

**Keystone gets approval**

Construction of the Keystone pipeline to transport oil from Alberta's oil sands to the U.S. is expected to begin next quarter following a Record of Decision by the U.S. State Department. TransCanada, Calgary, Alberta, proposed the \$5.2 billion, 1,830 mile Keystone pipeline from Alberta to Patoka, IL, in February 2005. In early 2006, the company added a 291 mile extension from Nebraska to Oklahoma. Last October, the company awarded \$3 billion in contracts for major materials and pipeline construction. The Presidential Permit for crossing the international boundary was expected to be issued by late March.

**Kenny uses Inliner to renew aging sewers**

Kenny Construction has begun work under three term contracts valued at \$26 million each for the city of Chicago, Department of Water Management (DWM) to renew aging wastewater pipe in the city's 100-year-old system.

Kenny is using Inliner Technologies' method of cured-in-place pipe (CIPP) to rehabilitate up to 360,000 feet of combined sewer pipe over a five-year period, with each contract having a two-year option to renew.

The city is home to more than 4,400 miles of sewer, which has deteriorated throughout the years and is prone to collapse. DWM divided the rehabilitation area into three districts - North, Central and South. The contracts call for renewal of up to 120,000 feet of combined sewer pipe in each district to restore structural integrity and reduce inflow and infiltration (I/I). Most pipes in these areas range between 10 and 48 inches in diameter.

The DWM is utilizing robotic cameras to record pipe conditions, investigating which areas need to be targeted first for rehabilitation. Kenny will then renew the pipes using Inliner's cured-in-place pipe method.

The contract also encompasses lateral lining and point repair work, with large-diameter pipe lining being bid separately.

**Aecon awarded utilities distribution contract from Union Gas**

Aecon Group Inc. announced that its Infrastructure Division has been awarded a three-year alliance contract renewal from Union Gas totaling approximately \$150 million.

Under the terms of the contract, Aecon will install mains, service lines and distribution system pipelines, perform engineering pipeline

project work, assist with integrity and maintenance of Union Gas' distribution pipeline infrastructure, and install standard distribution stations. The scope of the contract has increased and will now include the construction of some larger diameter pipeline projects.

The majority of the work will be done in Southwestern Ontario with a focus on the Windsor, Chatham, London, Sarnia, Waterloo and Brantford areas, with projects in Northeastern Ontario as well.

**Conservation groups sue over proposed pipeline**

A coalition of environmental groups and the Pitkin County Commissioners filed suit in March with the U.S. District Court in Denver to keep a proposed natural-gas pipeline out of three roadless areas on national forest land near the town of Silt, CO. Coalition leaders say a 100-foot-wide construction corridor for the Bull Mountain pipeline violates the 2001 federal Roadless Rule, which limits road-building on designated public lands, and say the suit could serve as a national test case for the rule.

The U.S. Forest Service and Bureau of Land Management approved the 25.5-mile pipeline route in January. It would cross the 120,000-acre Clear Fork Divide roadless area, which connects the Grand and Battlement mesas to the West Elk Mountains. The proposed route would follow a 1980s-era pipeline and connect to existing underground pipelines on its way north to merge with a main gas pipeline along I-70. The route approved by the federal agencies cuts through eight miles of the Clear Creek, East Willow and Baldy Mountain roadless areas.

**PLCA scholarships awarded**

The Pipe Line Contractors Association (PLCA) recently awarded the following recipients scholarship awards from the PLCA Scholarship Fund for 2008: Kirolos Abdel-Malek, son of Samir Abdel-Malek, ARB Inc.; Kristen Baus, daughter of Jay Baus, Michels Corp.; Jonathan Berti, son of Thomas Berti, R.L. Coolsaet Construction Co.; Aaron Bullock, son of Darinda Bullock, Latex Construction Co.; Lucas Farrell, son of Raphael Farrell, Miller Electric Mfg.; Lisa Guy, daughter of Sharon Guy, Delta Gulf Corp.; David Heffelfinger, son of Harold Heffelfinger, ITW Hobart Brothers; Ned Thomas, son of Kelcey Thomas, H.C. Price Co.; Angelo Trivisonno, son of Robert Trivisonno, The Lincoln Electric Co; and Jessica Westerman, daughter of Jim Westerman, Pipeline Supply Company. ■

**ISTT Appoints New Executive Director**



The International Society for Trenchless Technology (ISTT) has appointed a new executive director, John Hemphill, to succeed Executive Secretary John Castle, who is retiring, effective June 1. Hemphill currently serves as executive director of the North American Society for Trenchless Technology (NASTT), a position he has held since 2000. NASTT is one of the largest national societies affiliated with ISTT which, under Hemphill's guidance, has consolidated its position as

the leading trenchless technology organization in the region.

Hemphill has over 35 years experience in management and policy analysis in the fields of engineering and energy. He was executive director of the Business Council for Sustainable Energy where he advocated clean energy solutions at international forums on behalf of a U.S. "not-for-profit" association of businesses. At the International Energy Agency (IEA) in Paris, France, he served as assistant director for Energy Policy, where he worked with energy officials of member countries to promote sound energy policies.

Hemphill is a member of the American Society of Civil Engineers and NASTT. He holds undergraduate and graduate degrees in Civil Engineering from the University of Oklahoma and the University of Maryland, respectively.

**Construction Challenge Winners Announced**

An Oklahoma team has won the first ever Construction Challenge held at the CONEXPO-CON/AGG 2008 trade show in Las Vegas, NV. Teams from Illinois, New Jersey, Ohio and Texas also took home top honors in the teen competition, which was initiated by the Association of Equipment Manufacturers (AEM).

More than 50 student teams competed at the event, held March 11-13, 2008 at the Las Vegas Convention Center. The teams built pieces of "construction equipment," debated other teams on infrastructure issues and created interactive educational products to help spread the word about construction careers and equipment.

First place went to a team from Perry High School in Perry, OK. Team members were Amy Bieberdorf, Kelsey Cave, Evan Williams, Cassandra Bratcher, Daniel Cross, Dakota Johnson and Trevor Kukuk. Each team member won a \$2,000 scholarship and a computer.

A total of seven teams won titles and prizes. The team taking 3rd Place Overall, the only all-girls team in the competition, also won first place in two of the three challenges, Dialogue and Product Development. Their product, a coloring book for young girls, will now be used by the construction industry as an educational tool to introduce more young people to careers in construction.

The construction industry will create more than one million new jobs by 2012, but currently there are not enough skilled workers to fill all the jobs. AEM, in partnership with Destination ImagiNation Inc., initiated the Construction Challenge specifically to engage the interest of teens in careers in the industry through a hands-on, educational experience. The Construction Challenge offered a chance for students, teachers, parents and community leaders to learn more about this growing industry. They also learned about the industry's need for skilled employees to deal with infrastructure problems of crumbling bridges, overcrowded roadways and aging water and wastewater systems.



### CIGMAT 08 A Success

A one-day conference and exhibition was organized by the Center for Innovative Grouting Materials and Technology (CIGMAT) and the Department of Civil and Environmental Engineering, University of Houston on "Construction, Geotechnical and Flooding Issues in Houston & Other Major Cities" at the University of Houston on March 7. More than 300 were in attendance and over 16 speakers were invited. Attendees represented owners, consulting engineers, material supplies, contractors and academia who came from many parts of the U.S. and Canada.

After opening remarks by C. Vipulanandan, chairman and professor, director of CIGMAT on the need for such a conference, the general session focused on public works and transportation issues in the region. Plans for maintaining and expanding city of Houston water and wastewater facilities and funding highway projects in the region for years 2007-08 were discussed. The challenges in maintaining civil infrastructure and navigation channels in the Gulf Coast region by the USACE were also discussed. Among the speakers in the morning session were Michael S. Marcotte, director of Public Works, city of Houston; Gary Trietsch, district engineer, TxDOT; and Peter Key from the Toll Road Authority.

Topics covered in the four technical sessions included: "Asset Management of Water and Wastewater Systems in Major Cities"; "Condition Assessment of 60-inch PCCP Water Line in Houston";



and "Environmental Technology Verification Program-Water and Wastewater" (including the grouting and protocols developed by CIGMAT). Two panel discussions also were held on "Management of Major Water and Wastewater Systems" and "Challenges in Maintaining Small and Large Public Works Infrastructures."

A second panel discussed "Hurricane and Geotechnical Issues" with a focus on emergency management, faulting, subsidence and effect of stress on pavement performance. Several case studies on the influence of trees on foundation performance were presented.

Professor Michael Duncan from Virginia Tech, Blacksburg, VA, delivered the third Mike O'Neill Lecture on "Past, Present and Future of the Panama Canal." This was followed by a presentation by C. Vipulanandan on "Geotechnical Engineering Challenger in the Houston Area." A fourth session was presented on stormwater management and flooding issues related to the Houston, Dallas and San Antonio areas.

A reception was held in the exhibit area displaying posters on research activities at CIGMAT and the Department of Civil and Environmental Engineering. Several grouting, pipe, material supply and waste water rehabilitation companies participated in the exhibition.

Proceedings will be available on the CIGMAT web site at [www.cigmat.cive.uh.edu](http://www.cigmat.cive.uh.edu). The next CIGMAT conference will be held on March 6, 2009, at the University Hilton, University of Houston.

### National Database Of Water Pipe Infrastructure In Works

A group of Virginia Tech faculty and researchers are working to create the prototype of a national internet-based geospatial database of underground water pipes with funding from the U.S. Environmental Protection Agency and the National Science Foundation.

The project is a collaboration between Sunil Sinha, project leader and associate professor in the Via Department of Civil and Environmental Engineering (CEE), Randy Dymond, associate professor in the CEE department and co-director of Virginia Tech's Center for Geospatial Information Technology (CGIT), Thomas Dickerson, CGIT research associate, and Rahul Vemulapally, CEE graduate student.

"Underground water pipes are the nation's arteries" said Sinha. "Unfortunately, they are not in a very healthy state. About 40 percent of the water is lost because of leaks and other structural damage."

Sinha added that it is difficult to monitor and maintain underground pipes, but a standardized, web-based geospatial database of the existing infrastructure information would be very helpful to water utility companies and municipalities.

The Internet prototype application will be created based on underground water and sewage pipe information supplied by three of the 17 cities that are partnering with Sinha and CGIT. "We are currently receiving data in different formats from Atlanta, Pitts-

burgh and Seattle; the three pilot cities," said Dymond. "One of CGIT's jobs is to take this diverse information and create a standard format that could be used by all partnering cities."

The geospatial database will include rich, interactive maps of the water pipe infrastructure, as well as data exploration tools and reports. "Users will be able to pan and zoom or easily identify attributes such as pipe diameters, size or current condition," explained Dickerson.

The development of the geospatial database application is part of a group of large-scale water infrastructure projects that Sinha is managing at Virginia Tech. The overall objective of the ongoing water infrastructure research at Virginia Tech is to improve the decision-making process as it applies to water pipe infrastructure asset management and renewal programs.

The data received from the partnering cities are stored on the San Diego Supercomputer Center managed by the National Science Foundation and supervised by the U.S. Department of Homeland Security. Only Virginia Tech has full access to the data through the team of faculty and researchers involved in the project. All participating utilities have limited access to this national water pipe infrastructure database.