public records. In the general interest of the public, the surveying profession, title insurers and abstracters, ALTA, the American Congress on Surveying and Mapping (ACSM) and the National Society of Professional Surveyors, Inc. (NSPS) jointly promulgate and set forth such details and criteria for standards. It is recognized and understood that local and state standards or standards of care variations may augment or even require variations to the standards outlined herein; however, in no case may such variations result in a survey that compromises the intent or extent of these standards. Local adjustments to suit local situations, and often must be applied. It is also recognized that title insurance companies are entitled to rely on the survey furnished to them being of the appropriate professional quality, both as to completeness and as to accuracy. It is equally recognized that for the performance of a survey, the surveyor will be provided with appropriate data which can be relied upon in the preparation of the survey.

For a survey of real property and the plat or map of the survey to be acceptable to a title insurance company for purposes of insuring title to said real property free and clear of survey matters (except those matters disclosed by the survey and indicated on the plat or map), certain specific and pertinent information shall be presented for the distinct and clear understanding between the client (insured), the title insurance company (insurer), and the surveyor (the person professionally responsible for the survey). These requirements are:

1. The client shall request the surveyor arrange for the survey to be requested and shall provide a written authorization to proceed with the survey from the person responsible for paying for the survey. Unless specifically authorized in writing by the insurer, the insurer shall not be responsible for any costs associated with the preparation of the survey. The request shall specify that an "ALTA/ACSM LAND TITLE SURVEY" is required and, ~~meeting the then current accuracy standards jointly adopted by ALTA, ACSM, and NSPS. The request shall also designate which of the optional items listed in Table A are to be incorporated.~~ The request shall set forth the record description of the property. Complete copies of the record description of the property, any record easements benefiting the property, the record easements or servitudes and covenants affecting the property ("Record Documents"), documents of record referred to in the Record Documents, and any other documents containing desired appropriate information affecting the property being surveyed and to which the survey shall make reference shall be provided to the surveyor for notation on the plat or map of survey.

3. An "ALTA/ACSM LAND TITLE SURVEY" shall be performed in accordance with the then-current measurement and/or accuracy standards or guidelines adopted by the state in which the parcel being surveyed lies. ~~Accuracy Standards for Land Title Surveys" ("Accuracy Standards") as adopted, from time to time, by ACSM, NSPS, and ALTA and incorporated herein by reference. [and then delete the entirety of the Accuracy Standards from these standards - OR - leave this paragraph as is in the 1999 standards and make the attached alterations to the Accuracy Standards.]~~

5. The survey shall be performed and located on the ground except that the location of (a) buildings required under paragraph 5g below. (b) driveways and alleys required under paragraph 5j below. (c) cemeteries and burial grounds under paragraph 5k below. (d) water features required under paragraphs 5L and 7 below. (e) improvements required under Table A item 8. (f) parking areas and striping required under Table A, item 9. and (g) utilities required under Table A, item 11. may be shown based on rectified aerial photographs or photogrammetric mapping. In that case, the ramifications and qualifications of such methodologies (e.g. the potential accuracy and completeness of the data) must be agreed upon in writing by all interested parties (generally the title company, buyer, lender and client, if different) prior to the performance of the survey. There must also be a note on the face of the survey explaining the date and source of any such information. ~~And~~ The plat or map of an "ALTA/ACSM LAND TITLE SURVEY" shall contain, in addition to the required items already specified above, the following applicable information:

- (a) All data necessary to indicate the mathematical dimensions and relationships of the boundary represented, with angles given directly or by bearings, and with the length and radius of each curve, together with elements necessary to mathematically define each curve. The point of beginning of the surveyor's description shall be shown as well as the remote point of beginning if different. A bearing base shall refer to some well-fixed bearing line, so that the bearings may be easily re-established. All bearings around the boundary shall read in a clockwise direction wherever possible and appropriate. The North arrow shall be referenced to its bearing base and should that bearing base differ from record title, that difference shall be noted.
- (c) Measured and record distances from comers of parcels surveyed to the nearest right-of-way lines of streets in urban or suburban areas, together with recovered lot corners and evidence of lot corners, shall be noted. The distances to the nearest intersecting street shall be indicated ~~and verified?~~ Names and widths of streets and highways abutting the property surveyed and widths of rights of way shall be given. Any use contrary to the above shall be noted. Observable evidence of access (or lack thereof) to such abutting streets or highways shall be indicated. Observable evidence of private roads shall be so indicated. Streets abutting the premises, which have been described in Record Documents, but not physically opened, shall be shown and so noted.
- (d) The identifying titles of all recorded plats, filed maps, right of way maps, or similar documents which the survey represents, wholly or in part, shall be shown with their appropriate recording data, filing dates and map numbers, and the lot, block, and section numbers or letters of the surveyed premises. For non-platted adjoining land, names, and recording data identifying adjoining owners as they appear of record shall be shown. For platted adjoining land, the recording data of the subdivision plat shall be shown. The survey shall indicate platted setback or building restriction lines which have been recorded in subdivision plats or which appear in a Record Document which have been delivered to the surveyor. Contiguity, gores, and overlaps along the exterior boundaries of the surveyed premises, where ascertainable from field evidence or Record Documents, or interior to those exterior boundaries, shall be clearly indicated or noted. Where only a part of a recorded lot or parcel is included in the survey, the balance of the lot or parcel shall be indicated.
- (e) All evidence of monuments shall be shown and noted to indicate which were found and which were placed. All evidence of monuments found beyond the surveyed premises on which establishment of the comers of the surveyed premises are dependent, and their application

related to the survey shall be indicated. It is recommended that the surveyor prepare a written Surveyor's Report and place said report on the face of the survey. Such report should (1) outline the evidence, monuments and legal principles relied upon in resolving the boundary lines of the surveyed tract and (2) give the surveyor's opinion as to the uncertainties in the locations of the surveyed parcel's lines and corners resulting from: (i) ambiguous, conflicting or indeterminate reference monumentation, (ii) errors and ambiguities in the record description, (iii) caps or overlaps with adjoining record description where determinable given the instructions in paragraph 5d, and (iv) lines of occupation or possession which vary from the record title lines.

6. As a minimum requirement, the surveyor shall furnish two sets of prints (If the plat ~ map of survey to the title insurance company or the client. If the plat or map of survey consists of more than one sheet, the sheets shall be numbered, the total number of sheets indicated and match lines be shown on each sheet. The prints shall be on durable and dimensionally stable material of a quality standard acceptable to the title insurance company. The record title description of the surveyed tract must appear on the face of the survey. In general, the surveyor should prepare a new description of the surveyed tract only if: (a) the survey shows that the record title description is ambiguous and/or contains significant title problems, or (b) the record title description, while not having significant title problems contains controlling calls which result in courses that, based on the survey, vary significantly from the distances or directions contained in the record title description. In such cases, the surveyor should consult with all interested parties (generally the title company, buyer, lender and client, if different) regarding the preparation of a new description which may be able to address those issues. At least two copies of ~~the boundary~~ any new description prepared from the survey shall be ~~similarly~~ furnished by the surveyor ~~and shall be~~ on the face of the plat or map of survey, if practicable, or otherwise attached to and incorporated in the plat or map. Reference to the date of the "ALTA/ACSM LAND TITLE SURVEY," surveyor's file number (if any), political subdivision, section, township and range, along with appropriate aliquot parts thereof, and similar information shown on the plat or map of survey shall be included with the boundary description.

8. When the surveyor has met all of the minimum standard detail requirements for an ALTA/ACSM Land Title Survey, the following certification shall be made on the plat:

To (name of client), (name of lender, if known), (name of title insurance company, if known), (name of others as instructed by client):

This is to certify that this map or plat and the survey on which it is based were made in accordance with "Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys," jointly established and adopted by ALTA, ACSM and NSPS in 1999 \_\_\_\_\_, and includes Items \_\_\_\_\_ of Table A thereof. Pursuant to the Accuracy Standards as adopted by ALTA, NSPS, and ACSM and in effect on the date of this certification, undersigned further certifies that (Surveyor to complete certificate with the appropriate ONE of the following ~~three~~ two phrases ~~[the surveyor is directed to the Introduction to the Accuracy Standards].~~

- the Positional Uncertainties resulting from the survey measurements made on the survey do not exceed the allowable Positional Tolerance.
- ~~the survey measurements were made in accordance with "minimum Angle, Distance, and Closure Requirements for Survey Measurements Which control Land Boundaries for ALTA/ACSM Land Title Surveys."~~
- proper field procedures, instrumentation, and adequate survey personnel were employed in order to achieve results comparable to those outlined in the "Minimum Angle, Distance, and Closure Requirements for Survey Measurements Which Control Land Boundaries for ALTA/ACSM Land Title Surveys."

**[OR, DEPENDING ON WHAT IS DONE IN PARAGRAPH 3 ]**

To (name of client), (name of lender, if known), (name of title insurance company, if known), (name of others as instructed by client):

This is to certify that this map or plat and the survey on which it is based were made in accordance with "Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys," jointly established and adopted by ALTA, ACSM and NSPS in 1999 \_\_\_\_\_, and includes Items \_\_\_\_\_ of Table A thereof. Pursuant to the Accuracy Standards as adopted by ALTA, NSPS, and ACSM and in effect on the date of this certification, undersigned further ~~certifies that (Surveyor to complete certificate with the appropriate ONE of the following three two phrases [the surveyor is directed to the Introduction to the Accuracy Standards].~~

- ~~the Positional Uncertainties resulting from the survey measurements made on the survey do not exceed the allowable Positional Tolerance.~~
- ~~the survey measurements were made in accordance with "minimum Angle, Distance, and Closure Requirements for Survey Measurements Which control Land Boundaries for ALTA/ACSM Land Title Surveys."~~
- ~~proper field procedures, instrumentation, and adequate survey personnel were employed in order to achieve results comparable to those outlined in the "Minimum Angle, Distance, and Closure Requirements for Survey Measurements Which Control Land Boundaries for ALTA/ACSM Land Title Surveys."~~

**Table A**

If checked, the following optional items are to be included in the ALTA/ACSM Land Title Survey, except as otherwise negotiated:

6. \_\_\_\_\_ Identify ~~and show if possible~~, setback, height, and floor space area restrictions of record or disclosed by applicable zoning or building codes ~~(in addition to those recorded in subdivision maps, (beyond those required under paragraph 5d above) by tabulation on the face of the survey.~~ If none, so state. See "note" above.

**Accuracy Standards for ALTA/ACSM Land Title Surveys**

If radial survey methods or GPS are used to locate or establish points on the survey, the surveyor shall apply appropriate procedures in order to assure that the allowable Positional Tolerance of such points is not exceeded.

~~Application of Minimum Angle, Distance and Closure Requirements~~

~~The combined precision of a survey can be statistically assured by dictating a combination of survey closure and specified procedures for an ALTA/ACSM Land Title Survey. ACSM, NSPS, and ALTA have adopted the following specific procedures of an ALTA/ACSM Land Title Survey. The statistical base for these specifications is on file at ACSM and available for inspection.~~

Positional Tolerances for ALTA/ACSM Land Title Surveys

0.07 feet (or 20mm) + 50ppm

~~Positional Tolerances for Classes of Survey~~  
~~0.07 feet (or 20mm) + 50ppm~~

~~Application of Minimum Angle, Distance, and Closure Requirements~~

~~The combined precision of a survey can be statistically assured by dictating a combination of survey closure and specified procedures for an ALTA/ACSM Land Title Survey. ACSM, NSPS and ALTA have adopted the following specific procedures in order to assure the combined precision of an ALTA/ACSM Land Title Survey. The statistical base for these specifications is on file at ACSM and available for inspection.~~

~~American Congress On Surveying And Mapping~~  
~~Minimum Angle, Distance And Closure Requirements For Survey Measurements~~  
~~Which Control Land Boundaries For ALTA/ACSM Land Title Surveys~~  
~~(Note 1)~~

<del>Dir. Reading of Instrument</del> (Note 2)	<del>Instrument Reading Estimated</del> (Note 3)	<del>Number of Observations Per Station</del> (Note 4)	<del>Spread From Mean of D&amp;R Not To Exceed</del> (Note 5)	<del>Angle Closure Where N=No. of Stations Not To Exceed</del>	<del>Linear Closure</del> (Note 6)	<del>Distance Measurement</del> (Note 7)	<del>Minimum Length of Measurements</del> (Notes 8, 9, 10)
<del>20" &lt;1' &gt; [10"]</del>	<del>5" &lt;0.1' &gt; N.A.</del>	<del>2 D&amp;R</del>	<del>5" &lt;0.1' &gt; 5"</del>	<del>10" √N</del>	<del>1:15,000</del>	<del>EDM or Doubletape with Steel Tape</del>	<del>(8) 81m, (9) 153m, (10) 20m</del>

~~Note (1) All requirements of each class must be satisfied in order to qualify for that particular class of survey. The use of a more precise instrument does not change the other requirements, such as number of angles turned, etc.~~

~~Note (2) Instrument must have a direct reading of at least the amount specified (not an estimated reading), i.e.: 20" = Micrometer reading theodolite, <1' > = Scale reading theodolite, [10"] = Electronic reading theodolite.~~

~~Note (3) Instrument must have the capability of allowing an estimated reading below the direct reading to the specified reading.~~

~~Note (4) D & R means the Direct and Reverse positions of the instrument telescope, i.e., Urban Surveys require that two angles in the direct and two angles in the reverse position to be measured and meaned.~~

~~Note (5) Any angle measured that exceeds the specified amount from the mean must be rejected and the set of angles re-measured.~~

~~Note (6) Ratio of closure after angles are balanced and closure calculated.~~

~~Note (7) All distance measurements must be made with a properly calibrated EDM or Steel tape, applying atmospheric, temperature, sag, tension, slope, scale factor and sea level corrections as necessary.~~

~~Note (8) EDM having an error of 5 mm, independent of distance measured (Manufacturer's specifications).~~

~~Note (9) EDM having an error of 10 mm, independent of distance measured (Manufacturer's specifications).~~

~~Note (10) Calibrated steel tape.~~



**CLEVELAND CHAPTER PLSO  
NEWSLETTER EDITOR**

John G. Hoy  
4562 UP West 130 Street  
Cleveland, OH. 44135-3538

Phone: 216-476-3600  
Fax: 216-476-1665  
Email: HOY7419@ CS.COM

Affiliated with:



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# Calendar

January 14, 2005 State Executive Committee Meeting  
January 18, 2005 Executive Committee Meeting  
January 18, 2005 Cleveland Surveying News Deadline  
January 27, 2005 Annual Membership Meeting

March 1, 2005 Ohio Surveying News Deadline  
March 3, 2005 General Membership Meeting  
March 11, 2005 State Executive Committee Meeting  
March 21, 2005 Executive Committee Meeting  
March 23, 2005 Cleveland Surveying News Deadline

February 10-12, 2005 PLSO Annual Conference, Dayton  
February 10 2005 State Executive Committee Meeting (IF NEEDED)

The remainder of the 2005 calendar to be announced at the Annual Meeting.

## This Month's Quote:

"Every mile is two in winter." ..... George Herbert