



LOS ANGELES SECTION, REGION 9

San Bernardino & Riverside Counties Branch – Geotechnical Committee
SoCal Inland Empire Geo-Institute Chapter
FOUNDED 2010

Foundation Engineering for Expansive Soils Seminar

Monday September 19, 2016
Holiday Inn, Ontario Airport

Mr. Geoff Chao, Ph.D., P.E.
Mr. Daniel Overton., P.E.

Co-Authors of the book *Foundation Engineering for Expansive Soils*

Foundations on expansive soil sites are one of the most challenging problems facing builders, engineers, and building owners today. Many of the problems result from failure to identify expansive soils on the sites, inadequate design and construction, use of inappropriate foundation systems, and/or improper construction practices. Damage to structures and infrastructure due to problem soils is a billion-dollar issue. Increasing basic knowledge of soils engineering is the key to identifying design and construction defects for structures on expansive soils beyond the common methods utilized for expansive soils within Southern California.

The seminar is intended to provide geotechnical, structural, construction engineers, engineering geologists, and students with the tools necessary to design foundations to limit damage due to heaving or shrinkage of expansive soils. The presenters will discuss the types and nature of expansive soil, how to identify expansive soil, and how to estimate total and differential heave for in-situ soils from intact samples, as well as for fill soils from evaluation of results from remolded samples. The presenters will discuss reasons for distress caused by heaving or shrinkage of expansive soils and how to design appropriate foundation systems for these conditions. Attendees will learn how to determine the heave index property of a soil, the swelling pressure from expansive soils, and the magnitude of heave due to causes other than those of seasonal climatic changes for soils in a fully- or partially-saturated moisture condition.

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About the Seminar Instructors:

Geoff Chao, Ph.D., P.E, Senior Geotechnical Engineer – Dr. Chao has over 20 years of geotechnical and construction engineering experience and is currently a Vice President at Engineering Analytics, Inc. Serving in the roles of Project Manager and Project Engineer, Dr. Chao has extensive experience in the areas of construction and design defect investigations, construction remediation and mitigation, geotechnical and reclamation engineering design, and construction oversight experience on a diversity of projects. His technical specialties include expansive and collapsible soils evaluation, foundation design and construction for residential and commercial buildings, retaining wall investigation, landslide investigation, settlement and consolidation analyses, and seepage and groundwater modeling. Dr. Chao is an Adjunct Professor at Colorado State University, Fort Collins, Colorado where he has taught foundation engineering within the Department of Civil and Environmental Engineering. Dr. Chao is the co-author of a book titled “Foundation Engineering for



Expansive Soils.” He has authored over 40 technical papers, many of them dealing with structures on problematic soils.

Daniel D. Overton, P.E, Principal Geotechnical Engineer – Mr. Overton is a Principal Geotechnical Engineer for, and a shareholder of, Engineering Analytics, Inc. He received a Bachelors of Science degree in Civil Engineering from Colorado State University in 1985, and a Masters of Science degree in Civil Engineering with an emphasis in Geotechnical Engineering from UCLA in 1988. He has 30 years of geotechnical and forensic engineering experience on a diversity of projects. Mr. Overton has extensive experience in forensic studies of foundations in clay soil and claystone bedrock. Mr. Overton has served as the Project Engineer or Project Manager for public works projects, expansive soils design, forensic studies, foundation design for commercial and mid-rise buildings, residential and master planned communities, and geotechnical instrumentation. Mr. Overton is a Fellow of ASCE and is an Adjunct Professor at Colorado State University, having served on various thesis and dissertation committees, and is the Committee Chair of the Tailings and Mine Waste Conference. Mr. Overton is also a member of the Post-Tensioning Institutes DC-10 Slab-On-Ground committee, and is a licensed Professional Engineer in eighteen States. Mr. Overton has written approximately 50 technical papers addressing multiple aspects of geotechnical engineering, and is a co-author of the text book titled “Foundation Engineering for Expansive Soils”.

Technical Presentation, Location, and Registration:

Date:

Monday, September 19, 2016
8:00 am – 5:00 pm

Location:

Holiday Inn, Ontario Airport
2155 E. Convention Center Way
Ontario, CA 91764
(877) 410-6667 (Reservations)
(909) 212-8000 (Front Desk)
<http://hiontario.com>

Seminar attendees may reserve rooms for \$119 + 14% tax/night.

Dining:

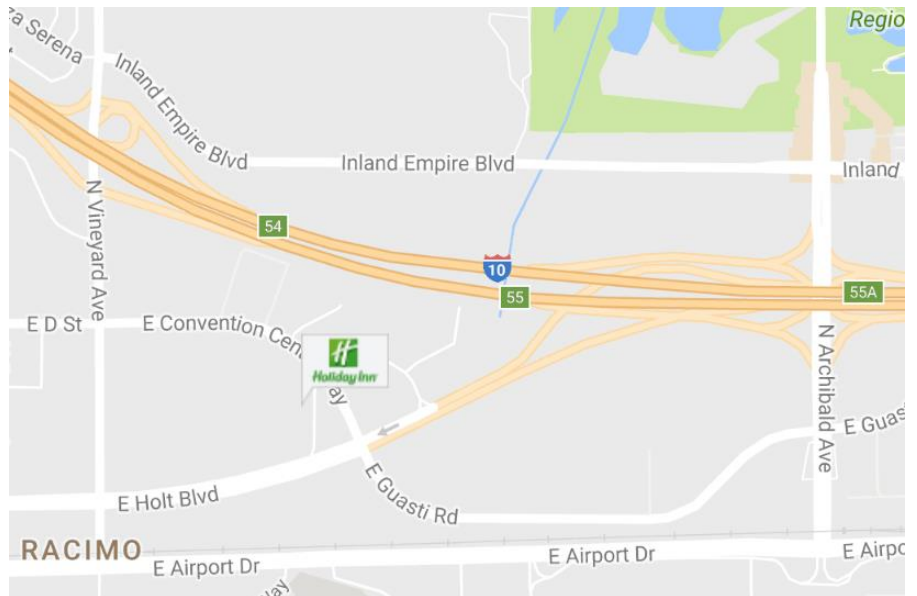
Continental Breakfast, Buffet Lunch,
& snacks/refreshments at breaks.

Cost: \$120 Professionals (\$150 at the door), \$40 Students

Registration: RSVP by September 12, 2016 to Paul Kim at: pkim@geotekusa.com

Registration/Payment Options:

- Register and pay online with Paypal:
<http://events.constantcontact.com/register/event?llr=fcorsuhab&oeidk=a07ed1g0na182155122>
- RSVP to pkim@geotekusa.com and pay cash at the door
- Mail a check payable to ASCE to the Committee Treasurer by September 12, 2016;
Mail to: Mr. Robbie Warner, Geo-Logic Associates
2777 E. Guasti Rd., Suite 1, Ontario, CA 91761, T: (909) 626-2282 ext. 3109
(Please include the names of attendees with check)





Schedule and Outline of Foundation Engineering for Expansive Soil Seminar

Schedule	Topic
07:30 – 08:00	<ul style="list-style-type: none"> Registration
08:00 – 08:15	<ul style="list-style-type: none"> Introductions and Sponsor Presentation
08:15 – 09:45	<ul style="list-style-type: none"> Introduction <ul style="list-style-type: none"> Damage from Expansive Soils Nature of Expansive Soils <ul style="list-style-type: none"> Macroscale Aspects of Expansive Soils Identification Classification of Expansive Soils <ul style="list-style-type: none"> El Test Risk Factor Odometer Testing <ul style="list-style-type: none"> Consolidation-Swell Test Constant Volume Test
9:45 – 10:05	<ul style="list-style-type: none"> Break
10:05 – 10:10	<ul style="list-style-type: none"> Sponsor Presentation
10:10 – 12:00	<ul style="list-style-type: none"> Water Migration in Expansive Soils <ul style="list-style-type: none"> Depth and Degree of Wetting Vadose Zone Modelling Heave Prediction Methods <ul style="list-style-type: none"> Nelson (2010) Method US Army (1983) Method Fredlund (1983) Method SVHeave Program and Examples
12:00 – 13:15	<ul style="list-style-type: none"> Lunch
13:15 – 13:20	<ul style="list-style-type: none"> Sponsor Presentation
13:20 – 15:15	<ul style="list-style-type: none"> Shallow Foundations <ul style="list-style-type: none"> Spread Footing Foundations Stiffened Slab Foundations <ul style="list-style-type: none"> PTI Method WRI Method Design Examples
15:15 – 15:40	<ul style="list-style-type: none"> Break
15:40 – 15:45	<ul style="list-style-type: none"> Sponsor Presentation
15:45 – 17:00	<ul style="list-style-type: none"> Deep Foundations <ul style="list-style-type: none"> Pier and Grade Beam Foundations Design Chart Design Examples
17:00 – 17:15	<ul style="list-style-type: none"> Break
17:15 – 18:00	<ul style="list-style-type: none"> Discussion/ Question and Answer Session {For those who wish to continue the discussion while waiting out traffic}

Sponsors

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