

## PTI RELEASES SLAB-ON-GROUND DESIGN MANUAL, 3RD EDITION

The **Post-Tensioning Institute's (PTI)** third edition of *Design of Post-Tensioned Slabs-on-Ground* incorporates extensive editorial revisions and clarification in its focus on geotechnical design parameters. Outlined are procedures guiding the user to applicable design systems with knowledge of their limitations. For qualified geotechnical and structural engineers, the new technical guide covers design of both ribbed and uniform-thickness post-tensioned, ground-supported foundations.

The manual is divided into eight chapters and six appendices. Topics include Slabs-on-Stable Soils, Geotechnical Investigation, Soil-Structure Interaction and Structural Design Procedure for Shallow Post-Tensioned Foundations. Appendices 3, 4 and 5 provide design examples of residential foundations, all on expansive soil in different climatic situations: dry, wet, and extreme suction profiles. Articulating the entire design process, the examples include plan layouts as well as formulas for completion.

The manual was developed by the PTI Slab-on-Ground Committee chaired by Kenneth Bondy, P.E., S.E. Committee membership from throughout the post-tensioning industry comprises structural engineers, geotechnical engineers and members of the academic community. *Design of Post-Tensioned Slabs-on-Ground* is available for \$41.50 (PTI members) or \$59.50 (public) plus shipping. Orders can be placed through [www.post-tensioning.org](http://www.post-tensioning.org), or PTI's Theodore Neff, Executive Director, 8601 N. Black Canyon Hwy., #103, Phoenix, AZ 85021; 602/870-7540; [info@post-tensioning.org](mailto:info@post-tensioning.org)

## Cayuga eyes new pipe plant

**Cayuga Concrete Pipe** announced a \$3.5 million investment in an advanced plant at its Croydon, Pa., headquarters property. Slated for an early 2006 groundbreaking, the new facility will be an addition to the existing plant, enabling quicker turnaround of orders, precise product dimensions and quality, with more efficient product delivery.

"This unique design will uphold our position as the technology leader for efficient and innovative manufacturing, while providing our customers with precise quality product," says George Hand, East Pipe Group president for **Oldcastle Precast Inc.**, of which Cayuga is a part. The plant will consist of a one-of-a-kind, automated bi-directional packerhead pipe machine, plus customized, automated moving floor, robot-controlled overhead crane and a computerized concrete batching system. Cayuga has partnered with **Elk River Machine Co.** and other equipment makers to develop designs for manufacturing solutions previously unavailable in the marketplace. As a result, the company has applied for two U. S. patents.

With locations in New Britain, Montrose and Croydon, Cayuga Concrete is Pennsylvania's largest concrete pipe producer, offering 12-in. through 144-in. rubber gasket and mortar joint product and elliptical pipe up to 108 in. in diameter. The Croydon plant has been in operation for over 50 years and employs 69 workers.

## SMITH MIDLAND EQUIPS QUANTICO

Smith Midland Corp. of Midland, Va., recently sold its first building under the company's new General Services Administration contract. The Federal Bureau of Investigation purchased its fourth Easi-Span building for use at the FBI Academy located on Quantico Marine Base in Virginia.

"The FBI needed a structure to house and protect special equipment for the purpose of training agents in anti-terror and tactical response driving situations," says Smith Midland Territory Manager Wayne Smith, adding that the company's previous relationship with the FBI helped secure the order, received late last year.

Installed in one day, the 40-ft. x 50-ft. precast structure is 12 feet tall in one half, while the other half is 16 feet tall. Buildings are available in a range of sizes from 6 ft. x 8 ft. to 40 ft. x 170 ft. Custom designs and sizes can be specified for special construction needs.

Easi-Set and Easi-Span structures meet the UL-752 bullet-resistance standard and wind loads up to 130 mph or up to 150 mph (custom). Rated at Seismic Zone 4, they are also fire resistant to a standard fire rating of 1.5 hours (additional protection is available in custom applications). The buildings are available with full A/C, electrical, plumbing and interior packages.

Suitable for a variety of applications, the structures serve as fiber-optic regeneration huts, switching stations, cellular phone sites, weather monitoring stations, military storage units, evidence and ammunition storage sites, pumping stations, water meter enclosures, emergency generator shelters, gate houses, irrigation system housing, food or bottle storage, restrooms, concession stands, sports dugouts, ticket booths, and general or HazMat storage buildings.

## Purdue, Ivy team host WWR web site

With the support of Ivy Steel & Wire, a division of **MMI Products, Inc.**, Indiana's Purdue University has established an educational Web site that promotes a better understanding of the benefits of using welded wire reinforcement (WWR) in concrete. Announcing the launch of [www.wire-reinforcement.com](http://www.wire-reinforcement.com), Purdue research scientist Bob McCullouch expressed appreciation for Ivy's support during development of the site and observed, "Over the years, the welded wire reinforcement industry has encountered many misunderstandings about this product within the design and construction communities. It is our hope that the new Internet resource will help dispel some of the myths associated with using WWR."

The site presents numerous tables, graphs, charts, images, animations, videos and voice narrations to bring clarity and interactivity to understanding the many facets of WWR. It is designed to serve as both an educational site and an on-line resource for design engineers and contractors, offering tools such as design examples, sample specifications, code provisions, splicing information, bends and hooks, and mat information. For contractors, a mat weight calculator (determines weight when mat bar sizes and spacing are entered) and a cost calculator (provides installed cost for various reinforcing options) are featured, as well as information on shipping and storing; handling and lifting; supports and accessories.

Affirms Ivy Vice President Bob May, "The original goal was to promote better understanding of WWR at the engineering design level and encourage broader use of this technology by construction professionals. [Through its] quality and depth, the site has achieved this and more."

