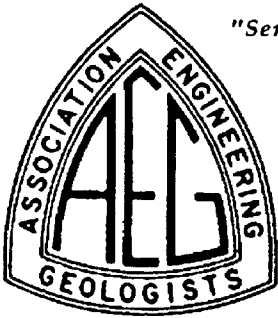


# Association of Engineering Geologists

"Serving Professionals in Engineering, Environmental and Groundwater Geology Since 1957"



Southern California Section

## NEWSLETTER - April 1997

### SECTION OFFICERS

Chairman: David Ebersold  
(818) 796-9141  
dave.ebersold@us.mw.com

Vice Chair.: Thomas L. Slosson  
(818) 376-6540

Treasurer: Mark A. Swiatek  
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swiatek@smartdocs.com

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ctnestle@ix.netcom.com

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(714) 647-0277

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Robert Hollingsworth  
(818) 889-0844

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e-mail: krowe@ocwd.com or  
krowe@ix.netcom.com

Deadline for submittals to the  
May Newsletter:  
**April 25th**

Next Meeting May 13th

### Dinner Meeting Tuesday April 8th

- Airtel Hotel
- Van Nuys
- Cost - \$25.00  
((\$10.00 for full-time students with valid I.D.)
- For reservations call Pat Stewart at Montgomery Watson  
at (818) 568-6161 by Thursday April 3rd

**Make reservations by Noon on the Friday before the Meeting**

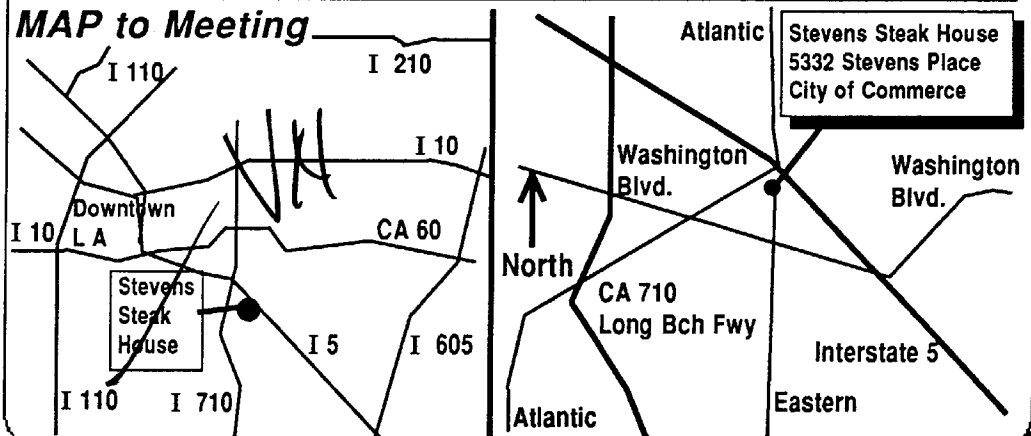
- 5:30 Social Hour & One-Half
- 7:00 Dinner
- 7:30 Announcements
- 7:45 Program

### Program

TOPIC **How to Avoid Getting Sued on the  
Standard of Care and  
Code of Compliance**

SPEAKER **Joel Castro, Attorney**  
Specializing in Standard of Care Issues  
Related to Grading and Construction

### MAP to Meeting



## Program Topic & Speaker

### How to Avoid Getting Sued on the Standard of Care and Code of Compliance

Joel B. Castro, Esq.

One of our tasks in performing professional services is to be familiar with the standard of care and code of compliance. To some people the standard of care is similar to the principle of common sense. However, it is often said that common sense is uncommon. Actually the standard of care involves proper education, training and experience and use of published guidelines which may be used to judge the adequacy of work.

Discussion of this topic is timely as the American Society for Testing and Materials (ASTM) has established over the last few years a very long list of completely new ASTM guidelines and methods for field and laboratory testing for geotechnical, environmental and water resources work.

Our speaker, Mr. Joel B. Castro, Esq., is particularly well versed in the standard of care and code of compliance issues related to geotechnical and engineering geology projects. He will discuss the definitions of the standard of care and how the code of compliance is a minimum effort of the care that should be provided and not the median. Example projects will be presented and discussed of how the minimum standard of care was not complied with and the results.

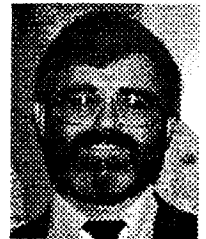
Mr. Castro is an attorney and heads a construction litigation firm in West Los Angeles. He graduated from the UCLA Law School in 1976, and since 1977 has represented many condominium and institutional clients in construction litigation. One of his main specialties is complex multi-party construction litigation. For example, he won the longest civil jury trial in Los Angeles County, the ten-month Monterey Hills land subsidence case, where the final settlement was 65 million dollars. Mr. Castro is very familiar with the Northridge Meadows Apartment Complex case, related to the 1994 Northridge Earthquake. He represented the families of 16 residents who died when the apartment building collapsed. He was also involved in the cases for the first failure analyses of steel frame structures which failed after the Northridge Earthquake in 1994.

Mr. Castro has been profiled in the Los Angeles Daily Journal as the "Indiana Jones" of trial attorneys. He is considered one of the top construction attorneys in the state and a pioneer in construction failure analyses and the dynamic performance of structures during earthquakes. He is an associate editor of California Construction Law Reporter and his article "Cosmetically Repaired Welded Steel Moment Frames: A Clear Risk of Disaster" has been published in the Construction Law Reporter.

## THIS MONTH

April 1997

Kelly E. Rowe  
Hydrogeologist



This month at our monthly meeting Mr. Joel Castro will discuss the issues of professional practices and standard of care. Many of us know Thomas Slosson and his father James Slosson have been working for

many years with attorneys and the courts related to these issues. As a result the Slossons have become intimately familiar with the legal definition of the standards of care and acceptable professional practices. I am sure Mr. Castro will provide an interesting presentation.

When you call in your reservation for the Airtel Hotel, Van Nuys meeting this month please state your preference for meal: either London Broil or Filet of Sole Almandine, or if you want a vegetarian meal. The Airtel just needs to know about how many of each; otherwise, we'll do mostly meat, with a few fish. The Airtel will need final head count by Thursday April 3rd as well.

The ASCE Geotechnical Group member responsible for setting up the speaker for our annual joint meeting last month should be congratulated for fooling everyone. I was surprised by the presentation the speaker, Dr. Handy, had related to the geotechnical investigations he had performed on the loess soil deposits found along the Missouri River. (This relates well to the zero percent of loess soil we have in California.) These reworked wind-laid deposits are found along the river alignment, thicker near the river. These deposits have geotechnical characteristics similar to the wind-blown sand deposits found in southern California, which compact/subside (hydrocompaction) upon wetting. Dr. Handy gave an example of where a site was cut on a slope and had compacted fill. The fill was stable but the loess collapsed upon wetting... along with the new house.

The latter part of Dr. Handy's presentation related to the contents of a small book he had printed through ASCE "When the House Fell Down". The objective of the book was to explain to non-technical people, e.g., attorneys, fundamental concepts of geotechnical engineering and geology. It apparently is filled with cute and off-color jokes which he shared with the group. He explained that many of the jokes were rewritten or taken out by former ASCE editors in previous versions of the book. After many years of writing and rewriting the book it was finally printed after three consecutive editors who worked on the book left ASCE to work elsewhere. Because no editors were available to finalize the book it was printed basically the way Dr. Handy wanted to have it printed. There is something to say regarding longevity on a project: You eventually get to have it the way you want it.

According to the description for the topic ASCE provided I understood Dr. Handy was going to discuss key concepts in technical writing. It was different... Please note AEG officers for next year: It is our turn to pick the topic and speaker. Please do so.

### Chairman's Column Dave Ebersold



What do AAPG, AEG, AIPG, AIH, AWG, CGS, GRA, IGS, NCGS, SEG, SCGS and others all have in common? California representatives from each of these organizations have all expressed an interest in CCGO, the California Council of Geoscience Organizations. The third organizational meeting for CCGO was held in Pasadena on March 23. A press release regarding this meeting is included in our newsletter. But check out the current versions of the mission and vision statements below; are these things that you support? Do you think they are important?

**CCGO Mission Statement: CCGO advocates the use of sound geologic knowledge and practice by proposing, reviewing, and monitoring statutes, regulations, and public policies.**

**CCGO Vision Statement: CCGO will be a leader of recognized integrity in advancing programs and legislation that take into consideration California's diverse geologic conditions, advocate knowledgeable uses of resources, and work to reduce the impact of geologic hazards.**

The main difference between this group and AEG is the ability to bring together geoscientists throughout the state in an organized and powerful way. In the coming few months, our section will need to make a decision of whether or not to support this organization. More on this as it develops.

OK. What else is going on? Field trip, field trip, field trip. Planned for April 26th, we will be trekking to the Eastside Reservoir. This promises to be an extremely interesting trip to view a dam under construction. What else? Our short course on photography and GIS will be held on April 19th and 20th. A bargain at \$95, this course will bring you up to speed with the latest in GIS desktop software - an extremely powerful tool for data analysis and presentation. What else? The hottest geologic gathering of the year may well be the Dibblee Geologic Foundation's field trip and BBQ and the St. Francis Dam Site on May 17th. Rumor has it that Tom Dibblee and J. David Rodgers will both be on hand to discuss.... Come for yourself and experience this once-in-a-lifetime event.

Portland. Portland. Portland. Portland. AEG's 1997 Annual Meeting will be September 30-October 4 in Portland. Abstracts are due by May 15, E-mail preferred: aegjuliek@aol.com. See AEG News for more info. I have seen all the preplanning info on this meeting and it will be a great one!!! Get involved, send in an abstract!

Our speaker in April will be Joel Castro. Don't forget that we'll be meeting at the Airtel Plaza Hotel in Van Nuys. We must have an ACCURATE attendance count by noon on Friday the 4th. PLEASE.

#### CCGO - Press Release

We hear so often that just one person can make a difference. If that is true, and we all know it is, then imagine what the unified efforts of an entire profession would be able to accomplish. Need a model? Look at the engineers. Our critics might suggest that unifying the profession would ensure geoscientists a monopoly on their market, effectively stifling competition and providing a paved path to riches. Get Real! I have yet to meet a geoscientist who chose this profession for the money. Rather, each of us is intrigued by the science, fascinated by the wonder of nature, predisposed to doing field work, interested in ensuring a safe and reliable water supply, rewarded by cleaning up the environment, thrilled with saving a life, or maybe just a little bit "touched." And so it is upon this premise, although contrary to today's political realities, that we wish only to be left alone to do our jobs.

It is upon this same premise that the leaders of over one dozen geologic organizations throughout California have been meeting to discuss the formation of the California Council of Geoscience Organizations (CCGO). The third organizational meeting was held in Pasadena on March 23, 1997. The Council intends to be a leader of recognized integrity in advancing programs and legislation that take into consideration California's diverse geologic conditions, advocate knowledgeable use of resources, and work to reduce the impact of geologic hazards. With a goal of achieving the sound practice of the geological sciences in the public interest, the Council will work to provide balanced information to lawmakers, regulatory agencies and the public regarding the economic, environmental, and human costs associated with geologic matters.

Issues covered at the March 23 meeting included the conceptual development of programs and strategies to reach the Council's goals, with specific identification of six areas: Legislation and Regulation, Regulatory Peer Review, Governmental Relations, Professional Practice, Professional Licensure, and Public Outreach. The group set a target date to have the Council fully incorporated and operational by August 1, 1997. Working aggressively toward this date, both strategic planning and development committees were formed. Organizational meetings will continue on a monthly basis, with the next one scheduled for Sunday, May 4, in San Jose. I know I speak for

all of the participating organization's leaders who have volunteered their precious time and challenged themselves to see the great benefits that CCGO could provide in urging you to investigate for yourself, ask questions of organizational participants, and see what CCGO can do for you.

For further information, contact Betsy Mathieson, CCGO Communications Volunteer, Chairman AEG SF Section, c/o Terratech Inc., 1365 Vander Way, San Jose, CA 95112, (408) 297-6969, fax (408) 297-7716, BMathieson@aol.com.

Announcements for applications for the Stout Scholarship are now going out in the SCS newsletter and AEG news. Please encourage any qualified candidates (must be a Student Member of AEG) to apply. Also, NOW IS THE TIME TO CONTRIBUTE TO THIS FUND. Checks may be made out to the Stout Scholarship Fund and sent to me (address on front of newsletter). I am also starting the process of transferring the scholarship over to the Engineering Geology Foundation. While the transaction will not occur for several months, it will accomplish two things, at a minimum: 1) contributions to the fund will be tax deductible and 2) the fund will not be threatened by any potential financial liabilities which AEG experiences. Again, both contributions and applications are welcome now.

**FIELD TRIP To East Side Reservoir:** The AEG Southern California Section is coordinating a field trip, courtesy of the Metropolitan Water District of Southern California, on **Saturday, April 26** to the East Side (aka Domenigoni) Reservoir project, about 5 miles south of Hemet (See application this newsletter). This is the largest imported surface water supply storage project in the history of southern California. It is presently under construction is to serve as an emergency supply of water (800,000 acre-feet) for southern California in the event a rupture along the San Andreas Fault cuts-off water supply aqueducts from Northern California and Arizona. The reservoir consists of three separate embankments that have their foundations in various stages of construction. We will be given a tour of the foundation areas, borrow site area, soils laboratory, and various structures associated with the dam. This will be a one day trip with a catered lunch. If you are interested in attending, sign-up sheets are included in this newsletter. Or contact Kim Bishop at 213-343-2409 and speak to him personally.

#### MARTIN L. STOUT SCHOLARSHIP

The Southern California Section is pleased to announce the competition for the Martin L. Stout Scholarship. This year's award is \$500.00. All applications must be completed and returned by July 15, 1997. The award will be made at the Section's August meeting. The competition is only open to student members of the AEG. You must be a student member in good standing at the time your application is received. Applications may be obtained from:

David B. Ebersold  
Chairperson, SCS AEG  
Montgomery Watson  
301 North Lake Avenue, Suite 600  
Pasadena, CA 91101  
e-mail dave.ebersold@us.mw.com

A theme session of the **HYDROGEOLOGY OF LANDSLIDES** has been proposed for the 1997 GSA ANNUAL MEETING IN SALT LAKE CITY. The deadline for submission of abstracts to GSA is July 7, 1997.

The theme session on landslide hydrogeology is of great practical importance, both locally and globally. We are actively soliciting participation of engineering geologists in the theme session, which will probably be well attended by geologists who work with many damaging landslides along the Wasatch Front and throughout the intermountain West. If you have a good landslide paper that would be appropriate, please consider submitting an abstract. For more information, please contact Robert A. Larson at (818) 786-8884 or ralarson@compuserve.com.

Description of theme session: The infiltration of water into and percolation of water through landslides of all types will be discussed, including modeling, theoretical aspects, dewatering, mon-

Continued from page 3

itoring, affect on activation and rate of movement, and case histories. Papers on debris flow generation and rainfall thresholds for failure initiation of previously stable slopes are appropriate.

#### Educational material for members

Ali Tabidian, our chairman of the education committee, has available a large collection of geological slide/overhead transparencies and video tapes. Ali, the education committee, now has at his disposal several hundred slides and overhead transparencies and over one hundred video tapes. The slides and transparencies cover a wide range of geological topics including landslides and earthquakes. Most of the video tapes are related to water, earthquake, and environmental geology related. These are available for their "educational activities" and they may obtain them by contacting the association or the education committee. Who knows? You may affect the direction of a career of someone who will take over your job or make your job obsolete.

#### SEISMIC HAZARDS ANALYSIS SHORT COURSE

Hosted by San Francisco Section of AEG

Saturday, May 3, 1997 8 AM to 5PM

Failure Analysis Associates Conference Center

Menlo Park, California

\$95 AEG members, \$110 nonmembers

Contact Jack Alt, 510-791-1986 or EpigeneInt@aol.com

You are welcome to attend the next CCGO meeting:

Sunday, May 4 9:45 AM - 4:30 PM

Betsy Mathieson's house at 197 South 13th Street, San Jose

(15 minutes from the SJ airport, and can provide airport transit)

If you are interested in attending this meeting details and an agenda will be sent a couple of weeks before the meeting, but it is suggest you make plane reservations now to get the lowest fares. For more information contact:

Betsy Mathieson

CCGO Communications Volunteer

Chairman, San Francisco Section of AEG

c/o Terratech, Inc., 1365 Vander Way, San Jose, CA 95112

408-297-6969 fax 408-297-7716

BMathieson@aol.com

P.S. Some of you may wish to attend a seismic hazards analysis short course to be put on by the SF Section of AEG the day before, in Menlo Park. If you're interested, Betsy can send details.

#### Now is the time...

Now is the time for all good men (or women) to come to the aid of their country Association. No kidding. Perhaps you have been bored with the way your life has progressed. "Go-to-work - nine to five, eat, sleep, go-to-work." ... Being a passive observer of life passing by. Give me a break.

Now is the time for more volunteers - active participants - to show some spunk. We need leaders. We need to fill in the vacancies for officer and committee positions now and for next year. We need to have many more people to participate in the communication and improvement of our profession. It depends on you to take some time to improve our community. You understand it takes educated and trained geologists to evaluate the geologic conditions and past of an area to safely and effectively use its resources, modify its surface and assist in long-range planning. I am not preaching to the choir. I am talking to you: the passive observer.

Now is the time to enjoy the benefits of being an active participant. Every one who takes the time to contribute/participate gains far more than they contribute. You can quote me. Or perhaps it is a Confucius philosophical truth. I know that after nine years of participating, I have enjoyed working at the different officer positions, having an excuse to meet others in the profession, learning what other people know, and understanding how our profession operates and improves. Doing the newsletter is fun, for only so long though. I will retire as newsletter editor by October and need a replacement. I understand some section officers will quit and need replacement by active participants.

#### Section Officer Elections are Coming Up Soon

Now is the time to talk to Joe Cota, (818) 785-2158, recent Chairman of the AEG Southern California Section, and ask what you can do to participate in the section. As recent chairman it is his task to nominate the slate of candidates for the next term. You can also contact the other section officers and find out how you can help. Our term of Section offices is similar to the bylaws of the Association, from July to August. (Actually the Association bylaws state the term is from October to October, at the time of the

annual meeting.) We have our term completed about two months earlier than the Association so the section chairman may become somewhat familiar with the current relevant issues that are to be voted upon at the semi-annual Association meetings. One meeting is in October at the location of the annual meeting and at the other meeting held in April in the vicinity of the home of the current AEG President. Our section is the largest and contains about 15 percent of the active AEG members.

#### ASTM: It is Out of Control

Now is the time for Eldon Gath, our current AEG President, a Southern California Section member to address an important issue regarding professional practice and standard of care. ASTM has encouraged a number of individuals to create over the last few years a very long list of completely new ASTM guidelines and methods for field and laboratory testing for geotechnical, environmental and water resources work. These guidelines and methods are being referred to by our friendly attorneys as the standard of care required of individuals working in the geotechnical/engineering geology/hydrogeology professions. ASTM uses its roster of thousands of members to substantiate its claims that their guidelines and methods are approved by the members, inferring they are approved by the profession.

Now is the time to examine what ASTM is doing...Having been an ASTM member, from 1994 to 1996, I appreciate the efforts to standardize approaches to our type of technical problems. For example, in 1991, the National Water Well Assoc. (NWWA), in Cincinnati, Ohio, held a conference in standardization of guidelines for performing "Phase I - Environmental Site Assessments (Phase I - ESAs)". I was surprised by the many types of Phase I - ESAs being performed by technical & non-technical people, who tended to focus on aspects of Phase Is leaning toward their particular field of interest. Those of us in the evening brain-storming sessions held hopes the NWWA guidelines would meet the needs of the community and standards necessary for adequate assessment of potential environmental liabilities associated with the purchase of property. We understood, however, that ASTM was rapidly progressing toward a similar set of guidelines and would likely supersede any NWWA guidelines. It was also understood that several of the members of the NWWA steering committee for Phase I - ESAs guidelines were also members of the ASTM committee forming the guidelines for performing Phase I - ESAs. Good. These guidelines were prepared through the consensus of opinions of members on the ASTM committee, many more of which consisted of attorneys, than technical types, than the proportion of members on the NWWA technical committee.

During my recent two-year tenure as an ASTM member, interested in environmental and groundwater resources subjects, I must have received about nine-inches of paper in the mail related to standards and guidelines planned for approval. Each packet indicated that I was one of about 100 to 300 people who received the packet for review, comment and approval. Review comments were to be returned to the respective ASTM subcommittee within a few weeks. Did I have adequate time to review and comment/approve...No. Regardless, I note that many of the proposed standards and guidelines were prepared by a few individuals who took relish in proposing what should be done relative to professional services for these subjects. There was a strong need for guidelines in certain areas, e.g. groundwater modeling, to raise the standard of care to acceptable levels. Some of the other proposed guidelines I reviewed warrant no special mention, perhaps derision. ASTM, however, has said that their guidelines have been reviewed and approved by thousands of its members, individuals/professionals specializing in the fields. (It really is more like six members or less.) Many of the recent guidelines and methods specified in the fields are certainly needed. In reality, others may be created by a few individuals who probably have too much time on their hands. Attorneys don't care they see the ASTM stamp of approval as the standard of care required for us to do our projects.

I hate to say it, ASTM may have gone too far out on the limb, advocating levels of standards of care for efforts involving Phase II - Site Assessment and Remediation, and Phase III Remediation. Give me a break. The ASTM staff have probably dilutions of grandeur related to creating laws/regulations on how we should live. Where will it stop? Will we be tied to the "ASTM Standard Guidelines" and not given the license to creatively evaluate the conditions of an area and present relevant solutions to the local problem? Do you know?

Have you checked the ASTM Web site lately? I thought I could browse through the text and figures of the guidelines I was interested in for free, but it simply lists the publications they have available along with what appears to me to be sold at inflated costs. Is it ASTM's goal to simply make money selling more guidelines? Some think this is so. Regardless, ASTM needs to be reeled in from wrecking havoc on the geological and engineering professions. If you are interested in this subject call or mail Eldon Gath and let him know what you think. He currently is in the position, as AEG President, to effect changes by voicing concerns and organizing efforts addressing ASTM's activities toward our organization and with other professional organizations.

HEY!

**AEG FIELD TRIP - SPRING 1997  
EASTSIDE RESERVOIR PROJECT**

**When:** Saturday, April 26, 8:00-5:00  
**Where:** East Side Reservoir Project, 5 miles south of Hemet  
**Cost:** \$45.00  
**Purpose:** Observe Eastside Reservoir Project under construction.

The Eastside Reservoir is an earth fill dam scheduled to be completed in July, 1999. The dam is being constructed to be a water supply reservoir, with a secondary purpose of serving as an emergency source of water should a large earthquake on the San Andreas fault sever the supply of water to southern California. Consisting of three separate embankments, the dam is in various stages of foundation work in different areas.

During the field trip we will view and hear about foundation excavations and treatments including cut-off walls for the three embankments. We will also see the inlet/outlet tower excavation and hear about slope stability problems and treatment for the excavation. Also planned for the trip is a visit to the rock borrow and rock processing areas, and a look at the on-site testing laboratory. The geology of the site and problems with potential fault activity will be discussed. A catered, hot lunch will be served.

**Important:** Hard hats and safety vests are required on the site, please bring your own.

Meeting Places

There will be two meeting places. One will be the Parking Lot A at the corner of State University Drive and Eastern Avenue at California State University, Los Angeles. Buses will depart from there at 8:00 A.M. The second meeting place will be the parking lot of Gary S. Rasmussen and Assoc., 1811 S. Commercecenter West in San Bernardino. Busses will depart that location promptly at 9:00 A.M. Maps to both locations are presented on the back of this sheet.

Please return the attached sign-up sheet and signed release form to:

Kim Bishop  
Dept. of Geology  
5151 State University Drive  
California State University, Los Angeles  
Los Angeles, CA 90032

To ensure a place on the trip, forms must be returned with a check payable to the Association of Engineering Geologists for \$45.00 by April 11, 1997.

Questions? Contact Kim Bishop at (213) 343-2409 or Linda Tandy at (213) 478-1329

To ensure a place on the trip, forms must be returned with a check for \$45.00 payable to the Association of Engineering Geologists by April 11, 1997.

Yes, I will be going on the field trip. Enclosed is a check for \$45.00

Name \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_

**STATEMENT OF UNDERSTANDING  
FOR FIELD TRIP PARTICIPANTS**

The undersigned hereby acknowledges and agrees that:

1. \_\_\_\_\_ (herein referred to as "Participant") intends to participate in a field trip sponsored by the Association of Engineering Geologists (herein referred to as "AEG").
2. Participant agrees and understands that during such field trips he/she will be under the direction and control of the trip director approved by the AEG, and specifically agrees to comply with all reasonable directions and instructions by the trip director during the course thereof.
3. Participant understands and acknowledges that there are specific risks of injury to person and/or property that are associated with field trips, including risks related to travel hazards, terrain, weather, and eating arrangements, other circumstances. Participant specifically agrees to and voluntarily assumes the risk of such injuries, and hereby certifies and represents that Participant will arrange for appropriate personal accident/health insurance coverage during the period of each such field trip.

4. Participant understands and acknowledges that the AEG assumes no liability for personal injuries or property damages to participants or to third persons arising out of field trips, except to the extent that such liability is imposed by law. Participant agrees to indemnify and to save the AEG harmless from any liability arising out of the acts or omissions of Participant during any such field trip, subject to any limitations or restrictions against such indemnification that are imposed by law.

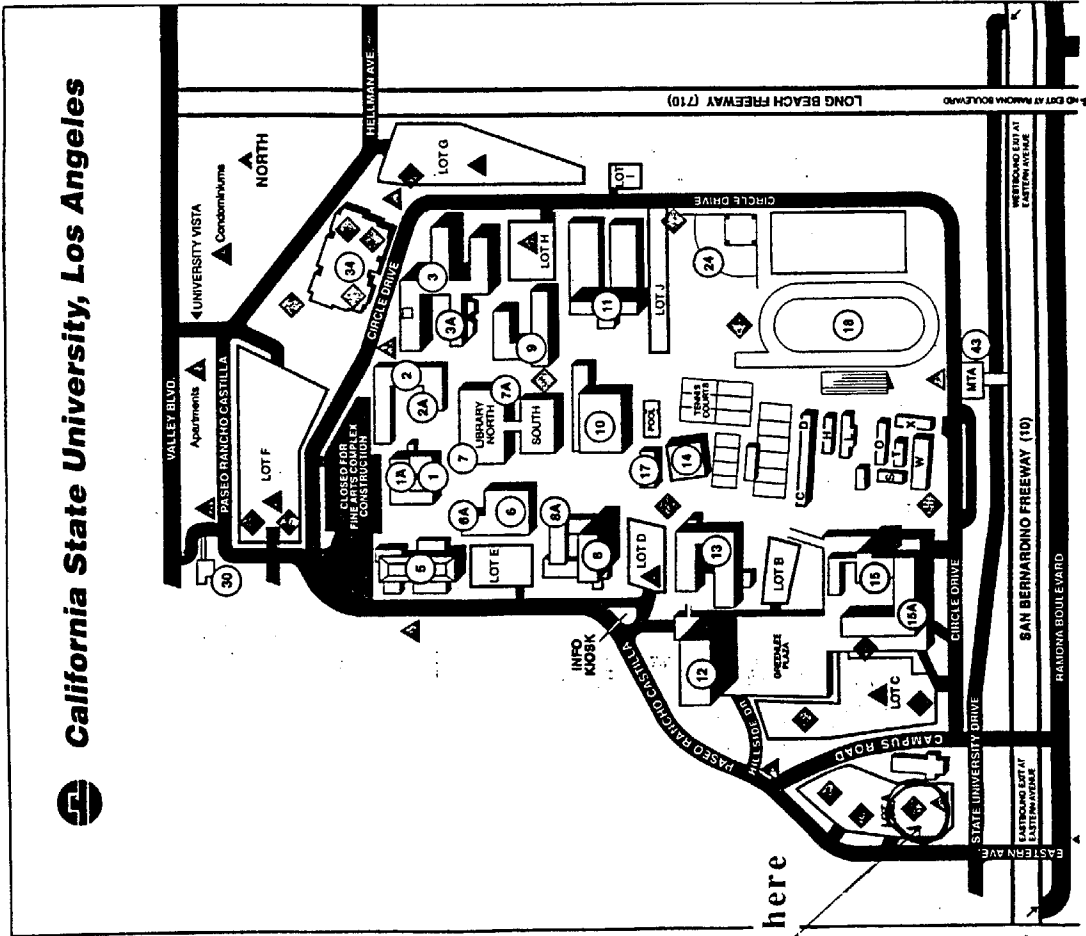
Date: \_\_\_\_\_ Signed \_\_\_\_\_ Participant

Sorry, no refunds for cancellations after April 15, 1997 (by the end of April 15, you should know if you can afford the trip).

Please check here if you are a vegetarian \_\_\_\_\_

Just Meeting Locations

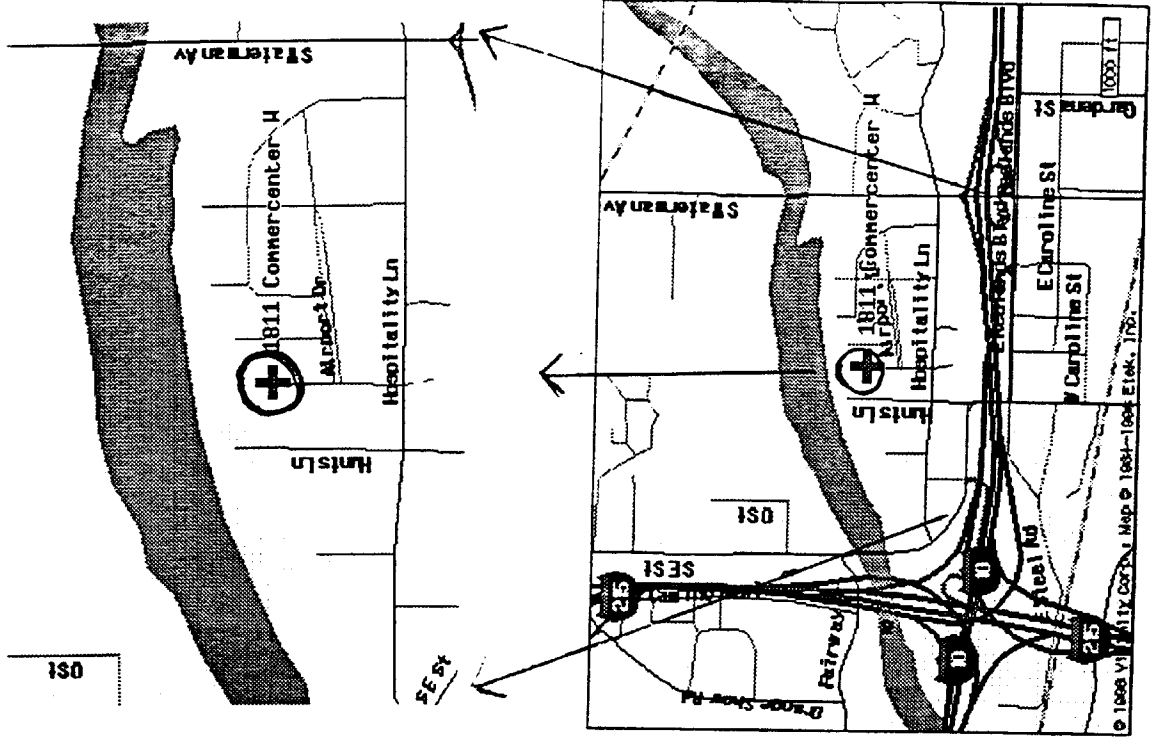
Gary S. Rasmussen and Assoc.  
1811 S. Commercenter West



Meet here

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710 ←



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**GEOTECHNICAL PHOTOGRAPHY AND GIS  
From Shooting to Digital Use**



A Two-Day Short Course Sponsored by the  
**Association of Engineering Geologists  
Southern California Section**

April 19 and 20, 1997 - 8am to 4:30pm  
Irvine Ranch Water District Office  
15600 Sand Canyon Avenue, Irvine, California

A two-day short course titled "**GEOTECHNICAL PHOTOGRAPHY AND GIS: From Shooting to Digital Use**" is scheduled for April 19 and 20, 1997, in Irvine. The short course instructor is **Woodrow L. Higdon** of **Geo-Tech Imagery International**. This short course was taught last fall for the northern California sections of AEG and was well praised by the attendees.

Topics to be discussed by Mr. Higdon during this two-day short course will include cameras, film types, lab print production, auxiliary lighting for ground shooting, shooting techniques, general litigation site documentation, infrared photography, aerial photograph interpretation, digital imaging, MapInfo GIS software, and Sure Map raster data sets. More specific details regarding topics to be covered can be provided upon request.

This is a short course you shouldn't pass up! Continuing education units will be awarded to AEG members. The reasonable course fee will include a CD with course-related digital images, lunches and drinks/munchies during breaks. Plan to attend and **SIGN UP NOW!** Complete the attached registration form and return it with your check promptly. Registration is limited to 90 participants. Advance registration of \$95 is requested by April 9, 1997 and will be confirmed by letter. Please add \$25 for LATE registration (postmarked after April 9, 1997). If you have any questions, please contact Sue Tanges at 619-442-8022 or [s.tanges@worldnet.att.net](mailto:s.tanges@worldnet.att.net).

\* \* \* \* \*

**REGISTRATION FORM, AEG SHORT COURSE**  
**Geotechnical Photography and GIS: From Shooting to Digital Use**  
**April 19 and 20, 1997, in Irvine, California**

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City/St/ZIP \_\_\_\_\_

Phone \_\_\_\_\_

Make check or money order payable to:  
**Association of Engineering Geologists**  
and mail to:

**AEG Short Course**  
**c/o Southland Geotechnical Consultants**  
**1238-A Greenfield Drive**  
**El Cajon, CA 92021**

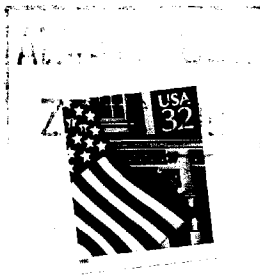
Course Fee: \$95 per person (by April 9)  
\$120 per person (after April 9)  
Are you an AEG member? \_\_\_\_\_

**SEE YOU APRIL 19th & 20th!!!**



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