



FHWA News!
New People, New Products, New Focus...

By

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Geotechnical Engineer
FHWA Resource Center

The Resource Center

We are now fully staffed again!

<http://www.fhwa.dot.gov/resourcecenter/teams/geotech/index.cfm>

Atlanta

- Silas Nichols
- Ben Rivers

Baltimore

- Peter Osborn (TST Leader)
- Justice Maswoswe (NEW)

Lakewood

- Barry Siel
- Daniel Alzamora (NEW)

Olympia Fields

- Naser Abu-Hejleh (NEW)

Our Suite of Services

Technical Assistance

Technology Deployment

- Market-Ready Technologies
- Resource Center One-Pagers
- Technologies “New to You”

Training

- National Highway Institute
- Project or Topic Specific
- Other (e.g. Webinar Series)

FHWA NATIONAL GEOTECHNICAL PROGRAM

www.fhwa.dot.gov/engineering/geotech

Geotechnical Engineering

Functional Areas

Earth and Rock Works

- o [Geosynthetics 2007](#)
Hilton Washington, Washington DC
January 16-19, 2007
 - o [1st North American Landslides Conference](#)
Vail, Colorado
June 3 - 8, 2007
- More on [Earth and Rock Works](#)

Earth Retaining Structures

- o [GEC #7 - Soil Nail Walls](#) (.pdf, 7.5 mb)
- More on [Earth Retaining Structures](#)

Geotechnical Hazards

- o [Interstate Technical Group on Abandoned Underground Mines](#)
 - o [Unknown Bridge Foundations Summit](#)
- More on [Geotechnical Hazards](#)

Ground Improvement

- o [Innovative Technology for Accelerated Construction of Bridge and Embankment Foundations in Europe](#) (.pdf, 8.3 mb)
- More on [Ground Improvement](#)

Structural Foundations

- o [31st Annual Conference on Deep Foundations](#)
Omni Shoreham Hotel, Washington, DC
October 4-6, 2006
 - o [Micropile Design and Construction](#)
- More on [Structural Foundations](#)

Subsurface Investigation

All Resource Types

Training & Workshops

- o [Micropile Design and Construction](#)
 - o [Webinars](#)
- More on [All Training & Workshops](#)

State Geotechnical Workshops

- o [Southwest Geotechnical Engineers Conference](#)
May 15-18, 2006
Albuquerque, New Mexico
- More on [All State Geotechnical Workshops](#)

Publications

- o [Checklist and Guidelines for Review of Geotechnical Reports and Preliminary Plans and Specifications](#)
- More on [All Publications](#)

Research

- More on [All Research](#)

Geotechnical Conferences

- o [Interstate Technical Group on Abandoned Underground Mines Sixth Biennial Workshop](#)
Rochester, NY
June 14-16, 2006
- More on [Geotechnical Conferences](#)

Software

- o [FoSSA 1.0](#)
- More on [All Software](#)

Featured Items

Related Technologies

- o [ACTT](#)
- o [LRFD](#)

Priority Technologies and Innovations

- o [Continuous Flight Augered \(CFA\) Piles](#)
- o [Expanded Polystyrene \(EPS\) Geofaom](#)

Links

- o [ASCE Geo-Institute](#)
- o [ASFE: The Best People on Earth](#)
- o [Highways for LIFE](#)
- o [Transportation Curriculum Coordination Council \(TCCC\)](#)
- o [National Highway Specifications Website](#)
- o [Transportation Research Board](#)
- o [US Army Corps of Engineers](#)

[[More Related Links](#)]

Sponsors

- o [Office of Bridge Technology](#)
- o [Resource Center](#)
- o [Turner Fairbank Highway Research Center](#)
- o [Federal Lands Highway Divisions](#)
- o [National Highway Institute](#)

Geotechnical Engineering - General Publications

Problems Downloading ISDDC files? Please contact ISDDC directly at <http://isddc.dot.gov/>

Publications Order Information:

- ISDDC web site information is available at the [Electronic Library](#) page.
- The publications with an NTIS number are available through [NTIS](#).
- Limited quantities of FHWA publications are available at the [FHWA Report Center](#).

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| <u>Publication Category</u> | <u>Publication Title</u> | <u>Publication Year</u> | <u>Publication #</u> | <u>NTIS #</u> | <u>View PdfWord</u> |
|-----------------------------|---|-------------------------|----------------------|----------------|---------------------|
| Drilled Shafts | Bored Piles | 1986 | FHWA-TS-86-206 | PB87-164794 | |
| Drilled Shafts | Drilled Shafts for Bridge Foundations | 1992 | FHWA-RD-92-004 | | |
| Drilled Shafts | Drilled Shafts: Construction Procedures and Design Methods | 1999 | FHWA-IF-99-025 | PB97-183974 | (122.4 MB) |
| Drilled Shafts | Handbook on Design And Construction of Drilled Shafts Under Lateral Load | 1984 | FHWA-IP-84-11 | PB85-201085 | |
| Drilled Shafts | Load Transfer for Drilled Shafts in Intermediate Geomaterials | 1995 | FHWA-RD-95-172 | | |
| Expansive Soils | A Review of Engineering Experiences with Expansive Soils in Highway Subgrades | 1975 | FHWA-RD-75-48 | PB76-248658/AS | (10 MB) |
| Expansive Soils | An Evaluation of Expedient Methodology for Identification of Potentially Expansive Soils | 1977 | FHWA-RD-77-94 | PB77-289164/AS | |
| Expansive Soils | An Evaluation of Methodology for Prediction and Minimization of Detrimental Volume Change of Expansive Soils in Highway Subgrades | 1979 | | | |
| Expansive Soils | An Investigation of the Natural Microscale Mechanisms That Cause Volume Change in Expansive Clays | 1977 | FHWA-RD-77-75 | PB77-291782/AS | |
| Expansive Soils | An Occurrence and Distribution Survey of Expansive Materials in the United States by Physiographic Areas | 1976 | FHWA-RD-76-82 | PB76-265230/AS | (1.5 MB) |
| Expansive Soils | Expansive Soils in Highway Subgrades, Summary | 1980 | FHWA-TS-80-236 | | |

Geotechnical Engineering Circulars

GEC No. 1 – Dynamic Compaction

GEC No. 2 – Earth Retaining Systems

GEC No. 3 – Design Guidance: Geotechnical Earthquake
Engineering for Highways

GEC No. 4 – Ground Anchors & Anchored Systems

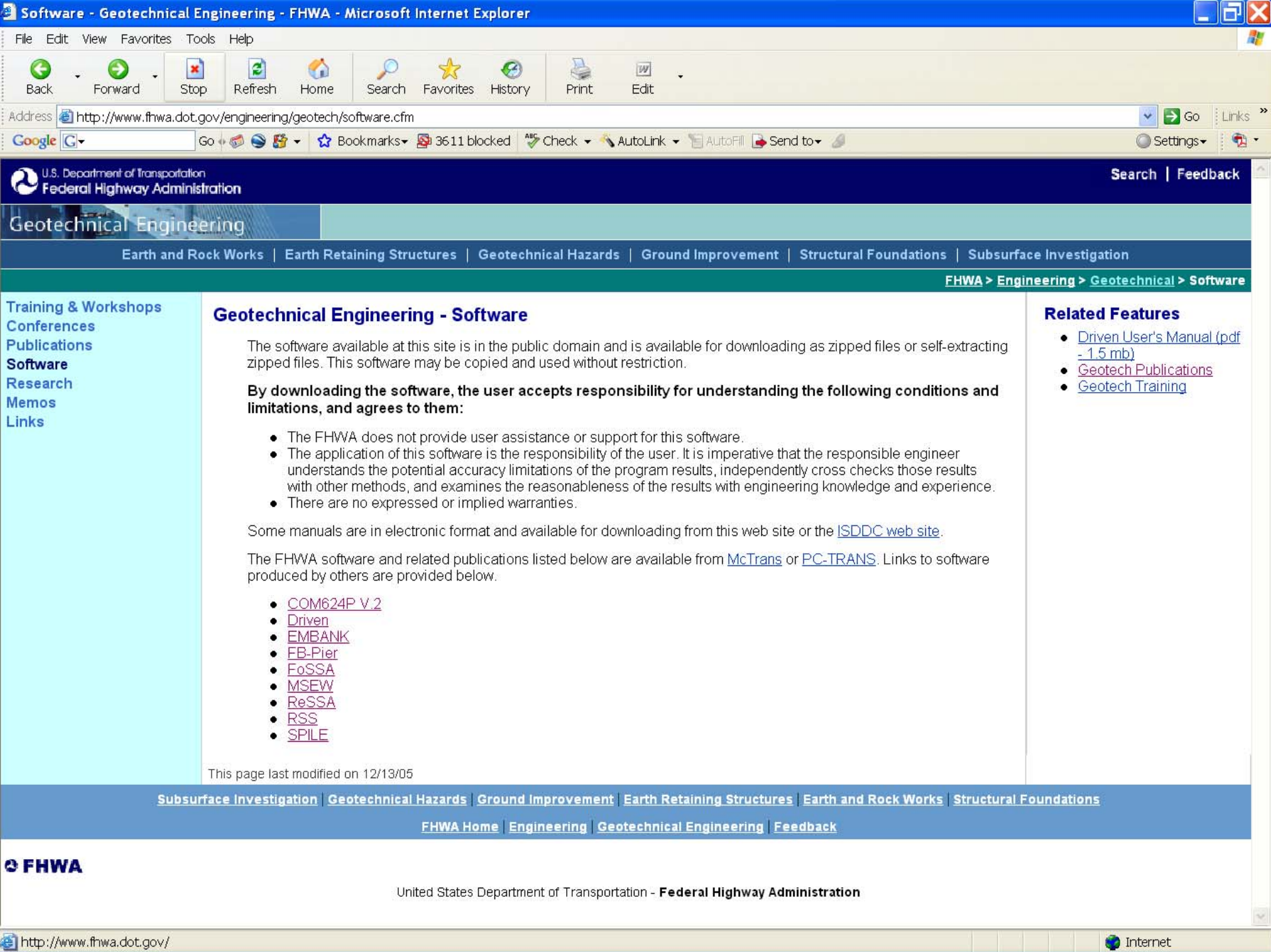
GEC No. 5 – Soil and Rock Properties

GEC No. 6 – Shallow Foundations

GEC No. 7 – Soil Nailing

GEC No. 8 – Design and Construction of Continuous Flight Auger
(CFA) Piles (Fall 2006)

GEC No. 9 – Deep Foundations for Lateral Load (Summer 2007)



Geotechnical Engineering

- Training & Workshops
- Conferences
- Publications
- Software
- Research
- Memos
- Links

Geotechnical Engineering - Software

The software available at this site is in the public domain and is available for downloading as zipped files or self-extracting zipped files. This software may be copied and used without restriction.

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- The FHWA does not provide user assistance or support for this software.
- The application of this software is the responsibility of the user. It is imperative that the responsible engineer understands the potential accuracy limitations of the program results, independently cross checks those results with other methods, and examines the reasonableness of the results with engineering knowledge and experience.
- There are no expressed or implied warranties.

Some manuals are in electronic format and available for downloading from this web site or the [ISDDC web site](#).

The FHWA software and related publications listed below are available from [McTrans](#) or [PC-TRANS](#). Links to software produced by others are provided below.

- [COM624P V.2](#)
- [Driven](#)
- [EMBANK](#)
- [FB-Pier](#)
- [FoSSA](#)
- [MSEW](#)
- [ReSSA](#)
- [RSS](#)
- [SPILE](#)

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Related Features

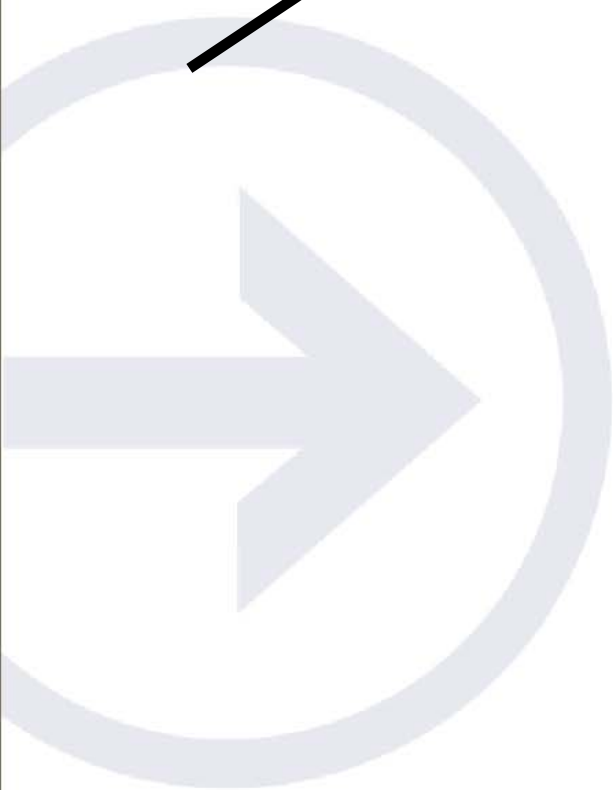
- [Driven User's Manual \(pdf - 1.5 mb\)](#)
- [Geotech Publications](#)
- [Geotech Training](#)

NHI Training Courses

Twenty-one (21) active courses available covering design, construction and inspection of geotechnical features

Currently updating several courses:

- 132012 – Soils and Foundations Workshop
- 132014 – Drilled Shafts
- 132021/22 – Design and Construction of Driven Piles (Now Available!)
- 132034 – Ground Improvement Methods (Now Available!)
- 132040 – Geotechnical Aspects of Pavements (Now Available!)
- 132078 – Design and Construction of Micropiles (Now Available!)
- 130082 – Load and Resistance Factor Design (LRFD) (Now Available!)
- 132036 – Earth Retaining Structures (Now Available!)
- 132039 – Geotechnical Aspects of Earthquake Engineering



Quick Search

Keyword:

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Advanced Search

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Quick Search
 Enter a keyword, numeric prefix or course number, and/or session location in the appropriate field(s), then click **Search**. Use the [advanced search](#) function to further limit your search.

Category Search
 You can also search by category. Simply click the category link to see a list of all the courses in that category.

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Search Criteria: Course Number = 132034

| Course Number | Material Name | Format | Type | Price | Add to Cart |
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| FHWA-NHI-132034 | Ground Improvements Reference Manual Volume I | Hard Copy | REFERENCE MANUAL | \$50.00 | |
| FHWA-NHI-132034 | Ground Improvements Reference Manual Volume II | Hard Copy | REFERENCE MANUAL | \$40.00 | |

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Training materials are included in session enrollment fees and provided at your training session. You do not need to purchase your materials separately.

Training sessions and course material provided at training sessions will continue to be offered to FHWA employees free of charge. However, due to fiscal constraints, NHI is no longer able to provide FHWA employees with free course materials.

We'd love to hear from you.
Please [submit feedback](#) regarding the NHI Web site and services.

Geotechnical Inspector Qualification

NHI #132069 – Driven Pile Foundations

NHI #132070 – Drilled Shaft Foundations

NHI #132079 – Subsurface Investigations (Now Available!)

NHI #132080 – MSE Walls/RSS (Now Available!)

Embankments/Cut Slopes

Anchored Walls/Soil Nail Walls



Geotechnical Engineering Focus Areas

LRFD

- Guidelines and Manuals
- Revised Specifications
- Updated Substructure Course

Extreme Events

- Update of NHI Course 132039 – Geotechnical Aspects of Earthquake Engineering
 - New Seismic Retrofit Manuals
 - New AASHTO Seismic Specification

Geotechnical Engineering Focus Areas

Accelerated Construction

- “Best Practices” Manuals and Guidelines
- Workshops and Training Courses

Construction and Quality Control

- Geotechnical Data Management
- Development of Improved Geotechnical Tools
- Geotechnical Inspector Qualification

Geotechnical Engineering Emerging Technologies

Continuous Flight Auger (CFA) Piles

Micropiles

Column Supported Embankments

Geophysics

Self Consolidating Concrete (SCC)

Intelligent Compaction

Lightweight Fill Materials



Geotechnical Engineering Areas of Interest

Safety

Cost Analysis

High Performance Materials

Asset Management

Risk Management (design and hazards)

Soil/Structure Interaction

Tunnels/Culverts

Health Monitoring

Assessment of Geotechnical Features

Innovative Contracting

Hydraulics

What are our objectives?

Technical assistance requests successfully fulfilled

Anticipate and meet future needs

Produce practical, useable technical products

Research program is re-engineered and revitalized

Adequate staff to meet needs

Thank You!

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