

2

President's Message

KCI has successfully weathered the economic storm based on the dedication of our employees, the trust of our clients, and the success of our projects.

Flood Watch

KCI's multi-discipline engineering teams are helping the Army execute the new requirements of the National Levee Safety Program.

Office Updates

New wins, plus KCI is providing geotechnical design services for the University of South Florida Polytechnic.

3

Many Shades of Green

The new Robinson Nature Center embraces sustainability in form and function.

4

People, Professional Notes, Awards, and Community Service

Race to the Finish

Shoring Up Baltimore's Water Infrastructure before the Grand Prix puts the Rubber to the Road

Ladies and gentlemen, start your engines and buckle up for the ride of your life over Labor Day weekend when Baltimore hosts the IZOD IndyCar and American Le Mans series in the first-ever Baltimore Grand Prix. But as the checkered flags fly and champagne bottles pop, many may be unaware of the behind-the-scenes sprint required to prepare the city's above and underground infrastructure for the event, including an expedited design by KCI to replace water mains running under the proposed track.

Threading through downtown, the challenging two-mile street course needed extensive repaving to transform the Inner Harbor area into a world-class racing venue. But like many cities around the country, lurking underneath the surface is a highly congested maze of utility lines, some dating back more than a century. Baltimore's Bureau of Water and Wastewater recognized and quickly acted on the opportunity to repair and replace aging water mains along the track alignment simultaneously with the roadway construction. The city engaged KCI to prepare plans to replace various water mains up to 20 inches in diameter that were already scheduled in the city's multi-year capital improvement program.



Engineers coordinated with the Maryland Stadium Authority to minimize impacts to pedestrian and vehicular traffic near Oriole Park at Camden Yards. Plans called for tunneling under a major transportation artery to replace the water main that provides water to the stadium, while keeping all vehicular lanes open to traffic.

Plans were developed on an expedited timeline, as road work had already begun. "Our engineers stayed ahead of the construction crews and worked with them to adjust phasing of the paving to accommodate the water main work," said KCI Vice President Timothy W. Wolfe, PE, BCEE. "We were available 24/7 and responded to calls around the clock to ensure construction went smoothly."

Designs had to avoid the 115 kilovolt transmission line that feeds electricity to nearly one quarter of the city. "We had to perform test pitting and additional assessments

[See Race, page 2]

President's Message



Greetings to our employees, friends and clients! KCI has weathered the economic storm in excellent shape and is positioned for a strong finish in the second half of the year. We want to thank our employees for their hard work, commitment and sacrifice. We have a tremendous workforce of dedicated professionals without whom we could not be successful. We also want to thank our clients for their trust and continued opportunities to support their programs through successful projects and consultation—without you, our clients, we also cannot be successful.

We are excited to showcase three projects that contributed greatly to our success through technical achievement and client service. Our infrastructure work associated with the Baltimore Grand Prix is typical of engineering projects throughout the world—below-ground improvements that often go unseen but are absolutely critical to the success of our cities and states. KCI provided construction oversight for the new Robinson Nature Center, which will endeavor to achieve a LEED platinum certification by the U.S. Green Building Council. Our work inspecting flood risk reduction projects for the U.S. Army Corps of Engineers supports the National Levee Safety Program in fortifying a piece of our national infrastructure vital to the public safety of many of our citizens.

Along with our successes, KCI continues to emphasize quality in our project deliverables and our internal processes. In September, our entire company will undergo an extensive ISO audit process for companywide recertification. Quality and best practices are a cornerstone to our business, and we look forward to announcing our successful recertification.

Whether working at a local or national level to improve our infrastructure, educating the public about our environment, protecting our citizen's public safety or focusing on quality, we are entering the second half of the year with a bullish attitude and a real sense of excitement about our company. Ladies and gentlemen, start your engines indeed!

Sincerely,

Nathan J. Beil, PE/D.WRE

[Race, from page 1]

for crossing the high power lines," said Wolfe. "To ensure adequate clearance, we worked closely with Baltimore Gas and Electric's engineering staff."

The water main project was completed in less than four months to ensure the roadway work was finished in time for the race. The bureau's proactive response not only saved the city tax dollars by expediting portions of their capital improvement program and combining construction projects, but also strengthened the city's confidence in the integrity of the water infrastructure under the track, as Baltimore sits on the world stage.

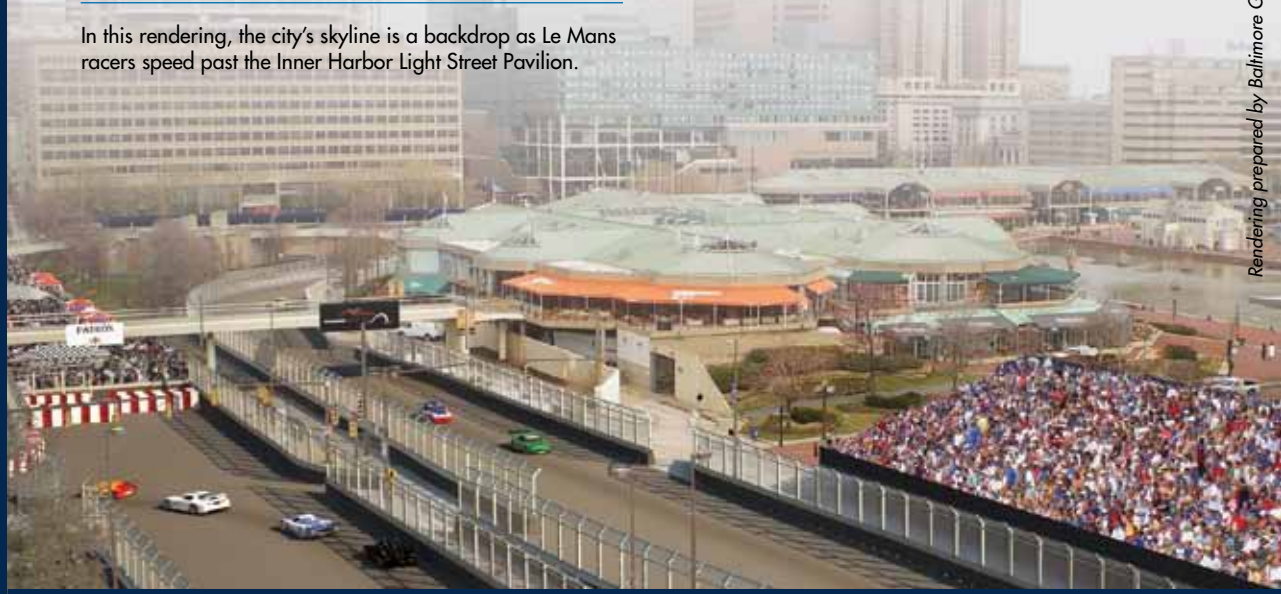
"An event of this caliber is expected to bring more than 100,000 race fans into Baltimore with an anticipated economic impact of more than \$60 million dollars for the city and surrounding area," said Jay Davidson, Baltimore Grand Prix President and CEO. "In addition to the fans in attendance, the IZOD IndyCar Series and the American Le Mans Series presented by Patrón have a viewing audience that spans over 200 countries, which is

In this rendering, the city's skyline is a backdrop as Le Mans racers speed past the Inner Harbor Light Street Pavilion.



Scheduling of water main replacements ensured uninterrupted service during Orioles' home games as construction continued through the baseball season.

a huge worldwide platform to showcase the city of Baltimore."



Rendering prepared by Baltimore Grand Prix

FLOOD WATCH

KCI Inspects Miles of Flood Risk Reduction Projects Under New Program



Two KCI crews spent 34 days in the field, inspecting 116 miles of levees, like the Wyoming Valley, Pa., system shown here, which included 2.5 miles of floodwall, 35 pump stations and approximately 1,000 drainage structures.

This year, a rash of severe storms and unprecedented rainfall have filled our nation's waterways to record levels. Thanks to the U.S. Army Corps of Engineers (USACE)-led program first enacted in 1917, a network of levees and floodwalls channels high waters, reducing flood risks for many cities, communities and properties. Working with the Baltimore District Corps, KCI has inspected more than 100 miles of these flood damage reduction systems throughout the Chesapeake Bay watershed.

The USACE continually refines and reinvigorates its flood control procedures in response to legislative changes, technical innovation, and catastrophic disasters like hurricanes Katrina and

Office Updates

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FLORIDA

KCI is providing geotechnical design services for multiple facilities for the University of South Florida Polytechnic.



Tampa Bay Water selected KCI for a four-year, \$370,000 contract for subsurface utility engineering services.

Under a master services agreement with nsoro/MasTec LLC, KCI was awarded the South Florida Market for AT&T's Generator Project.

GEORGIA

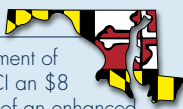
As a subconsultant to SFL+a Architects, KCI will be providing LEED commissioning, data and



fire protection services for a new warriors in transition complex at Fort Stewart for the U.S. Army Corps of Engineers Fort Worth District.

MARYLAND

The Baltimore City Department of Public Works awarded KCI an \$8 million contract for design of an enhanced nutrient removal upgrade at the Back River Wastewater Treatment Plant. The city also selected KCI for a four-year, \$3 million open-end contract for solid waste facilities management services and a \$1 million on-call contract for roadway reconstruction and resurfacing design.



Howard County, managing partner of the One Maryland Inter-County Broadband Network (ICBN) project, awarded KCI Convergent

Technologies one of four contracts to construct a minimum of 150 miles of fiber optic cable within the central Maryland region.

The Maryland Department of General Services selected KCI to perform construction scheduling and claims analysis under a \$300,000 contract.

KCI will be providing information technology consulting and technical services to the Baltimore County government under a five-year, \$500,000 contract.

The Maryland State Highway Administration selected KCI for a six-year \$2 million open-end agreement for plat preparation and metes & bounds survey services statewide.

NORTH CAROLINA



The North Carolina Department of Transportation awarded KCI several contracts, including construction engineering and inspection services for three interchange projects in Jacksonville, NBIS inspection for municipal bridges, and corridor reviews for potential stream and wetland restoration associated with 34 bridge replacement sites. The agreements total more than \$5 million in fee.

KCI will prepare design plans to replace the Texas Road Bridge over Flat Creek for the town of Montreat.

The North Carolina Ecosystem Enhancement Program awarded KCI two contracts totaling \$2.7 million for the Jacob's Ladder

Many Shades of Green

New Robinson Nature Center Strives for Highest LEED Rating



The Robinson Nature Center was designed not just for sustainability, but as a celebration of nature, by bringing the environment inside through even the smallest touches, like the stairwell flooring that features a wood grain pattern or the reception desk made from pressed sunflower seeds.

When its doors open to the public this fall, the new James H. and Anne E. Roberson Nature Center will encourage its visitors to embrace and connect with the environment through its many exhibits and its sustainable building, both of which illustrate a strong passion and respect for nature. KCI provided construction oversight and inspection services for the 23,000-square-foot building and 18-acre site, which was designed and built to meet the requirements of the U.S. Green Building Council's highest certification, LEED Platinum.

When building such a facility was still little more than an ambitious goal of the Howard County Department of Recreation and Parks, the property's previous owner, Anne Roberson, set her mind to protecting her homestead from development. Upon her death in 2005 she willed the tract, located centrally between Baltimore and Washington, to the newly-established Roberson Foundation with direction to sell the property to the county in conjunction with a \$1 million donation of seed money for a new nature center.

KCI worked with the county, architect GWWO Inc., and contractor Forrester Construction Company to complete the sustainable facility, which features

a host of green technologies, including photovoltaic cells that provide between 12 and 17 percent of the building's power, geothermal heating and cooling, and a vegetated green roof.

"In pursuing a high level of LEED certification, every material needs to count for points," said Brandon M. Murdock, LEED AP, KCI's on-site project engineer. "The contractor set up specific LEED coordination meetings to make sure specifications were followed and the recycling program was enforced down to items consumed during lunches and breaks." KCI staff documented that more than 75 percent of the construction waste, by weight, was sorted and recycled.

Every aspect of construction was monitored to verify that materials met LEED requirements. "We had to get invoices noting where the materials were not only shipped from, but where all the components were harvested," said Murdock. "It was critical that no non-compliant products were brought on site."

The building is the foundation of a complete learning experience, featuring exhibits that were designed for hands-on manipulation. Visitors begin their nature tour at the canopy level of a mature tree and follow the path down to the forest floor, then through nocturnal displays and into a 50-seat planetarium. The center will also boast a butterfly house, indoor beehive and a hands-on discovery room where children can interact with a host of different materials, including several donated snake skins and deer skulls.

"The Roberson Nature Center is truly one of the many jewels in our park system," said Howard County Executive Ken S. Ulman. "Everything about this place is special: the environmentally sensitive building design, the exhibits tailored to inform and fascinate children of all ages, and the beautiful, natural layout of the surrounding property all add up to a regional destination no one should miss."

KCI's on-site inspector Tom Hackett, who has a personal connection to the site, couldn't agree more. "When I was an electrician, 15 or 16 years ago, and wiring a building just down the street, I would see

Wood certified by the Forest Stewardship Council came from within a 500-mile radius of the site.



[See Nature, page 4]



Prior to and during the inspections, KCI met the local sponsors including the Borough of Elkland, responsible for O&M for this 2.9-mile long flood risk management system in Pennsylvania.

Rita. Their most recent advance included development of the National Levee Safety Program, which requires a periodic inspection of each system every five years, on top of routine examinations. These more comprehensive inspections aid the Corps' district offices in communicating with the local sponsors—agencies responsible for operation and maintenance (O&M) of the levee systems—and public about overall conditions and needed actions. KCI helped the

Baltimore and Philadelphia Districts execute the new program by inspecting levee systems in Pennsylvania and New York.

Before setting out in the field, engineers collected available data, interviewed sponsors and reviewed design criteria to develop pre-inspection packets. "All information that was procured, including plans, as-builts, calculations, previous inspection reports, and operations and maintenance documents, was digitally scanned and catalogued," says Raymond J. Krahe, PE, CFM, KCI's project manager. "The research and input from the sponsors was critical in establishing a baseline in present day."

Two multi-disciplined teams walked every foot of each system, inspecting levee embankments, drainage structures, floodwalls and pump stations. Crews included a water resource, structural and geotechnical engineer, as well as a mechanical/electrical engineer,

[See Levee, page 4]

The Baltimore District is responsible for flood risk reduction systems in the 64,000-square-mile Chesapeake Bay watershed, which extends into six states and includes more than 100,000 tributaries. Systems inspected by KCI are shown in red.



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and Jacob's Landing stream restoration full-delivery projects in Rowan County.

As a subconsultant to Guerrero Builders, KCI will provide mechanical/electrical engineering services for the demolition of 150 housing units at Seymour Johnson Air Force Base.

OHIO

Summit County awarded KCI a \$500,000 general engineering contract for bridges.



KCI is working Chambers, Murphy & Burge Restoration Architects on the adaptive re-use of the sheriff's residence building in Belmont County.

PENNSYLVANIA

KCI is conducting a power study and developing one-line diagram upgrades for Pennsylvania State University.



The Pennsylvania Department of Transportation awarded KCI a \$1 million open-end contract for construction inspection in District 4-0.

Under two contracts, the township of Cheltenham selected KCI to provide site inspection on-call services and inspection services to implement the township's corrective action plan.

TENNESSEE

The Tennessee Stream Mitigation



Program selected KCI to provide assessment, design, construction management and monitoring services for two miles of the West Piney River in Dickson County.

VIRGINIA

As a subconsultant to Alpha Corporation, KCI will be providing construction engineering and inspection services to the Virginia Department of Transportation's Culpeper District.



WASHINGTON, DC

KCI was awarded a \$1.3 million conduit and cabling design-build contract by the George Washington University.



The District Department of Transportation selected KCI to provide engineering services for the rehabilitation, reconstruction and repair of the Benning Road Interchange.

WEST VIRGINIA

KCI was awarded a \$500,000 open-end contract to provide cultural resources services for the West Virginia Department of Highways.



The town of Harpers Ferry selected KCI to provide engineering services for improvements to Potomac Street.

People



Michael A. Lambert, LEED AP, Land Development, was promoted to vice president. With more than 25 years of industry experience, Lambert leads the firm's Land Development Practice in Maryland. He oversees KCI's Sparks and Fulton-based civil and site engineering operations, working with a variety of clients ranging from private developers to public school systems.



Robert C. Macoy, Power, was promoted to regional practice leader. Macoy has more than 16 years of experience with a variety of utility providers. His design and management experience includes overhead and underground distribution, substation design, utility pole and overhead clearance inspections, street light audits, and code compliance.

J. Ryan Flickinger, PE, Water/Wastewater/Solid Waste, was promoted to senior associate. Flickinger is a senior environmental engineer and project manager working out of the firm's office in Newark, Del.

The following individuals have been promoted to associate: **James C. Hankinson, PE, LEED AP**, Land Development; **Kenneth R. Gerew**, Mechanical/Electrical; **Gregory A. Potts, PE**, Mechanical/Electrical; and **Joseph E. Roman, PE**, Highways and Traffic.

In Memoriam

Roger L. Cantrell, 1956-2011



Roger Cantrell, Construction Engineering/Inspection, passed away July 11. Roger joined KCI in 2002 as a construction inspector. Most

recently, he was assigned to oversee construction of Triangle Parkway in Raleigh, N.C., working alongside his son Roger Jr., also an employee. His colleagues will remember him for his constant up beat, positive attitude and good-hearted nature.

innovator

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[Nature, from page 3]

Mrs. Robinson tending to her flower gardens," he said. "It seemed that she loved nature, and now this building is going to give that back to the community."

Excited to open its first nature center and already making plans for sleepovers and other programs, the county will be poised to meet its dual goal of bringing people together with nature through learning and experience, while fostering an ethic of stewardship of the land and environment.

Questions from interactive consoles, each representing a calendar season, can be answered by searching among the 143 hand-painted panels that make up the leaves of the tree at the center of the Life of the Forest exhibit.



[Levee, from page 3]



In addition to inspections, KCI is currently developing operations and maintenance manuals for the 16-mile-long Wyoming Flood Control Project, which is located along the North Branch of the Susquehanna River in Luzerne County, Pa.

as needed. "In addition to general maintenance and operation, we were looking for cracks, erosion, animal burrows, and excessive vegetation," said KCI Vice President and Regional Water Resources Practice Leader Kerry B. Rexroad, PE. Back in the office, engineers prepared reports to marry the field results with the research data and formulate recommendations to support the District's official rating determinations.

As the project progressed, KCI collaborated with District staff to adjust and improve the process. "We worked hand-in-hand to help shape the program, considering everything from data and report formatting to close-out of past inspection observations," said Krahe. "That was probably the most enjoyable and challenging aspect of the project—working on a new federal program and being respectful of continued development." With the success of the initial periodic inspections, the Baltimore District is looking to continue with systems in the southern portion of the Bay's watershed.

Professional Notes



The Maryland Chamber of Commerce appointed President **Nathan J. Beil, PE, D.WRE**, as chairman of their membership committee.

Vice President **Charles H. Hegberg**, Resource Management, led a Green Technology Initiatives session at the Americans for Community Development Conference, held June 6 and 7 in Evanston, Ill.

Jane Thurman, Administration, was appointed as an alternate to the board of directors for the city of Raleigh Transit Authority.

KCI's Sparks, Md., headquarters hosted educators who teach business in local elementary, middle and high schools, as part of a master's degrees program the teachers are pursuing.



In July, **Thomas G. Sprehe, PE, BCEE**, Environmental, presented "Current Water Management Innovations in Maryland, U.S.A.

and the Chesapeake Bay," at the 2011 Water Leaders' Summit at Singapore International Water Week conference.

Nicholas A. Barrick, Land Development; **John J. Rupp**, Wireless Telecom; and **Harshad P. Shetye**, Water/Wastewater/Solid Waste, passed the professional engineering examination.

Ransford Addei, PE, Geotechnical, earned a master's degree in engineering from the University of Maryland College Park. **Kristen Kearby**, Administration, earned a master's

degree in business administration from Loyola University Maryland.

Susanna K. Brellis, Natural Resources Management, received her Certified Arborist accreditation from the International Society of Arboriculture.

Michael J. Pieper, Natural Resources Management, received his Certified Senior Ecologist certification from the Ecological Society of America.

On June 7, **Steven D. Hamit, PE, CPESC**, Municipal Engineering, presented an outline of the Grand Lakes St. Marys project at the Ohio County Sanitary Engineers and Affiliate of the County Commissioners Association of Ohio 2011 Summer Conference in Columbus.

Awards

The **Delaware Adopt-A-Wetland Program** presented KCI with its **Statewide Adopter Awards** at their Spring Workshop held on April 9 in Smyrna, Del.

KCI accepted a Project Achievement Award presented by the Baltimore Chapter of the **Construction Management Association of America** at a banquet on June 10 for work associated with the **Lancaster County Administration Building**.

At a luncheon on June 16, the *Baltimore Business Journal* honored KCI and other local companies as one of the region's healthiest employers.



The **Baltimore Museum of Industry** presented Executive Vice President and board member **Harvey M. Floyd, PE**, Transportation, with

the Harriet Bank Award at a luncheon on June 9.

At a banquet on May 26, the Maryland Chapter of the **American Concrete Institute** recognized the **Greenmount Church Road Bridge over Murphy Run** with an Award for Excellence in Concrete Construction.

The First State Chapter of the **American Society of Highway Engineers** selected **Old Lancaster Pike** as Project of the Year.



The **MD 355 Interchange** design-build project was honored at a banquet on June 14 with the **American Society of Civil Engineers** Maryland Section's Outstanding Civil Engineering Achievement Award.

At a banquet held on June 12 in Newark, Del., **J. Ryan Flickinger, PE**, Water/Wastewater/Solid Waste, was honored as Young Engineer of the Year by the Delaware Section of the **American Society of Civil Engineers**.

Community Service

Team KCI raised \$3,000 at the American Diabetes Association's Tour de Cure Maryland, held May 7. Riders included: **Benjamin P. Becker, EIT**, Mechanical/Electrical; **Kathy L. Hoverman, PE**, Natural Resources; **Christopher J. Griffith, PE, CCM**, Construction; **Colin R. Hill**, Natural Resources; **Aaron M. Hostenstein, PE, PTOE**, Highways and Traffic; **Christopher L. Overcash, PE, BCEE, LEED AP**, Water/Wastewater/Solid Waste; and others.