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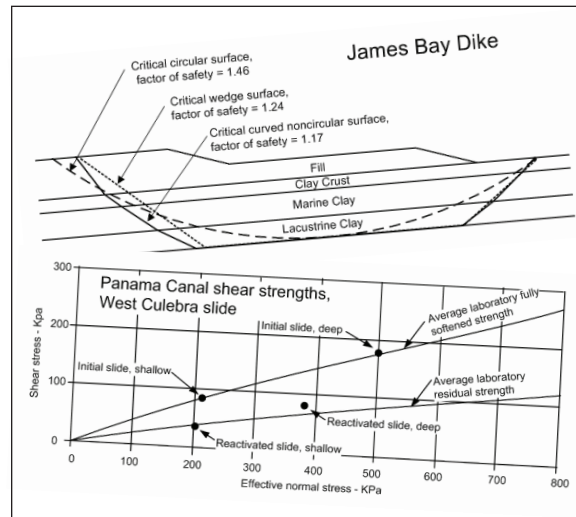
Soil Strength and Slope Stability

December 3-4, 2008
www.cpe.vt.edu/sssf/

Soil Strength and Slope Stability

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The Inn at Virginia Tech and Skelton Conference Center
Blacksburg, VA



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Sponsored by:
Virginia Tech
The Center for Geotechnical Practice and Research
Continuing and Professional Education

Soil Strength and Slope Stability is a practical short course that covers the factors that determine drained and undrained strengths of soils, and methods of evaluating the stability of slopes using computer programs and simple approximate methods.

The course is designed to answer common questions about soil strength and slope stability analyses such as:

- How are soil strengths influenced by factors such as grain size, water content, pore pressures, and sample disturbance?
- How can soil strengths be evaluated using common laboratory tests, in situ tests, or correlations with index properties?
- How do soil strengths vary with time?
- When should undrained strengths be used to evaluate slope stability, and when should drained strengths be used?
- When should slope stability analyses be performed using total unit weights? When should they be performed using buoyant unit weights?
- Which methods of slope stability analysis are most accurate? Which methods are easiest to use?
- How can slope stability be improved using geosynthetics, anchors, or piles?
- Which slope stability computer programs provide the best capabilities for analyzing short term, long term, and rapid drawdown stability? Which afford the most efficient data input? Which provide the best report-ready output?

Who should attend? Engineering staff from project level engineers through senior level managers who wish to refresh and expand their knowledge of the soil mechanics principles involved in soil strength and slope stability, and effective and reliable methods of applying them in practice.

What you'll receive:

- 14 hours of instruction
- Notes for all lectures in a 3-ring binder
- A flash drive with reference materials
- A trial copy of a slope stability computer program useable for 30 days
- An opportunity to interact with the instructors regarding your particular concerns regarding evaluation of soil strength and slope stability
- Refreshments at breaks, lunches both days
- 1.4 CEUs

About the Speakers

Dr. J. Michael Duncan, PhD, PE, University Distinguished Professor, Emeritus, and co-Director of the Center for Geotechnical Practice and Research at Virginia Tech, is a recognized expert in the area of shear strength and slope stability evaluation. He serves as a consultant on slope stability problems for the Panama Canal Authority, the U. S. Army Corps of Engineers, the Bureau of Reclamation, and geotechnical engineering consulting firms and owners in the U. S. and other countries. He served as a member of the team that investigated the levee and I-wall failures in New Orleans during Hurricane Katrina. He has been involved in teaching and research on shear strength and slope stability since 1965.

Dr. Thomas L. Brandon, PhD, PE, has been a faculty member at Virginia Tech since 1985. At Virginia Tech he is the director of the W. C. English Geotechnical Research Laboratory and teaches courses on shear strength, slope stability, laboratory testing, and earth pressures and foundations. His research involves shear strength of soils, in situ testing, geosynthetics, and thermal properties of soils. Professor Brandon has been a consultant to various engineering firms and government agencies, regarding stability and seepage in dams, levees, retaining walls and bridge abutments. He worked with Professor Duncan on investigation of the failures of levees and flood walls in New Orleans during Hurricane Katrina, and is continuing to work on stability and seepage problems in the Hurricane Protection System in New Orleans.

Matthew D. Sleep has his Bachelor's degree in Geological Engineering from the University of Mississippi, and his Master's degree in Geotechnical Engineering from Virginia Tech. He was employed by the U. S. Army Corps of Engineers for 3 years, and is working toward his PhD degree in Geotechnical Engineering at Virginia Tech. He has extensive experience with computer analyses of seepage and slope stability.

For More Information

For further technical information about the short course, contact Lisha Farrier at phone (540) 231-5052, or e-mail: lfarrier@vt.edu. For all other information, please contact Sam Linkous (540) 231-8569.

Virginia Tech does not discriminate against employees, students, or applicants for admission or employment on the basis of race, gender, disability, age, veteran status, national origin, religion, sexual orientation, or political affiliation. Anyone having questions concerning discrimination should contact the Office for Equal Opportunity. If you are a person with a disability and require any auxiliary aids, services, or other accommodations for this workshop, please discuss your accommodation needs with Sam Linkous at (540) 231-8569 by two weeks prior to the course.

VT/017001/0908/8.4M/29

Lecture Schedule

1. Soil mechanics principles governing slope stability
2. Mechanics of limit equilibrium methods
3. Drained shear strength of cohesionless soils
4. Drained shear strength of cohesive soils
5. Undrained strength of cohesive soils – part 1
6. Undrained strength of cohesive soils – part 2
7. Undrained strength of cohesive soils – part 3
8. Water pressures and unit weights for slope stability analyses
9. Use of back analysis in slope stability studies
10. Commonly encountered difficulties with computer analyses of slope stability
11. Analysis of the stability of reinforced slopes
12. Computer-based slope stability analysis – part 1
13. Computer-based slope stability analysis – part 2
14. Discussion of case histories and questions presented by course attendees

Visit www.cpe.vt.edu/sss/ for a detailed course agenda

Location and Lodging

The short course will be held at The Inn at Virginia Tech and Skelton Conference Center, 901 Price's Fork Road on the Virginia Tech Campus. A block of discounted lodging rooms is being held at The Inn at Virginia Tech at a special rate of \$119 plus tax for a single or \$139 plus tax for a double lodging room. The rooms are reserved and available at this rate until **November 8, 2008**. To reserve please call (540) 231-8000 or 1-877-200-3360 and mention the name of the short course. Free parking will be provided.

Registration Information

The registration fee is \$950 (\$475 for employees of CGPR member firms). Please complete the attached form and return to the Conference Registrar by **November 26, 2008**. You may also register online at: www.cpe.vt.edu/sss/.

Note: Payment of registration fees is required prior to program attendance. Registration will be processed when payment is received. **Refund Policy:** Requests for refunds will be honored when received seven calendar days prior to the program. However, another person may be substituted at any time for this program. A \$75 administrative fee will be deducted for cancellations. In the unlikely event that this program is cancelled or postponed due to insufficient enrollments or unforeseen circumstances, the university will fully refund registration fees but cannot be held responsible for any other expenses, including cancellation or change charges assessed by airlines, hotels, travel agencies, or other organizations.

For weather or disaster-related program cancellation or postponement information, please call 540-231-9489.

Registration Soil Strength and Slope Stability

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Please print or type—complete a separate form for each participant or register online at: www.cpe.vt.edu/sss/.

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Title _____

Company _____

Company's FID No.* _____

Address _____

City _____ State _____ Zip _____

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Signature _____

Registration Fee: Registration will be processed when payment is received.

Non-member—\$950

CGPR Member—\$475

Method of Payment:

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Phone (540) 231-5182
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*FID number necessary to process a refund payable to a company, agency, or government agency.

The information you provide is subject to the Freedom of Information Act guidelines.

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