ACEC MARYLAND News

SPECIAL AWARDS ISSUE!

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President's Message

by George Wirth, PE

One of ACEC/MD's major initiatives every year is the work of the Legislative Committee and the Consulting Engineers Political Action Committee (CEPAC). The big event for these two committees is the Legislative Action Day, held in Annapolis every year during the legislative session. This important event provides our member firm representatives with the opportunity to meet with individual members of the Maryland General Assembly in the morning to educate them on our issues. We also sponsor a buffet lunch and invite all the members of the General Assembly, where we again educate them on our issues in an informal setting. As in past years, over 60 legislators joined our representatives for lunch.

We started off all of our meetings by thanking legislators for increasing transportation funding and not expanding the sales tax to include engineering services during the special session. We also explained our 2008 legislative issues, and encouraged their support on the following issues:

- The importance of extending the section in the State Ethics Law (Section 15-508) passed in 2006 that allows for fair competition on Design/Build projects.
- For consistency with both the federal SBA program and the state's MBE program, the importance of increasing the state's Small Business Reserve Program for architectural and engineering services from the current $2-million level to $4.5-million.

- The need for programs to address the shortage of students entering the engineering profession.
- The importance of increased funding for overall infrastructure improvements, including the necessity of immediately increasing transportation funding to at least $600 million per year.
- The importance of basing MBE goals on the actual availability of qualified firms to provide services.
- The benefits of Qualifications Based Selection (QBS) for all jurisdictions.

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an affiliate of ACEC

AMERICAN COUNCIL OF ENGINEERING COMPANIES/MARYLAND
326 N. Charles Street
Baltimore, Maryland 21201
(410) 539-1592
FAX (410) 685-5470
www.acecmd.org

President's Message

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These issues are very important to the consulting engineering community and we will continue to promote them during the 2008 General Assembly session. Of special interest are bills that are expected to be introduced this session that address the aforementioned Ethics Law and Small Business Reserve Program.

February marked the celebration of engineering with "National Engineer's Week" where we promote engineering nationwide. We held our annual awards banquet February 19, 2008, at the Engineers Club. At that time we recognized both projects and individuals that have had the greatest positive impact on society. I congratulate all the award winners that are described in this newsletter!

During Engineer's Week we also participated with other professional engineering societies in outreach efforts to students. Probably the biggest focus of Engineer's Week is student outreach, where our goal is promoting engineering as a career and attracting more students to the engineering field. Our Career Outreach Committee is addressing this shortage, both during Engineer's Week and through out the year, by conducting school visitations whereby young engineers go into local high schools and middle schools to discuss the type of work they perform on a daily basis. Our presenters have found it very rewarding when the "light bulbs" go off in students' heads as they grasp the type of work performed by our member firm employees. The Career Outreach Committee is always looking for volunteer presenters, so please get involved with student outreach by volunteering for school visitations.

I wrote to you last month about a new committee we are organizing this year that will focus on promoting small firms and discussing small firm issues. The new Small Business Enterprise Committee (SBE) will also be the voice of small businesses for ACEC/MD. I want to encourage all small firms to participate in this new committee.

The next ACEC conference is planned for April 27-30, 2008 in Washington, D.C., where the focus will be on legislative issues and lobbying Congress. Congratulations to ACEC/MD Past President Terry Niemeyer, who will take office as treasurer of ACEC at this time. Be sure to take advantage of this tremendous opportunity to attend a national conference in your own backyard. This year's Consulting Congress Day will be held Tuesday, April 29th. In the morning, at an informative briefing, registrants can gain valuable knowledge on the issues to be discussed during the visitations. If you are interested in the details of the spring conference go to www.acec.org .

As you are probably aware of, in August, the Maryland State Highway Administration (MDSHA) changed their contracting guidelines to eliminate the cap on overhead. This was in response to the Federal Highway Administration's (FHA) changes in procurement rules, which eliminated fixing overhead on federally funded highway projects. MDSHA's response to the new rules was to have split overhead rates for field and office staff, fixing the overhead rate for the contract term, applying a fixed fee of 21% on direct labor, and eliminating provisional overhead rates. We believe that fixing the overhead for the term of the contract is a cap and does not meet the new FHWA regulations. We also believe that the cap on overhead and not allowing provisional overhead will be a financial disaster for small and startup firms. ACEC/MD along with ACEC is aggressively working to get the guidelines changed, so they are fair to all consulting engineering companies.

I want to continue to encourage member firms to get involved with an ACEC/MD committee. This is the best way to get the most value from your membership. We need your help and support to continue to make a difference. If you are not sure what committee to get involved with, contact me and I will steer you in the right direction.

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Award Judges Provide Valuable Service

We would like to express appreciation for the following judges that played an integral part in the success of our Awards Program. The distinguished panel of judges for this year's awards included:

Engineering Excellence Awards:

Stu Robinson; A. Morton Thomas & Associates

David Mayhew; Director of AEC Facilities Management, Towson University

John Narer; Maryland State Highway Administration

Karuna Pujara; Chief, HHD, Maryland State Highway Administration

Steve Sharar; Chief, Transportation & Special Projects Division, Howard County Bureau of Engineering

Amar Sokhey; P.E., EBA Engineering, Inc.

Scholarship & Individual Awards:

Stu Robinson; A. Morton Thomas & Associates

Stacy Stone; Greenhorne & O'Mara

Mike Myers; Rummel, Klepper & Kahl

George Wirth; Schnabel Engineering

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Seeking Employment

The following individuals are seeking employment and have a complete resume on file in the ACEC/MD office. Please phone 410-539-1592 if you are interested in obtaining a copy.

1. Sophomore pursuing Mechanical Engineering degree at the University of Maryland, College Park seeks internship with a mechanical engineering firm.
2. Management level person with over 20 years of experience in Operations Management and Help Desk activities seeks position.

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KCI Technologies Wins 2008 Grand Award

The American Council of Engineering Companies/Maryland (ACEC/MD) is pleased to announce that member firm ***KCI Technologies, Inc.*** of Hunt Valley is the recipient of the **Grand Award** in the organization's 2008 Engineering Excellence Awards Competition, presented February 19, 2008 at The Engineers Club, Baltimore. The twelve finalists in the competition were recognized for diverse accomplishments that exemplify today's engineering challenges.

2008 GRAND AWARD and OUTSTANDING PROJECT IN GROUP 1: Studies, Research and Consulting Engineering Services

South Bethany Tidal Pump System (DE)

KCI Technologies

The canals of South Bethany may soon be flushed clean thanks to an innovative tidal pump system that will circulate canal water to the Atlantic Ocean and return clean seawater via a network of underground pipes. Like many canal systems worldwide, water quality in South Bethany's canals is severely degraded. Poor circulation, sediment accumulation, low oxygen levels, excessive nutrients, and pollution have led to declining shellfish communities, pungent and harmful algae blooms, and fish kills. Based on a concept developed by Lloyd Hughes, a former councilman and retired engineer, the town of South Bethany commissioned the team of Oceaneering International Inc. and KCI Technologies Inc. to evaluate the feasibility and develop preliminary designs for a tidal pump using only tidal differential to power the system. Engineers explored possible scenarios for alignment, configuration, materials and construction methods to further define the tidal pump concept and determine a potential cost and implementation schedule. Effective hydraulic analysis posed a crucial design challenge because of the low head differential and resulting low operating velocities. To deliver the required circulation through the system, each component had to be optimized for flow performance by reducing friction wherever possible. "The modeling scenarios took creativity to reflect the varying environmental and fouling conditions," said KCI Vice President Tim Wolfe, PE. "Possible marine growth like barnacles had to be considered as impediments to the low velocity water." The first of its kind, the tidal pump system will utilize almost two miles of underground piping, two ocean outfalls located 30 feet below sea level, and an innovative diffuser system configured to dissipate velocity during the exchange. Once constructed, residents could see improvement in water quality in as little as a month, as the tidal pump fully flushes the canals every 30 days.

2008 GRAND AWARD and OUTSTANDING PROJECT IN GROUP 1: Studies, Research and Consulting Engineering Services - South Bethany Tidal Pump System (DE) - KCI Technologies

GROUP 2: Building/Technology Systems

OUTSTANDING PROJECT IN BUILDING/ TECHNOLOGY SYSTEMS

University of Maryland BioPark, Building 2

KIBART

Kibart, Inc. provided mechanical, electrical, and plumbing design engineering services for Building 2 of the University of Maryland Baltimore BioPark located in Baltimore's Westside redevelopment district. This 240,000 SF, six floor high rise bio-tech R&D facility was designed for a LEED Silver Rating that exceeds ASHRAE 90.1-1999 energy goals by 41.9%. The mechanical/electrical systems designed by Project Managers Farshad Kassiri, P.E. and Karl M. Gumnick, P.E. posed several unique challenges that required creative design solutions. The first challenge was for Kibart to design the mechanical/electrical systems to meet the LEED Silver rating and achieve a 35% energy reduction against the ASHRAE Energy Model. Both goals were needed to comply with construction tax credits offered by the Maryland Energy Administration. This challenge was especially difficult for this project, due to the nature of this facility. R&D lab buildings traditionally use large amounts of energy, due to items such as year-round continuous heating/cooling, fume hoods, extensive lab exhaust systems, and high quantities of fresh air for lab make-up. Kibart exceeded its objectives by achieving a 41.9% energy reduction, employing

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2008 Engineering Excellence Award Winners

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OUTSTANDING PROJECT IN BUILDING/TECHNOLOGY SYSTEMS - University of Maryland BioPark, Building 2 - KIBART

variable volume lab airflow, including hoods, variable/primary chiller plant, variable/primary high efficient condensing gas heating system, large Delta T heating and chilled water flow, fluorescent T5 lighting fixtures, high efficient wall envelope system, Low E argon filled window glazing, and VAV fresh air controls while maintaining high levels of indoor air quality. The second challenge was to design for flexibility to accommodate a multitude of varying unknown tenants, including labs, offices, and classrooms. The firm met that challenge by implementing M/E/P systems that were sized for an initial non-lab occupancy that could easily be doubled in capacity to serve labs. This effort required careful planning and coordination with all of the team members, including the Architect, the Owner, and the General Contractor.

HONOR AWARD IN BUILDING/ TECHNOLOGY SYSTEMS

Telemetry/Alarm Control Instrumentation for Water Distribution System

Sidhu Associates

A comprehensive and fully-featured Supervisory Control and Data Acquisition (SCADA)system was designed and built for the City of Baltimore. A new state-of-the-art, centralized Telemetry Control Center (TCC) was provided within this project at the existing Ashburton Water Filtration Plant building owned and operated by the City. This project included design of new instrumentation at fifty remote sites, specification of pump controls to facilitate remote control, design of automatic control algorithms to operate the unmanned pumping stations and implementation of microprocessor-based programmable logic controllers (PLC) and redundant communication equipment at all of the sites. Prior to this project, facilities were monitored and controlled in a number of disparate ways, including manual dispatch to remote locations. All facilities are now monitored and controlled from the TCC. Utilizing licensed radio communication for data communication was a new concept introduced to the City of Baltimore under this project. As designed, the system can be easily expanded in the future to provide more facilities with reliable wireless communication. Modular and redundant components were utilized at TCC to minimize impact to the system in the event of a single component failure. This redundancy guarantees operators reliable, accurate information allowing them to react quickly to water needs throughout the region and immediately respond to unexpected events and thus protect the safety of the public water system. Unmanned stations are controlled remotely, creating an economic savings over dispatching individuals to stations when pumps need to be started or stopped. Chlorine leak annunciation at TCC allows operators to respond immediately, repair the leak and notify the public. The entire system was engineered to be installed and commissioned on a site-by-site basis to allow all facilities to operate continuously--serving the public and providing necessary water for fire protection at all times. The project design allowed for coordination among other concurrent renovation projects without impact to project schedule. The public benefited from a modernized water distribution system without being inconvenienced by outages.

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HONOR AWARD IN BUILDING/TECHNOLOGY SYSTEMS - Telemetry/Alarm Control Instrumentation for Water Distribution System - Sidhu Associates

2008 Engineering Excellence Award Winners

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Sidhu Associates personnel developed and implemented a unique interface between the new SCADA system and a proprietary City-owned data historian. With the implementation of an SQL data interface with firewall, all of the SCADA data are transmitted automatically to the data historian. All users now have continuous access to real-time data, critical to optimizing system operation.

GROUP 3: Structural Systems

OUTSTANDING PROJECT IN STRUCTURAL SYSTEMS

Wisconsin Avenue Bridge Strengthening and Rehabilitation

KCI Technologies

A national treasure is stronger and safer thanks to the strengthening and restoration of the Wisconsin Avenue Bridge, one of five original stone arch bridges to cross the C&O Canal and its adjacent tow path near Georgetown. Built in 1831, the single-span, 54-foot-long masonry arch bridge is the oldest existing highway structure in Washington, D.C. Since this bridge is listed on the National Register of Historic Places and is a contributing element to the Georgetown National Historic Landmark District, maintaining the visual historic integrity of the structure was a key concern. The rehabilitation was further complicated by the coordination and consensus required between multiple federal and district agencies, the need to maintain traffic across the bridge, and the extensive public coordination required. FHWA and the District of Columbia called on KCI Associates of D.C. to inspect, analyze and develop plans for the rehabilitation. Once engineers determined that traditional methods of strengthening were not viable due to physical constraints and historic concerns, the team chose to strengthen the bridge using the Archtec™ system—a proprietary masonry strengthening system developed by Cintec. The KCI team worked with Cintec and their engineer Gifford to analyze and design the innovative strengthening system, which called for embedding stainless steel reinforcing rods within the structure to strengthen the bridge without altering its facade. The strengthening was completed in under three weeks with minimal impact to traffic. The Wisconsin Avenue Bridge is again completely open to both pedestrian and vehicular traffic following restoration and strengthening of the wrought iron railings, repairs to the surrounding stone masonry retaining walls, utility relocations, roadway reconstruction and resurfacing, and completion of the brick sidewalks. It is now strong enough to stand the test of time, and the weight of 45-ton trucks, for the foreseeable future.

OUTSTANDING PROJECT IN STRUCTURAL SYSTEMS - Wisconsin Avenue Bridge Strengthening and Rehabilitation - KCI Technologies

HONOR AWARD:

Hollins Road Bridge over Tinker Creek (VA)

Alvi Associates, Inc.

Alvi Associates designed a replacement bridge to cross a river in karst terrain, with the depth to rock varying from as little as 5 feet to more than 60 feet. The solution is an innovative bridge consisting of a three-span concrete rigid frame which provides a wide variety of benefits.

Original or Innovative Application of New or Existing Techniques. This bridge is innovative in reviving use of the efficient framed construction which was more common about a century ago. Such construction became less common as designers sought to make design easier, but modern software enables a return to this type of efficient design.

Complexity. While the framed design simplifies construction, it also makes the bridge structural analysis considerably more complex. Moreover, a framed structure can develop significant thermal and concrete shrinkage forces, therefore a special construction sequence was developed to successfully minimize them. Additional complications encountered were the need to stage construction and accommodating the karst terrain.

Social, Economic, and Sustainable Design Considerations. The framed design provides substantial benefits with respect to all key design criteria:

- The use of a thin deck, without beams, maximizes the waterway opening, allowing floods to pass more easily, in turn shortening the bridge and providing major cost savings.
- The efficiency of the framed construction reduces material needs and construction cost, and also provides a structurally redundant and safer design.
- The all-concrete construction, and the elimination of all deck joints, bearings, and beams, accelerates construction and greatly reduces maintenance costs.
- The visual cleanliness and simplicity of the bridge offers an elegant appearance.

Exceeding Client/Owner Needs. The client originally developed a conventional design based on hydraulic studies. On the firm's initiative, they reviewed these studies and proposed the alternate "value engineered" design described herein, which was readily accepted by the client because of its benefits.

Future Value to the Engineering Profession. This bridge serves as an example of how thinking outside of the box, and applying modern computing power, can enable revival of an efficient bridge

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2008 Engineering Excellence Award Winners

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HONOR AWARD IN STRUCTURAL SYSTEMS - Hollins Road Bridge over Tinker Creek (VA) - Alvi Associates, Inc.

type from a past era. Hopefully, the example provided by this bridge will gradually result in broad adoption of this bridge type for the many projects where it makes sense, thereby providing considerable value to both the profession and society.

GROUP 4: No Finalists

GROUP 5: Environmental

OUTSTANDING PROJECT IN ENVIRONMENTAL

Mattawoman Wastewater Treatment Plant – Upgrade for Enhanced Nutrient Removal

Joint Venture – George, Miles & Buhr / KCI Technologies

Nutrient pollution is a serious threat to the health of the Chesapeake Bay, fueling algae growth, clouding water, depleting oxygen levels and creating dead zones for fish, blue crabs, oysters and other marine life. In the battle to save the Bay, Charles County has taken a big step forward through improvements to its Mattawoman Wastewater Treatment Plant (WWTP). The joint venture team of George Miles and Buhr LLC and KCI Technologies Inc. led the design effort. Because Mattawoman WWTP sits in the heart of the county's designated growth and development district, the design team was tasked with reducing nutrient discharges to conform with the region's biological nutrient removal (BNR) goals, while providing treatment capacity for the county's economic and growth centers. Among the project's challenges were site limitations, funding considerations, and operator safety concerns. In addition, all renovations had to occur while the site was operational. Although originally designed to meet goals outlined in the 2000 Chesapeake Bay Initiative, engineers modified the design to a four-stage treatment process known as Bardenpho™ to comply with stringent new goals approved under the state's Enhanced Nutrient Removal (ENR) program. The joint venture team also assisted the County in negotiating the first-ever ENR grant from Maryland Department of the Environment, which covered more than 40 percent of the cost. Mattawoman is now one of the most flexible, innovative, and state-of-the-art wastewater treatment plants in Maryland and is one of the first facilities to meet the new ENR goals. The application of unique design parameters such as effluent reuse, bio-solids recycling, and multi-staged nitrogen removal uniquely positions the County to meet current ENR requirements, accommodate planned local growth, and assist in improving the health of the Chesapeake Bay. As a result of upgrades designed by GMB and KCI, the Mattawoman WWTP is capable of reducing nutrient discharges to the Bay by nearly two million pounds per year.

HONOR AWARD IN ENVIRONMENTAL

Swan Point Wastewater Pumping, Water Reclamation Facilities, Parallel Force Mains, and Existing Outfall Sewer Modifications

Rummel, Klepper & Kahl

RK&K teamed with The Whiting-Turner Contracting Company (W-T) for a design-build project that provided a new limit-of-technology (LOT) wastewater reclamation facility (WRF) in Swan Point, Maryland. The project also included pumping, parallel force mains and existing outfall modifications. The project owner is U.S. Steel and ownership will be transferred to Charles County Department of Utilities after commissioning. Robert J. Andryszak, P.E. and Kelly Duffy, P.E. served as RK&K's project manager and deputy project manager, respectively. The

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OUTSTANDING PROJECT IN ENVIRONMENTAL - Mattawoman Wastewater Treatment Plant – Joint Venture – George, Miles & Buhr / KCI Technologies

2008 Engineering Excellence Award Winners

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HONOR AWARD IN ENVIRONMENTAL - Swan Point Wastewater Pumping, Water Reclamation Facilities, Parallel Force Mains, and Existing Outfall Sewer Modifications – Rummel, Klepper & Kahl

existing treatment facility serving the Swan Point area was undersized for proposed development and provided modest treatment with no nutrient removal. The new WRF is designed for 0.3 million gallons per day (mgd) treatment capacity and to comply with LOT Enhanced Nutrient Removal (ENR) effluent concentration requirements of 3 mg/l nitrogen and 0.3 mg/l phosphorus. The Four-Stage Bardenpho process and downstream filtration was utilized. Re-use of the existing outfall was selected to avoid the environmental impact of installing a new subaqueous portion. 9,000 linear feet parallel force mains and pumping stations were provided to convey flow between the new WRF and existing outfall. The outfall was undersized and was converted from gravity to a pressure system using a HDPE liner to avoid disturbing wetland areas with an open-cut larger, gravity outfall installation. This gravity to pressure conversion using the HDPE liner was the first of its kind to be completed in the region. This $14 M project was completed in approximately three years, with the majority of the construction being completed within a 12-month period. Utilizing the design-build delivery method expedited the project, allowed the Owner to select preferred equipment, and provided a facility constructed with limited environmental impact that produces high quality effluent.

HONOR AWARD IN ENVIRONMENTAL

New Design Water Transmission System

Whitman, Requardt & Associates

Frederick County, Maryland is currently expanding the New Design Road Water Treatment Plant (NDRWTP) to serve the region's growing population. To meet these increasing demands, Frederick County and the City of Frederick have collaborated in the expansion of the NDRWTP using the Potomac River as the raw water source. To deliver the additional water where needed, the following new facilities were required: potable water transmission, potable water storage, and pumping facilities. This infrastructure, known as the New Design Water Transmission System, consists of approximately 15 miles of large diameter pipeline (42-, 36-, 30- and 24-inch mains) from the NDRWTP to the City of Frederick, and a 2.5 million gallon water storage tank, and 15 million gallon per day (MGD) booster pumping station built on a ridge overlooking the historic Monocacy National Battlefield. The project included detailed alignment studies; comprehensive hydraulic and surge modeling, including water quality studies; extensive environmental permitting; final design and bidding services; and construction services, administration, and on-site inspection. The Corridor Alignment Report, completed by Whitman, Requardt and Associates, LLP (WR&A) in November 2001, examined the infrastructure required to deliver an ultimate water demand capacity of 54.0 MGD to the County's Service Areas and the City of Frederick. WR&A also analyzed several alignment alternatives for comparative purposes. The completed study and report resulted in the adoption of an alignment corridor and the initiation of the final design stage for the Water Transmission Main, Pumping Station, and Storage Tank in April 2002. The potable Water Transmission Main, Pumping Station, and Storage Tank were bid and constructed

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HONOR AWARD IN ENVIRONMENTAL - New Design Water Transmission System - Whitman, Requardt & Associates

2008 Engineering Excellence Award Winners

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under four separate contracts, and all are currently completed and in service. WR&A also provided complete construction services and on-site inspection for all four construction contracts. Final combined total construction cost was $30,605,000.

HONOR AWARD IN ENVIRONMENTAL

Kurt Iron & Metal Facility, Fairfield Marine Terminal

Whitney, Bailey, Cox & Magnani

The Maryland Port Administration (MPA) purchased 10.5 acres from the Estate of Kerry Ellis, at a site known as the Kurt Iron & Metal Facility, in 2000. The site was used for shipbreaking, salvage, and demolition disposal from 1987-1997. At the time of purchase, the site had abandoned, deteriorating trailer buildings, infrastructure and debris piles ranging in height from 25 to 35 feet, resulting from shipbreaking activities as well as unlicensed solid waste disposal from other marine demolition. The MPA purchased the site to expand the Fairfield Marine Terminal, procure additional deep water access, and to provide contiguous property for the development of the Masonville Dredged Material Containment Facility. WBCM Project Managers, Mark Shafer, P.E. (clean-up) and Jesse Lindsay, P.E. (capping) along with subconsultant, EBA Engineering, were tasked with the environmental assessment, clean-up, and remediation of the site. This Project was the first of its kind to be enrolled in the MDE's Voluntary Clean-Up Program (VCP) by the MPA. It illustrates how a significantly environmentally-impacted property can be resurrected into a viable beneficial use. The initial phase consisted of a Phase 1 Environmental Assessment and Inventory of the site. During this Phase, WBCM assisted in the inventory, prepared mapping of the site, and performed quantity estimates of the debris and abandoned infrastructure according to characterization of the material. After enrollment in the MDE VCP program, the Phase II Environmental Assessment was developed and completed. WBCM provided the oversight and review of the Response Action Plan (RAP) and provided the technical design information for utility installation and the final capping of the site. The final phase focused on the actual cleanup of the site. WBCM prepared the Contract Documents for the "Environmental and Solid Waste Disposal at the Former Kurt Iron and Metal Facility." These were predicated largely on WBCM's development of a performance specification which detailed the preparation of a site specific Health and Safety Plan; the characterization, segregation, and handling of the materials; and the disposal requirements of the hazardous and solid waste.

HONOR AWARD IN ENVIRONMENTAL - Kurt Iron & Metal Facility, Fairfield Marine Terminal - Whitney, Bailey, Cox & Magnani

OUTSTANDING PROJECT AWARD IN TRANSPORTATION - Rehabilitation of Frederick Douglass Bridge over Anacostia River - Design/Build Project- Rummel, Klepper & Kahl

GROUP 6: Transportation

OUTSTANDING PROJECT AWARD IN TRANSPORTATION

Rehabilitation of Frederick Douglass Bridge over Anacostia River

Design/Build Project- Rummel, Klepper & Kahl

The Frederick Douglass Bridge carries South Capitol Street over the Anacostia River serving as a vital link between the Anacostia area and I-295 to the south of the river and the District of Columbia (DC) to the north. The bridge provides access into and out of downtown DC for high volumes of traffic. Prior to this rehabilitation contract, the bridge consisted of 17 spans on the DC Approach, 7 spans on the Anacostia Approach and 8 spans over the river. Rummel, Klepper & Kahl, LLP (RK&K) teamed with Corman Construction (CCI) on a design-build (D/B) portion of this contract to modify the existing DC approach for the District Department of Transportation (DDOT). The existing structure was a viaduct that passed over

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2008 Engineering Excellence Award Winners

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HONOR AWARD IN TRANSPORTATION - US29/Briggs Chaney Road Interchange - Joint Venture – Wallace, Montgomery & Associates / McCormick Taylor

Potomac Avenue in DC prior to construction. In order to facilitate future traffic needs associated with the 2008 opening of the Washington Nationals Baseball Stadium adjacent to the bridge site and to spark future development of the Anacostia Waterfront area, the existing bridge profile was lowered approximately 19′ to create an at-grade intersection at South Capitol St. and Potomac Ave. The challenges associated with creating this intersection included demolishing 14 spans of bridge; lowering by jacking approximately 228′ of existing bridge structure to a new profile (to the best of the team's knowledge, this may be the first time a bridge has ever been lowered); constructing 275′ of MSE wall approach; and constructing 1,425′ of new roadway. A further challenge was the short duration of the project. Design was 100% complete within 6 months and the bulk of construction was completed in a two month period while the bridge was closed. RK&K provided continual support during construction which required CCI to work 7 days a week, 20 hours per day. DDOT had committed to the public that the closure would not extend for more than this two month period; therefore, time was of the essence. The bridge was opened to traffic eight days early and the project has been deemed a success by all involved

HONOR AWARD IN TRANSPORTATION

US29/Briggs Chaney Road Interchange

Joint Venture – Wallace, Montgomery & Associates / McCormick Taylor

US 29 is a major north-south roadway connecting northern Howard County to Silver Spring. The Maryland State Highway Administration conducted planning studies in the 1980's to determine necessary safety and operational improvement requirements throughout the corridor limits. The US 29 / Briggs Chaney Road interchange project was one of three at-grade intersections that were programmed to be reconstructed to a grade-separated interchange within the corridor limits. The existing intersection is located in an area north of Fairland in Montgomery County and was bordered by a shopping center and an auto park on the east and a town home community, Maryland National Capital Park and Planning Commission property, and Paint Branch High School on the west. The number of through lanes on US 29 remained the same as existing, 3-lanes in each direction, while Briggs Chaney Road and Old Columbia Pike were widened to 2-lanes each direction with turn lanes, bikeways, and pedestrian accommodations. Since the project was located in a highly urbanized area within a limited right of way envelope, the interchange geometric design was not typical. To accommodate all traffic movements, the east side of the interchange consists of tight urban diamond ramps, while the west side includes a partial cloverleaf. The project also included a two-span steel girder bridge on a curved alignment carrying six traffic lanes and two bike lanes on Briggs Chaney Road over US 29. The bridge is 114 feet wide and 183 feet long and includes curved fascia girders, a raised median, a sidewalk, a bikeway, and parapets with a simulated cut stone finish, decorative metal railings, and decorative light standards. A sound barrier was incorporated into the project to mitigate noise from the increased traffic volumes for the Avonshire Townhome Community. Other environmental improvements include stream restoration, extensive landscaping, storm water management, and water quality considerations within the Paint Branch Special Protection area.

GROUP 7: Special Projects

HONOR AWARD IN SPECIAL PROJECTS

Roll On Roll Off Platform, Locust Point Marine Terminal

Johnson, Mirmiran & Thompson

Johnson, Mirmiran & Thompson (JMT) partnered with the Maryland Port Administration (MPA) and BalTerm, LLP to design a new roll-on roll-off (RORO) platform for BalTerm (Baltimore Forest Products Terminals), a major tenant utilizing the South Locust Point Marine Terminal at the Port of Baltimore. This fast-tracked special project allows BalTerm and the Port to stay competitive in their respective industries, providing a win-win for client and tenant. A RORO platform is beneficial to the specialized needs of the paper industry, allowing uniquely designed ships to dock adjacent to the pier and lower a stern ramp onto the platform. This permits high capacity trailers to enter the ship's hull to retrieve the three-ton rolls of paper. The MPA tenant lease required the platform be ready for use in time for the first ship's arrival scheduled for May 5, 2007. Prior to the platform completion, BalTerm was

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2008 Engineering Excellence Award Winners

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forced to unload the ships via a starboard-side elevator and lift trucks, which was inefficient in terms of both time and money. Challenged with a severe time constraint, JMT accomplished the design in less than six months, including underwater inspections, thorough structural analysis of berthing forces and meeting the operational needs of the trailers. Construction began on the project in October 2006 and was completed in mid-April 2007, in time for the arrival of the first shipment. The 92 feet by 110 feet RORO platform allows the Port of Baltimore to remain the largest on the East Coast in paper handling, continue to meet the needs of the port industry, and help ensure the economic future of the City of Baltimore. Since the completed construction, BalTerm has significantly increased unloading efficiency and greatly reduced operating costs, resulting in increased paper tonnage through the Port of Baltimore. This JMT project increased the Port's competitive advantage within the paper distribution industry, assisting in the economic growth of the State of Maryland.

HONOR AWARD IN SPECIAL PROJECTS - Roll On Roll Off Platform, Locust Point Marine Terminal - Johnson, Mirmiran & Thompson

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Don Sherin Selected for 2008 President's Award

At the president's discretion, the American Council of Engineering Companies/Maryland honors an individual whose actions have greatly contributed to the advancement of the consulting engineering profession and the citizens of Maryland. This year's award is presented to longtime ACEC/MD supporter ***S. Donald Sherin.***

After a distinguished career in the state of Maryland that spanned 44 years commencing in 1961 at the Maryland State Roads Commission, Don Sherin retired in 2004. Prior to his retirement, Don worked in the Maryland State Highway Administrations' Planning and Programming, Bureau of Highway Design, Bureau of Maintenance, and beginning in 1969 as the Chief of the Office of Consultant Services in the Office of Administration.

Over his sterling career, Don was responsible for approximately $2 billion in SHA A/E contract procurements. In addition, after 1974 his responsibilities included assisting other MDOT Administrations in their A/E procurements.

From 1962-1963, Don served in the U.S. Army, primarily with an independent engineering company in Frankfurt, Germany. A resident of Cockeysville, Don is an active member of the Maryland Association of Engineers.

Don's efforts on behalf of the engineering profession and the citizens of Maryland have positively impacted the business climate in which our member firms operate.

Congratulations to Don and thanks for all that he has done for the engineering profession!

ACEC/MD "President's Award" Past Recipients

1997 R. Charles Avara (former delegate in MD General Assembly)
1998 Gene Lynch (DGS Secretary)
1999 David Winstead (former MDOT secretary)
2000 None
2001 Emil Kordish, PE (past ACEC/MD President; retired-Rummel, Klepper & Kahl)
2002 Liz Homer (former Deputy Administrator-SHA)
2003 Delegate Casper Taylor (former Speaker of the House in MD General Assembly)
2004 Francis Kuchta, PE (former DPW Director for Baltimore City)
2005 Carl Scheffel (Fox Industries, Inc.)
2006 Neil Pedersen (SHA Administrator)
2007 Bill Gluck (Maryland DGS)

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KCI's Terry Neimeyer Garners Community Service Award

Annually, ACEC/MD honors a member firm representative that has made a significant contribution to their community by volunteering their time and expertise. This year ACEC/MD is pleased to present the 2008 Community Service Award to Terry F. Neimeyer, P.E.

ACEC/MD past president and principal at KCI Technologies Terry Neimeyer is extremely active in multiple civic and community organizations that benefit the business community and the citizens of Maryland. The former chairman of the Maryland Chamber of Commerce, Terry's leadership in 2007 guided the organization to a new position of influence in the regulatory and legislative arenas. Subsequently, in 2008 he was elected as a Board member in the United States Chamber of Commerce. Terry currently chairs the Baltimore County Citizen's Advisory Committee for Solid Waste and is the past president of the Juvenile Diabetes Research Foundation.

A staunch advocate for the engineering profession and higher education, Terry is a member of the National Advisory Committee of Johns Hopkins Whiting School of Engineering, a member of the Advisory Board at the University of Delaware, a member of the Industrial Advisory Board at the University of Maryland Baltimore County (UMBC), and a member of the Baltimore County Executive's Advisory Board on Higher Education.

Terry was recently elected to serve as the ACEC Treasurer/Vice President (2008-2009) and is the chair of ACEC's Design Professional Coalition. He previously served ACEC as the chair of the Peer Review Subcommittee and as a member of ACEC's Planning Cabinet, Curriculum Committee and IBM Committee.

Terry's contributions truly personify the positive impact that our member firms' employees have on society.

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Thanks for Being a Sponsor

A special thanks goes out to the firms that went the extra mile and cosponsored this year's Awards Banquet. This event would not be a success without their participation!

PLATINUM:

Rummel, Klepper & Kahl

URS Corporation

GOLD:

Century Engineering

Greenhorne & O'Mara

Johnson, Mirmiran & Thompson

KCI Technologies

Schnabel Engineering

Whitman, Requardt & Associates

Whitney, Bailey, Cox & Magnani

SILVER:

A. Morton Thomas & Associates

Development Facilitators

Dewberry

DMJM Harris

George, Miles & Buhr

Kibart

McCormick Taylor

Wallace, Montgomery & Associates

BRONZE:

Ames & Gough

Constellation Design Group

EBA Engineering

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ACEC/MD Presents Three Scholarship Awards at Banquet

In order to assist worthy students pursuing a career in engineering or land surveying, the American Council of Engineering Companies/Maryland (ACEC/MD) awards three $2,500 scholarships. Two scholarships, sponsored by ACEC/MD, go to selected students majoring in either civil, mechanical or electrical engineering, or surveying, attending an accredited college or university. The third scholarship, the William R. Kahl Scholarship, sponsored by long-time member firm Rummel, Klepper & Kahl (RK&K), is awarded to a selected civil engineering student.

At the end of 2007, the engineering community of Maryland lost two giants with the passing of both ACEC/MD past president Emil Kordish, P.E., and City of Baltimore DPW Director George Winfield, P.E. We recognize their legacy by presenting the two ACEC/MD scholarships in their honor.

To qualify for a scholarship, a student must be a U.S. citizen pursuing a Bachelor's or Master's degree, or PhD, in an Accreditation Board for Engineering and Technology (ABET)-approved engineering program or in an accredited land surveying program. Candidates must be entering their sophomore, junior, senior, fifth or graduate year in the fall of this year.

ACEC/MD 2008 Scholarship Awards

Lida Ramsey, a recipient of an ACEC/MD Scholarship, is a resident of Bethesda. She is a sophomore at the University of Maryland-College Park (UMCP), pursuing a degree in electrical engineering. With a strong 3.8 GPA,

Lida is currently involved with External Relations at the A. James Clark School of Engineering, and is a member of the Primannum Honor Society and the Society of Women Engineers. She previously participated with Engineers Without Borders on a project that improved a water irrigation system in Ecuador.

V. Rajesh Karyampudi, a resident of Bowie, is a recipient of an ACEC/MD Scholarship. Rajesh is a junior at the University of Maryland-College Park (UMCP) pursuing a degree in Mechanical Engineering with a minor in International Engineering. A part-time employee as a Computer Service Technician, and as an assistant in UMCP's Engineering Recruitment & Special Programs Office, Rajesh previously worked summers at both W. R. Grace and Company and NASA Goddard Space Flight Center. A member of the Association of Energy Engineers, Rajesh, along with five fellow undergraduates, recently launched a business that developed a composting product that was based on an award winning project development through the Quality Enhancement Systems and Teams (QUEST).

William R. Kahl 2008 Scholarship Award

Elaine Huffman is the recipient of the William R. Kahl Scholarship presented to the outstanding Civil Engineering student in this year's competition. A resident of Bowie, Elaine is in her sophomore year at Virginia Tech where she possesses an outstanding 3.92 GPA. Elaine is a member of the Society of Women Engineers where she co-chairs the Educational Outreach Committee and is an Historian for the Student Chapter of the American Society of Engineers. She previously held part-time positions at both Lockheed Martin, Transportation & Security Systems and NASA Goddard Space Flight Center.

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Member News

- **DEWBERRY** announces the following additions to their staff:
  - ***Frank H. Kaul, PE,*** as Senior Structural Engineering on the ICC Project in the Maryland Hub Office.
  - ***David L. Taylor, Jr.*** as an Associates responsible for business and operational development for land development services, with emphasis on achieving strategic planning initiatives, recruiting, growth of professional staff and client satisfaction.
- **GEORGE, MILES & BUHR, LLC,** (GMB) is pleased to announce that ***James N. Richardson, EIT***, successfully passed the examination to become a LEED accredited professional.
- **HEERY INTERNATIONAL** recently named 20-year HEERY veteran ***Bill Heitz*** as President of the firm. He previously served as Senior Vice President and East Region Manager in the firm's Baltimore Office. Former President ***Jim Moynihan*** will continue as Chairman/CEO of HEERY and its BALFOUR Beatty sister companies.
- **HENRY ADAMS, LLC** recently announced that ***J. Doug Tebera, PE***, has been appointed President of the firm. Former president ***Charles A. Meyer, PE,*** will remain chairman of the firm, while ***Ed Sugg*** and ***Don Steiner*** will continue in their roles as part of the firm's senior management.
- **KCI TECHNOLOGIES** announces the following:
  - ***Joel S. Keels, EIT, CCM,*** has been promoted to vice president overseeing the firm's Mid-Atlantic Construction Management Division.
  - ***Jeffrey R. Perkins, PE,*** has been promoted to Senior Associate. He recently joined the firm as Division Chief of Civil/Environmental Engineering in the Northeast Region.
  - Senior Architectural Historian ***Margaret B. Parker,*** Northeast Environmental and Cultural Resources, and Senior Environmental Scientist ***Bruce R. Thompson*** have been promoted to Senior Associates.
  - Design Supervisor ***Kofi B. Acheampong, PhD, PE,*** and Scientist/Hydrogeologist ***Jeffrey D. Gernand, PG,*** have been promoted to Associates.
  - The firm has launched KCI Protection Technologies, LLC to specialize in engineering services for security, fire protection, risk analysis, life safety and emergency management.
- Affiliate Member Firm **PURPLE CHERRY ARCHITECTS** recently received the Award of Excellence from The Remodeler's Council of the Home Builders Association of Maryland.
- **WHITNEY, BAILEY, COX & MAGNANI** is pleased to announce the following promotions:
  - ***Mike Wuerthele, PE,*** Senior Vice President, has been promoted to Class B Principal. He currently serves as the Branch Manager of the firm's Pittsburgh, Pennsylvania office.
  - ***Dick Brown, PE,*** has been promoted to Vice President of Bridge Structures. He recently served as Chief Engineer, Bridge Structures.
  - ***Mayo Lucas, PHR,*** has been promoted to Vice President of Human Resources. She recently served as the Director of Human Resources.
  - ***Jim Diepold, PE,*** has been promoted to Chief Engineer for Maine-Industrial. He recently served as Project Manager.

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ACEC/MD Initiates Young Professional of the Year Award

AMT's Christina Guzman Selected for Honor

In conjunction with our parent organization, ACEC, ACEC/MD has initiated a Young Professional of the Year Award. This award recognizes the accomplishments of our member firms' young engineers by highlighting their interesting and unique work, and the resulting important impact on society. The winner of the inaugural Young Professional of the Year Award is Christina Guzman, P.E.

With over five and a half years of experience as a civil engineer, Christina is a valuable team member at member firm A. Morton Thomas & Associates. Her well-rounded design experience ranges from work on sediment stream restoration/stabilization and stream assessment to highway design and planning.

A 2002 graduate from Penn State University with a B.S. in Civil Engineering, Christina has been very active in the American Society of Civil Engineers (ASCE) Maryland Section including serving as Younger Member President for 2006-2007 and 2007-2008; as a Younger Member Board Member from 2002-2005; assisted with the pre-conference set up of the Rebuilding Together event of ASCE's national conference in Baltimore in 2004; promoted and participated in Toys for Tots events in 2006 and 2005; and in educational outreach to local schools at the collegiate and elementary levels. Christina currently serves as the fundraising and program chair for the upcoming regional conference Eastern Region Younger Member Council (ERYMC) of ASCE in Baltimore.

Outside of ASCE, Christina served as the Penn State Alumni Association Secretary from 2003-2005, and as a judge for the middle school project in the Maryland Engineering Challenges from 2003-2006.

ACEC/MD is proud to recognize the accomplishments of its member firms' young professionals, and very much appreciates their contributions to the profession and society.

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AMERICAN COUNCIL OF ENGINEERING COMPANIES/MARYLAND
326 North Charles Street, Suite 202
Baltimore, Maryland 21201-4310

PROFESSIONAL DEVELOPMENT

March 5-7 ***1st Transportation Convention***
Washington, DC. Program features three days of high-level transportation policy discussion. Program offered by the County Executives of America Association. For more information or to register, call Amy Kemble at 214.750.0123 or akemble@dean.net.

March 6 ***A/E/C Essentials: An Introduction to the Design & Construction Industry***
Baltimore. Presented by SMPS. Program is eligible for both AIA Learning Units and SMPS Certified Professional Services Marketers CEUs. ACEC members eligible for member rate. For more information contact Natasha Moussaui at 800-292-7677, x243 or go to www.smps.org.

March 19 ***LEED For New Construction Technical Review Workshop: Certification Requirements and Process***
Timonium. Program is offered by the US Green Building Council, Baltimore Regional Chapter. For more information contact James Posey Associates - Marc Hurwitz at 410-265-6100.

April 9-10 ***Symposium on Climate Change – The Public Works Role, Strategy & Impact***
Tempe, AZ. Presented by APWA. For more information call 800.848.APWA.

April 30 ***Loss Prevention and Risk Management for Design Professionals***
Ellicott City. Presented by CBIZ. Six hours of both AIA and ACEC approved professional development credits will be offered. For more information call 800.553.8500. Seating is limited. The deadline to register is April 22, 2008.

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