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In this issue:

Facilities Engineering



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Mitch Duke, technical engineer for the Pentagon Renovation, inspects the new filters for the Pentagon's heating, ventilation and air conditioning controls system. Photo by Andrea Takasb, U.S. Army Engineering and Support Center, Huntsville, Ala.

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Facilities engineers tackle Army's rapidly changing installation needs

by Lt. Gen. Robert Wilson

This issue of *Public Works Digest* is devoted to facilities engineering. Given the magnitude of change occurring on Army installations, I can't think of a more appropriate theme. As the Army continues to simultaneously transform, reposition forces from overseas, conduct base realignment and closure actions, and grow the size of the force, our installations are being inundated with requirements for improved, expanded and new infrastructure. During this period of unprecedented change, facilities engineering will be more important than ever.

The Army will rely on facilities engineers to respond quickly to the infrastructure needs of the force, provide high quality and sustainable facilities, and develop comprehensive installation master plans, which will posture us to adapt to new changes in the future. In short, effective facilities engineering will enable us to support an expeditionary Army at war and provide Soldiers and Families the quality of life they deserve.

Through effective facilities engineering, the Army will be able to respond quickly to the burgeoning infrastructure needs of a transforming force. The Army is in the midst of transforming from an overseas-based, static force to a U.S. based, expeditionary force built around smaller, more agile and capable units. This transformation has created tremendous demand for facilities and infrastructure to house Soldiers and Families, care for our people and provide units with the capabilities they need to work, train, maintain, mobilize and deploy.

To meet the demand, facilities engineers are adopting a variety of innovative concepts and techniques designed to expedite construction of new facilities and rapidly modernize existing facilities. At Fort Bliss, Texas, for example, facilities engineers are employing the very latest in modular construction techniques to rapidly erect barracks and unit operations facilities, without any degradation in quality. Another



Lt. Gen. Robert Wilson
Photo by Monica King

example can be seen at Fort Carson, Colo., where facilities engineers have modernized aging "rolling pin" barracks to approximate the "1 + 1" configuration. In doing so, they have provided Soldiers with state-of-the-art housing at a fraction of what it would cost to build a new facility.

Using Military Construction Transformation concepts, facilities engineers are enabling us to provide facilities when and where the Army needs them, at a greatly reduced cost. Through their Herculean efforts, we are responding rapidly to the monumental infrastructure requirements of a transforming Army.

Effective facilities engineering is also enabling us to meet the Army's infrastructure needs with high quality, sustainable facilities. Despite the unprecedented amount of new construction, and despite compressed timelines to provide usable facilities, the Army cannot afford to sacrifice on quality or sustainability. Sustainability, in particular, is becoming increasingly important as we realize the financial dividends and environmental benefits of energy and water conservation. To that end, the Army has incorporated the Leadership in Energy and Environmental Design for New Construction Silver rating as a principal feature in all new military construction.

Facilities engineers are also employing innovative design concepts to create more energy efficient facilities. At Fort Irwin,

Calif., for instance, facilities engineers have incorporated solar panels on the roofs of buildings to leverage the abundance of solar energy. There are similar examples of facilities engineers incorporating wind turbines and geothermal energy systems to promote sustainability and reduce costs. At every turn, facilities engineers are employing innovative concepts and techniques, enabling us to meet the needs of a rapidly changing Army while providing high quality, sustainable facilities.

Creating high quality facilities and sustainable installations requires planning. To that end, facilities engineers are working diligently to create comprehensive installation master plans. With so much change occurring on installations, an effective master plan has become absolutely essential. On installations throughout the Army, master planners are updating and maintaining Real Property Master Planning Digests and Installation Design Guides to ensure our installations are postured to adapt to a changing Army.

Over the next five years, the Army will invest more than \$48 billion in military construction to support Army transformation, BRAC, and the restationing of forces from overseas. This is a huge investment in our installation infrastructure. To ensure we invest wisely, our facilities engineers will play a pivotal role. We will rely on them to enable us to rapidly respond to the infrastructure needs of the force, provide high quality, sustainable facilities and develop comprehensive installation master plans, which will posture us for the future.

As I said at the outset, to support an expeditionary Army at war, and provide Soldiers and Families the quality of life they deserve, facilities engineering has become more important than ever.

Lt. Gen. Robert Wilson is the assistant chief of staff for installation management and commander, Installation Management Command. **PWD**



Corps serves installations with facilities engineering know-how

by Lt. Gen. Robert L. Van Antwerp

Army installations face daunting challenges in executing the complex actions associated with Army transformation, global realignment and Base Realignment and Closure, above and beyond the day-to-day tasks of operating and maintaining installations. The Directorates of Public Works serve on the front lines of these actions. With much leaner organizations, they must balance constantly changing and competing requirements with funding and staffing resources.

The U.S. Army Corps of Engineers is one of the teams that helps address these huge requirements for the Army. USACE is a reservoir of facilities engineering capacity, skill and experience for DPWs. We can provide engineering, construction, real estate, environmental, training and acquisition services. We can get the job done without the need for IMCOM to grow, sustain and resource a standing work force to handle the surges of these responsibilities on installations. And one of my top priorities is to make sure that USACE delivers our programs and projects with excellence.

Installation support

Our districts offer engineering expertise in the construction, operations, maintenance, repair and alteration of facilities. They can provide life-cycle services that include everything from acquisition packages to complete project management and quality assurance. Our centers and labs have specialized Armywide programs and services that leverage geographic district expertise and resources where needed for successful and cost-effective project execution.

In addition, USACE continues to explore new technologies, like Building Information Modeling. (*Editor's note: see article on page 34.*) We pursue innovations in sustainability practices and energy savings programs. We promote important initiatives like master planning and environmental sustainability. These endeavors provide ready resources to help the Army execute its requirements and help the public works



Lt. Gen. Robert L. Van Antwerp
Photo by F.T. Eyre

community stay on the cutting edge of installation management.

We are heavily involved with service to installations. Our districts, centers and labs have the expertise and tools to integrate the complex actions needed to meet both short-term mission requirements and long-term planning goals. Whether the need is for infrastructure, utility gaps or mission-essential requirements analyses; master-planning studies; environmental services; or real estate leases and disposals — we are ready to serve.

USACE's eight Centers of Standardization provide a key element for support of standard facility construction missions throughout the Army's MILCON Transformation (MT) program. These centers are developing 41 standard facility designs that will deliver completed projects 30 percent faster and at 15 percent less cost than previous project delivery methods.

This initiative generates multiple benefits. It provides programmatic standardization and efficiency, leverages USACE technical expertise and introduces economies of scale. It also establishes process criteria and product standardization, consistent delivery and quickly deploys project lessons learned through the Engineering and Construction Community of Practice.

MT's standard requests for proposals are founded upon performance-based specifications driven by the International Building Code, Leadership in Energy and Environ-

mental Design Silver standards and the Energy Policy Act of 2005 — all designed to address the long-term sustainability and energy conservation goals of the Army and the Department of Defense.

Centrally managed programs

USACE centrally manages several important programs for IMCOM. These include the Facilities Reduction, Energy Management/Commercial Utilities, Furniture Acquisition and Access Control Point programs.

The Facilities Reduction Program (FRP) removes the Army's excess facility inventory worldwide using cost-effective and environmentally sound methods. The program helps the Army reclaim the real estate it needs to realign its force structure and decrease maintenance and utility costs. FRP succeeds by centralizing management, decentralizing execution and incorporating the industry's best practices and acquisition strategies. It has saved more than \$7 million since 2004.

The FRP also teams IMCOM elements and USACE districts. For example, the Huntsville Engineering and Support Center teamed with the Seattle District and the Army Environmental Command on several projects that exceeded the Army standard for waste diversion of 50 percent by weight.

USACE is also deeply involved with energy planning and management on installations. The Energy Engineering Analysis Program is a team effort of the Huntsville Center, the Construction Engineering Research Lab and the Department of Energy's Pacific Northwest National Lab. The program helps installations achieve mandated energy reduction goals by identifying energy saving projects, contract acquisition strategies and funding options.

Utility rate interventions have produced more than \$65 million in cost avoidance and savings since 1999. Utility surveys have identified \$13.8 million in savings. Since 1998, USACE has awarded Energy



ACSIM looking for input to Energy and Water Campaign Plan update

by Curt Wexel

A letter from Lt. Gen. Robert Wilson, assistant chief of staff for installation management, dated April 30, distributed the *U.S. Army Energy and Water Campaign Plan for Installations* and solicited input for its update by July 31. This biennial review is essential, because the updated campaign plan will be used to define and defend ACSIM's energy initiatives for the fiscal years 2010-2015 Program Objective Memorandum (POM) budget reviews.

The *Army Energy Strategy for Installations* is the Army's 25-year vision. The strategy, signed in July 2005 by the Secretary of the Army, consists of five key initiatives:

- eliminate energy waste in existing facilities,
- increase energy efficiency in new construction and renovations,
- reduce dependence on fossil fuels,
- conserve water resources, and
- improve energy security.

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Savings and Performance contracts that have achieved \$328 million in contractor-financed infrastructure improvements on 33 Army installations to be repaid from actual energy cost savings.

The Furniture Program enables installations to have quality furnishings installed in new and renovated barracks and administrative facilities. (Editor's note: see article on page 9.) Key services include furnishings design, procurement and oversight of delivery and installation. Unaccompanied Personnel Housing furnishings was paired with longstanding administrative furnishings designs and has resulted in more than \$54 million of savings, which have been used to purchase furniture for tens of thousands of additional barracks spaces.

In support of the Army Office of the Provost Marshal General mandate to secure Army installations worldwide, USACE manages the Access Control Point Program. We conduct site inves-

The road map for executing those initiatives is contained in the Army's *Energy and Water Campaign Plan for Installations*, which is, by design, an evolving document, flexible and responsive to a changing world. The updated plan will reflect three major areas of change:

Response to new directives

Since the publication of the energy strategy and the initial campaign plan, the Department of Energy has issued implementing instructions for the Energy Policy Act of 2005, and directives were issued for Armed Forces energy security, 10 U.S. Code, Chapter 173, which was approved Dec. 22. On Jan. 26, the president signed Executive Order 13423, *Strengthening Federal Environmental Energy and Transportation Management*. The president's Council on Environmental Quality issued further implementation instructions and requirements in a memorandum dated March 28.

tigations, provide technical expertise in physical and electronic security design, and encourage compliance with the Army Standard for Access Control Points. We also centrally manage the procurement and installation of equipment for access gates at active, Reserve and National Guard sites. The program promotes the Installation Design Standards program and provides economies of scale by leveraging the existing USACE presence and relationships at Army installations.

Teamwork works

The Army's public works mission and workload are huge and demanding. Yet we live in a tough environment of limited available resources. We can't let those obstacles stop us from achieving our goals. USACE and DPWs must team using innovative thinking and technology to meet these challenges. We have the will, so we will find a way.

To be successful in our priority of delivering with excellence, we must focus on



Wind turbines at Camp William, Utah, produce nearly one megawatt of electricity at full capacity. To comply with Executive Order 13423, the Army must increase use of renewable power sources. Photo courtesy of the Office of the Assistant Chief of Staff for Installation Management

Relevant documents are posted at the Army's Energy Program web page, <http://army-energy.bqda.pentagon.mil>. These ➤

our mission. Remember how, when you were a kid, you could take a magnifying glass, focus sunlight and start a fire with a pile of leaves? That's focused light. Whenever you can focus something, it's much more powerful. So we have to focus our efforts.

We are proud of our past successes in assisting installations to accomplish their demanding workloads. We want to help the IMCOM public works community ensure Soldiers and their Families have the best facilities in which to work and live, now and in the future. The USACE team stands ready to continue serving IMCOM as the Army and its installations transform to meet future mission requirements.

Essayons.

Army Strong, Engineer Ready!

Lt. Gen. Robert L. Van Antwerp is the chief of engineers and commanding general of the U.S. Army Corps of Engineers. 



FY 2009 ECIP guidance revised to improve program input

by Ronald Diehl

Annual Guidance for the fiscal year 2009 Energy Conservation Investment Program (ECIP) was distributed to all Army organizations at the end of May with requested submission of candidate projects for the FY 2009 program due

at the Office of the Assistant Chief of Staff for Installation Management by July 31. The guidance is also available on the Army Energy web site, <http://army-energy.hqda.pentagon.mil/funding/ecip.asp>.


The guidance includes several changes to the process by which projects are documented and submitted for ECIP funding consideration. One fundamental change is the requirement that installations report monthly energy consumption data to the Army Ener-

gy and Water Reporting System database in order to qualify for ECIP funding.

Other changes include specific identification of the preparer of documentation as well as the project execution POC. The guidance stresses the importance of accurate documentation of each project, realistic cost estimates and strong follow-through in the design and execution of each project.

The FY 2007 ECIP program was funded in the amount of \$19.86 million.

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Photovoltaic panels in use on Kwajalein Atoll. Photo from the Army Energy Program web site

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new directives primarily impact data collection and reporting, and set new performance target metrics.

New technologies, opportunities

The campaign plan identifies specific key actions needed to achieve each of the initiatives of the strategy, detailing the approaches to be taken, the technologies and tools required, specific projects and milestones, a description of the end state and the metrics for success. Energy market forces have been especially volatile, resulting in rapid changes in both legislative and economic conditions, which subsequently drive innovation, new technologies and investment economics. Investment opportunities also change with the restructuring of the Army and changes in mission and operations.

New construction, especially associated with Base Realignment and Closure, provides a unique opportunity to build efficient and sustainable facilities. This opportunity begins with proper site plan-

ning, such as passive solar orientation, and continues through design with the incorporation of cost-effective and efficient energy features. New facilities are incorporating the Leadership in Energy and Environmental Design rating standards into sustainable designs and using Energy Star equipment. For more information on efficient design, see <http://www.hq.usace.army.mil/cepa/pubs/oct06/story1b.htm>.

Resource constraints


The availability of resources directly and profoundly impacts execution of the plan. Since multiple funding streams and appropriations are involved, different portions of the execution plan have been affected inconsistently. Planned actions are inter-linked or sequenced, such that changes in one section of the plan can have ripple effects elsewhere. Where appropriations did not meet requirements for some budgeted elements for the FY 2007 campaign plan, priorities were realigned to minimize long-range repercussions on execution.

In light of changing directives, oppor-

tunities and resources for our energy program, and the resources needed to achieve them, Headquarters, Department of the Army conducted a critical review of performance in meeting milestone schedules of the plan. HQDA is also leading upgrades and a thorough review of our energy and infrastructure data to better track energy usage performance in meeting mandated energy goals.

The Office of the ACSIM looks forward to receiving ideas and input for incorporation in the update of the U.S. Army Energy and Water Campaign Plan for Installations and to its successful defense in the FY 2010-2015 POM budget reviews. Input may be submitted to the author at the information below.

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Presenting: Army Facilities Standardization Program

by John Scharl

What is it?

The Army Facilities Standardization Program (AFSP) is a management tool that establishes Army Standards that provide the essential performance criteria for specific facility types and Army Standard Designs that set layout and facility configurations. These facility standards are mandatory for all Army installations, armories and Reserve centers.

The AFSP is designed to increase the Army's ability to:

- improve standards for quality of life that Soldiers and Families deserve,
- establish and enforce Army Standards and Standard Designs for the Military Construction programs, and
- foster a culture of innovation to investigate and transfer emerging technologies to create the global infrastructure required to support and sustain the all-volunteer force.

Who is involved?

The Office of the Assistant Chief of Staff for Installation Management provides Army-level program management and approves all facility Army Standards. The process links the Army doctrinal proponent, e.g., G-4 (supply) for maintenance facilities, resource agencies and the engineering expertise of the Army Corps of Engineers to develop the most effective facility criteria to meet mission requirements.

How does it work?

The multiagency involvement facilitates the adapt-build approach in the MILCON Transformation process, avoiding unnecessary, repetitive design costs while ensuring all similar facilities provide the same essential mission capabilities regardless of where the facility is constructed. It also ensures facilities achieve required energy and sustainable efficiencies.

Documentation for the AFSP is web-based. The web portal, <https://www.idсарmy.hqda.pentagon.mil/army%5Fids/>, is titled Installation Design Standards (IDS). It contains approved Army Standards, Army

Standard Designs and installation planning requirements.

The IDS enables installation commanders to focus both short- and long-term efforts to achieve efficiencies through standardization across all garrisons. It provides mandatory planning and design criteria similar to community zoning codes so that the Army can achieve the highest degree of continuity, sustainability, reliability and efficiency in site planning, buildings, road networks, landscaping, signs and markings, and force protection. In this manner, the Army ensures its installations reflect a sense of community, order, tradition and pride, bedrock requirements to maintain quality facilities.

What has been completed?

Army Standards have been published for:

- company operations facilities,
- enlisted personnel barracks,
- general instruction buildings,
- child development centers,
- access control points,
- chapels,
- lodgings,
- operational readiness training complexes,
- Family housing and
- community service facilities.

An Installation Technology Transfer Program has been established. The program was instrumental in publishing approved Army Standards for keyless electronic door access, light-emitting diode traffic lights and waterless urinals.

In addition, a Lean Six-Sigma Rapid Improvement Event on the MILCON pro-



This armored vehicle maintenance facility at Fort Knox, Ky., is an example of the type of facility for which standard designs are being developed. Photo from the Installation Design Standards web site

cess significantly improved response times, cost and delivery, and new facilities categories were developed to support Warrior in Transition Units.

What is in the works?

Army Standards are under development for:

- enlisted unaccompanied personnel housing for the Warriors in Transition program,
- headquarters buildings for the Warriors in Transition program,
- Soldier and Family assistance centers,
- tactical equipment maintenance facilities,
- brigade and battalion headquarters,
- command and control facilities for echelons above brigade,
- dining facilities,
- physical fitness centers,
- fire stations,
- basic and advanced individual training complexes,
- youth activity centers and
- judicial centers.

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Administrative furniture program assists Army Transformation

by Kim Gillespie

The way Army installations buy administrative furniture for their buildings is changing, and the U.S. Army Engineering and Support Center, Huntsville, is the central manager for that change.

The Office of the Assistance Chief of Staff for Installation Management and the Installation Management Command instituted the Centrally Managed Administrative Furniture program in fiscal year 2006 and designated Huntsville Center as the program management support, procurement delivery agent for this important task.

"IMCOM was very impressed with the success of Huntsville Center's management of the Unaccompanied Personnel Housing (UPH) Furniture program," said Bill Sugg, then chief of the Engineer Branch, Public Works Division at Headquarters IMCOM. "Huntsville's record of customer service, on-time delivery, cost savings through competitive procurement and centralized tracking and management convinced us that Huntsville Center should manage the administrative furniture program, too. We anticipate additional synergies and savings through combining both programs."

The relationship among the team members requires close coordination. OACSIM is responsible for policy and programming of funding. IMCOM receives Army funding, sets priorities and disperses funding to Huntsville Center. Huntsville Center is responsible for program and procurement support, including data collection and historical analysis, overseeing the collection of furniture requirements, procurement management, and execution and delivery of furnishings.

While the focus of the OACSIM, IMCOM and the U.S. Army Corps of Engineers initiative is administrative furniture, the mission is about supporting Army personnel.

"Ensuring Army Soldiers and civilians have quality furniture that arrives on time

is critical to the success of Army Transformation," said Alicia Allen, Huntsville Center's Furniture Program manager. "In addition to ensuring quality, centralizing administrative furniture procurement also standardizes furniture to ensure the same quality of life is maintained at all Army installations. Cost is also an important factor in that we will standardize the design to ensure quality, but, whenever practical, furniture will be procured through competition to get the best prices available for that level of quality."

Education is important to the success of the program, according to Scott Wick, the proponent for furniture at Headquarters USACE.

"This is a big change, and personnel may not understand how centralized management works and why it was necessary to implement this program," Wick said.

Instead of funding each installation separately for the procurement of administrative furnishings, IMCOM now sends funding to Huntsville Center. It uses customer requirements to make the procurement.

"We make sure they get what they need and get the best value," said Stephen Evans, Huntsville Center project manager for administrative furniture. "Our role is to



Steven Evans, Huntsville Center's project manager for the Administrative Furniture program, and Alicia Allen, Huntsville Center's furniture program manager, review office furniture catalogs as they discuss the administrative office furniture program. Photos courtesy of the Engineering and Support Center, Huntsville, Ala.

help the installation in every way we can."

The challenge for Army personnel is shifting from proprietary to performance-based thinking and acquisition, according to Evans. Like standardization, performance-based thinking is another Army initiative that installations and personnel will enjoy once they start seeing the benefits.

"It has only been 19 months since Centrally Managed Administrative Furniture was first conceived by the OACSIM," Evans said. "We received the final go-ahead from Corps headquarters in late January, so we still have a lot of work to do to make this system fully operational, but we are making good progress."

The Centrally Managed Administrative Furniture program is being modeled after the successful UPH Furniture program, which is also managed by Huntsville Center for OACSIM and IMCOM. The UPH Furniture program is a partnership with OACSIM, IMCOM, installations, Corps districts and the General Services Administration vendor community. The UPH ►



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Furniture program produces on-time deliveries at least 98 percent of the time, realizes significant programmatic savings and has increased the expected life of the UPH furnishings by as much as 50 percent, according to Allen.

“We’ve had 12 years to develop the barracks furniture program, but we have a much shorter time frame to get the administrative furniture program running smoothly,” she said.

Establishing standard procurement methods is the first step, according to Allen and Evans. Eventually, standardized designs for standardized facilities are envisioned.

“Standardized designs will meet the functional demands of the customer,” Allen said, “and must complement the facility designs.”

The program must also use the most efficient procurement process, which can best be done by competition, usually through the GSA schedules whenever practical, Evans said. To the maximum extent possible, the use of Blanket Purchase Agreements will be used to provide the furniture.

“The competition will be done up front,” Allen said.



Office furniture like this is being obtained for the Fort Hood, Texas, motor pool through the Centrally Managed Administrative Furniture program.

The interior design function remains a critical part of the furnishings process.

“Even Centers of Standardization facilities may require design changes, although they may not be drastic modifications,” Allen said.

Although the centrally funded furniture program will improve the ability to provide furniture when needed, the amount of funding will still be limited. So IMCOM is ensuring that furniture procurement is being made the right way and prioritized correctly, Allen said.

“We are also developing a strategy to ensure small business goals are met,” Allen said. “Whether this is through the vendor, rather than the manufacturer, has yet to be finalized. But we know we can fulfill many of our small business goals through GSA procurements, as we have done with our UPH Barracks Furniture program.”

The administrative furniture program had its first challenge at the end of FY 2006. Funding was received in August. Within six weeks, 79 furniture designs were completed, and 127 building procurements were made.

“This is a great example of a team effort and getting the job done,” Allen said. “A project delivery team (PDT) was developed that consisted of OACSIM and

IMCOM centrally managed administrative furniture personnel, Huntsville Center’s administrative furniture team, installation customers and Corps district representatives, who all worked together with many long hours to ensure the furniture would be on its way. To make it happen and to assess the best features of a number of types of methods, the PDT utilized a variety of contracting methods. The Corps’ Baltimore District

also played significant role; they took the lead in awarding the bulk of the contracts.”

The experience and data gained from this initial design and procurement effort is being used to develop the final program process and structure.

“We plan that by centrally managing the administrative furniture program, we can assist OACSIM and IMCOM by developing a data base detailing the type and amount of furniture purchased,” Evans said. “By having all the administrative furniture data in one location, it will be much easier to program and prioritize the replacement of furniture. Prioritizing procurements will become easier as we implement the program.”

Allen and Evans are also optimistic that customers will be pleased with the quality and service resulting from central management.

“The design standards and procurement methods are a good guarantee that the furniture will have its promised life span, or beyond,” Allen said.

Evans summarized the administrative furniture mission as “getting the best value for the customer.” Best value means a standard for quality, competition for cost, and timely delivery and service, he said.

“The Corps stresses the ‘fours Rs’ (relevant, ready, responsive and reliable),” Evans said, “and (former chief of engineers) Lt. Gen. (Carl A.) Strock has emphasized how these four elements are connected. Our joint OACSIM, IMCOM and Corps of Engineers program incorporates the four Rs — we are doing the right thing in the right way, and when we say we can do something, we do it!”

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Kim Gillespie is the chief of Public Affairs, Engineering and Support Center, Huntsville, Ala.

PWD



Army applies program comments to thousands of historic properties

by Susan Thompson

Four years of effort by the Army came to fruition with the publication in the *Federal Register* of the notice of adoption of three program comments for World War II- and Cold War-era properties. These comments cover National Historic Preservation Act (NHPA) Section 106 compliance for 35,000 Army properties, as well as 10,000 more across the Department of Defense.

With the *Federal Register* publication, the program comments are available to installations for full implementation. Installations can proceed with renovation, demolition, mothballing, deconstruction and salvage, and transfer, sale or lease of these properties without need for further Section 106 consultation or compliance activities.

“The Army currently owns 61,000 buildings and structures that are 50 years old or older, and this number will increase to 83,000, or 57 percent of the total inventory, in the next 20 years,” said Lee Foster, Army deputy federal preservation officer. “Programmatic compliance actions, such as these three program comments, are critical to addressing this rapidly growing inventory of buildings and structures subject to Section 106 NHPA compliance.”

The properties covered are: unaccompanied personnel housing from the Cold War era, 1946-74; ammunition storage facilities from the World War II and Cold War eras, 1939-74; and Army Ammunition Plants and production facilities from the World War II and Cold War eras.

Lists of the properties affected can be found on the Cultural Resources Community site, <https://www.us.army.mil/suite/page/412399>. These lists have been sent to each state historic preservation officer.

The U.S. Army Environmental Command is overseeing the completion of the treatment measures required by the program comments. Included are the expansion of two existing historic contexts to cover Cold War-era ammunition storage



The “Rolling Pin” design of these barracks at Fort Knox, Ky., is typical of Unaccompanied Personnel Housing built during the 1960s. Photos courtesy of R.C. Goodwin and Associates

and production facilities, and documentation of properties at 11 installations. Installation actions that affect these properties can be undertaken before the completion of the treatment actions.

One element of the mitigation is already complete: a publicly available version of the historic context for Cold War-era unaccompanied personnel housing. This document can be found on DENIX, on the dedicated “Program Alternatives” page, <https://www.denix.osd.mil/ProgramAlternatives>. As the treatment measures are completed, they will be posted on this web site on the public or DoD sides, as appropriate.

Installations will soon receive further guidance on how the program comments apply to existing compliance agreements and the application of the comments to



Historic preservation requirements have now been fulfilled for the vast majority of ammunition storage facilities, such as this Stradley, or “yurt,” structure at Anniston Army Depot, Ala. This property type is among the few designed specifically for the changing ammunition technology of the Cold War.

properties within historic districts. Check the Cultural Resources Community Site for further details.

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Susan Thompson is chief, Preservation Branch, U.S. Army Environmental Command. **PWD**



Fort Benning removes corrosion from HVAC piping

by David Miller, Larry Baca and Mark Fincher

During the summer of 2005, several of the large buildings used for basic training on Sand Hill at Fort Benning were not cool enough to provide relief to trainees during the hot Georgia summer. Despite the best efforts of maintenance workers, no amount of filter changing or coil cleaning could keep those facilities sufficiently cool.

Two of the older facilities, Buildings 3105 and 3210, were selected by Fort Benning's Directorate of Public Works personnel for investigation of the heating and cooling problems. One of the recommendations from Shaw Infrastructure, the DPW operations and maintenance contractor, was to attempt to de-scale the inside of the heating and cooling piping in these buildings.

Shaw, together with DuBois Chemical, the industrial chemical division of JohnsonDiversey, had previously initiated a corrosion study using mild steel coupons in several buildings at Fort Benning. In structures where no anti-corrosion chemicals were being used, corrosion rates were no better than "fair," about 0.5 to 0.8 millimeters per year. Considering the buildings at Sand Hill are more than 25 years old, corrosion rates of this magnitude on the pipes in the dual heating and cooling systems could have led to considerable scale and rust accumulation.

Dye studies were then conducted on Buildings 3105 and 3210 using fluorescein yellow/green. Results showed about 1,000 gallons of circulating chill water in each building. Examination of building blueprints yielded an estimated design circulation of 8,000 gallons based on pipe diameters and lengths. A portion of pipe removed for physical examination was severely occluded.

The DPW, Shaw Infrastructure and DuBois Chemical previously had excellent success removing rust and scale from steam boiler tubes using an inhibited acid product. When laboratory testing of the scale present in the pipes was shown to be

primarily iron oxide and calcium carbonate, the decision was made to attempt to descale the heating and cooling plumbing in a similar manner as had been employed with the steam boilers.

Introduction of the acid into pressurized water pipes was not as simple as introducing acid into an open boiler. Several types of pumps were tried before an effective and inexpensive combination of pumps was identified. A small pump functioned as the transfer pump from the acid container and primed the high-pressure carbonator pump driven by a one-third horsepower motor. A carbonator pump is typically employed in soft drink dispensers, but with its 125 psi output, polyimide impeller and stainless steel body, the pump proved to be acid resistant enough for this application. Each pump cost under \$150 and, with a water rinse after each use, withstood months of use.

The process of acid cleaning the building's plumbing began by locating a suitable place for acid injection. Ideally, the acid should be injected into as large a diameter pipe as possible, on the low pressure side of a large circulation pump and through a relatively small orifice, about one-quarter to three-eighths inch. Large-diameter pipes and pumps are desirable to minimize any localized effect of the concentrated acid on pump seals and plumbing when it is first introduced, prior to circulation and dilution.

An anti-foaming product was initially injected, then, based on either prior dye study results or sodium hydroxide titration, acid was introduced into the system to a concentration of 1 percent to 2 percent. Pumping rates averaged 1.25 gallons per minute against the 60-90 psi present in the plumbing. The acid was circulated overnight, and system flushing

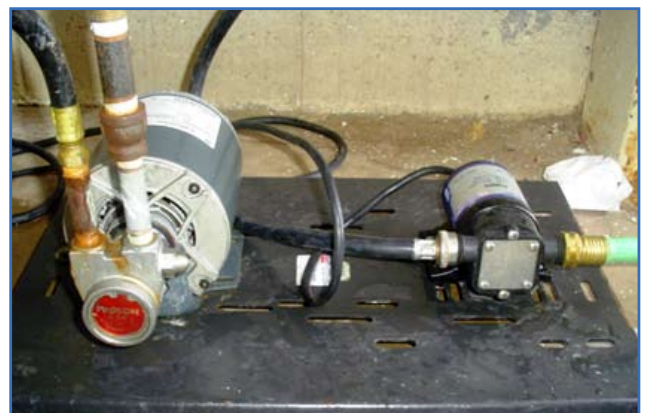
began the following day. Generally, the acid was neutralized by the carbonate scale, and discharge water pH was neutral, though provision was made to introduce neutralizing sodium hydroxide if required.

Flushing the dissolved iron and scale from the system, at rates which did not exceed make-up water feed rates, took five to seven days. Samples for dissolved and suspended solids were collected during this time and used to determine when system flushing was completed.

The final step was the introduction of an oxygen-scavenging corrosion inhibitor into the cleaned system. Proper concentration of the inhibitor and the total system volume following cleaning was determined by ▶



A portion of pipe removed for physical examination at Fort Benning, Ga., is severely occluded. Photos by David Miller



The carbonator pump is to the left in the pump arrangement used at Fort Benning, Ga., to introduce acid into pressurized water pipes.



Horizon in sight for facilities engineering regulation

by John W. Wehmanen and Philip R. Columbus

Last year, we confidently predicted that the consolidated Army Regulation 420-1 was on the horizon and would be out last fall. It wasn't, and still isn't, but it is moving steadily in that direction. Here is the latest update.

The new reg is traveling along the path towards publication — progressing steadily but not as rapidly as everyone wants toward the day when answering the question, “Where is that in the regs?” will be easily answered. It will be in AR 420-1.

When it comes out, almost all the Army's public works and facilities engineering policy regulations will be together — either as complete chapters, as self-standing Army publications connected by hyperlinks to the new regulation or as synopsis chapters. The end-state regulation will have 30 chapters, updated and collocated under one cover. These will represent nearly 40 separate ARs as they stood when this undertaking began.

AR 420-1's long-awaited first increment will include 10 fully developed chapters. The first chapter, an introduction, will be followed by nine chapters encompassing former regulations. Old regulations that will each become a chapter are: ARs 11-27, 210-50, 415-15, 420-10, 420-18, 420-49, 420-70, 420-72 and 420-90. The existing AR 210-50

was revised earlier and includes the material from AR 210-12, and AR 415-15 has been updated and includes AR 415-19.

When, you ask? To paraphrase the weatherman, the prognosis for publication is “increasingly sooner.” The draft of AR 420-1 has cleared the Office of the Judge Advocate General (OTJAG). The last of their thorough and helpful review comments has been received and processed. Not to count chickens while the eggs are still hatching, clearing OTJAG is a major positive step. The text will now be put into the Army Publishing Directorate (APD) special publishing interface software and sent to them. Once they comment and we clear their comments, APD will publish AR 420-1 on their web site.

“Increasingly sooner” to be sure, but when, you ask? The best estimate as this article goes to print is this fall. That is later than predicted last year, but this has been a surprisingly large and complex task. Everyone involved in creating the new regulation is eagerly awaiting the day this fall when the announcement can go out that the first increment is done.

Future developments will add regulations from the Office of the Assistant Chief of Staff for Installation Management, the Installation Management Command and

the chief of engineers to synopsis chapters. This will husband valuable resources while ensuring all the needed information is readily locatable.

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PWD

Look us up on the web

For an electronic copy of the

Public Works Digest,

go to:

<http://www.imcom.army.mil/sites/pw/digest.asp>

Fort Benning's DPW, its facility maintenance contractors and their suppliers and vendors all worked together successfully to keep Soldiers cooler at Sand Hill.

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(continued from previous page)

titration of nitrite contained in the inhibitor using ferroin indicator and ceric sulfate.

The progress made in cleaning the pipes in Buildings 3105 and 3210 occurred in steps. System volumes increased from 1,000 gallons to 2,000 gallons after the first cleaning. A second acid cleaning raised the volume to 4,000 gallons, and a third treatment yielded 8,000 gallons of circulating water. While the heat-transfer-inhibiting properties of scale are significant, in this example, there simply was not enough circulating hot or cold water before acid

cleaning to handle the thermal transfer demands.

These Sand Hill basic training buildings have decentralized heating systems maintained by Shaw Infrastructure and centralized cooling plants operated and maintained by Georgia Trane. But because both heating and cooling systems share distribution plumbing within the buildings, it was important that anti-corrosion chemicals be maintained in systems during both heating and cooling seasons. To that end, Shaw and Trane agreed to allow Shaw to introduce the corrosion inhibitor into dual temperature systems postwide.



FRR contractors work 40,000-plus man-hours a month without accident

by Debra Valine

Huntsville Engineering and Support Center estimates that the five contractors working on its Facilities Repair and Renewal (FRR) Program projects have worked about 1,750,000 man-hours since fiscal year 2004 without a lost-time accident. They average between 40,000 and 45,000 man-hours a month. The government and private sector project managers and the teams they lead take a lot of pride in getting the job done safely, within budget and on time.

“There is probably no better way to show respect for another person than to protect their safety and well being,” said Ray Waits, Huntsville Center’s safety manager. With any construction activity, taking the extra steps to work safely is the ultimate sign of professionalism.

“Working safely shows real care and concern for employees and everyone else on the job,” Waits said. “Committing to safety reflects true leadership that is strong enough to resist the pressures of cutting corners or taking chances to meet deadlines. It avoids human tragedy, huge financial costs and the needless pain and

suffering of not only the injured but the family members as well.”

The five contractors working FRR projects are BMAR & Associates Inc., Global Engineer & Construction, Vanguard Contractors Inc., Ameresco Solutions Inc. and RCI Inc. Their projects involve hurricane recovery and mitigation projects at NASA sites, including Stennis Space Center, Miss., and the Michoud Assembly Facility in New Orleans, La. They are also working on multiple barracks renovations on Fort Bragg, N.C., and general building and lab renovations at the Armed Forces Radiobiology Research Institute (AFRRI) in Bethesda, Md.

The FRR program started out as the Maintenance Repair and Renewal program in 1992. The program was developed to provide installations with quick support to projects that have budget and schedule



On scaffolds suspended from the top of the 20-story-high Vehicle Assembly Building, National Panel Systems’ workers Ken Harris and Patrick Chiles painstakingly place individual tiles of the NASA logo. Photos courtesy of the Engineering and Support Center, Huntsville, Ala.

constraints and provide a turn-key contractor solution to the government’s needs. The program is available to all Corps districts and their customers as part of the its “One Door to the Corps” policy.

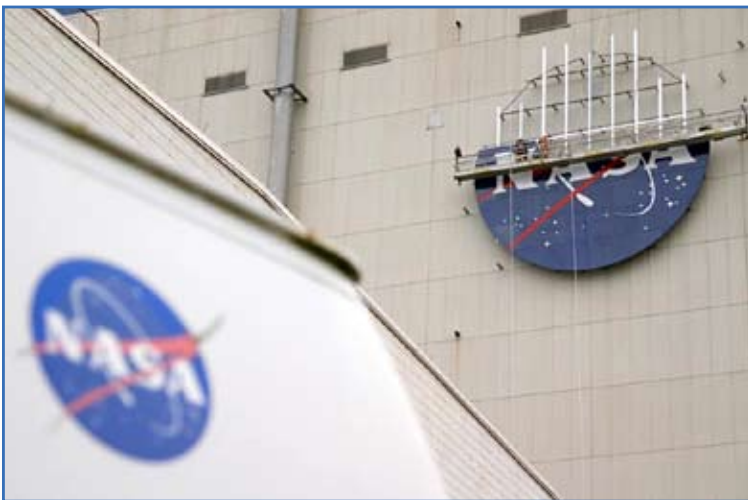
“An example of quick support on projects is the work we are doing for

AFRRI,” said Wade Doss, the FRR division chief. “The facility had a broken water main and called Huntsville Center for help. We were able to respond within 24 to 48 hours and get the water main repaired.”

Keys to the program’s success include innovative and flexible acquisition strategies associated with executing the task orders against the family of indefinite-delivery, indefinite-quantity (IDIQ) hybrid service and construction contracts covering all 50 states plus U.S. territories, Doss said.

IDIQ contracts have several advantages. They employ performance-based specifications and scopes of work that ensure the desired end result is achieved. They use work plans in lieu of full blown architect-engineer designs. They save time because construction can be fast-tracked. They also ensure quality of work and use of best applications.

Under the program, virtually any repair, renovation or minor construction work can be done. Specifically, the FRR program conducts surveys and special studies; develops work plans that are similar to designs, but must be incidental to each project; performs alterations, additions, ➤



The logo on NASA’s Vehicle Assembly Building in New Orleans was damaged by wind during Hurricane Katrina. Known as the “meatball,” the logo measures 40 feet in diameter and consists of 80 pieces of porcelain enameled sheet metal fabricated by Cherokee Porcelain Enamel Corp, of Knoxville, Tenn.



Army's new medical action plan affects public works

by Philip R. Columbus

Following the disclosure of conditions at Walter Reed Army Medical Center in Washington, D.C., the Army embarked on a comprehensive review of the process, procedure and facility needs of wounded Soldiers. Under the direction of Medical Command (MEDCOM), an Armywide team was assembled to address the issues and develop solutions. The result is the Army Medical Action Plan (AMAP).

A key element of the AMAP is the creation of the "Warrior in Transition Unit" (WTU). These units will provide the command and control necessary to assure warriors in transition are properly housed and administered.

The mission of the WTU is proper rehabilitation. It is designed to ensure Soldiers are provided the tools and facilities they need to accomplish that mission.

Following the briefing of the AMAP to the Army vice chief of staff, a warning order was prepared to begin the implementation of the key tasks in the AMAP. From a public works perspective, several of the tasks have effects:

- Installation management responsibilities for Fort Detrick, Md., and Walter Reed Army Medical Center will be transferred from MEDCOM to the Installation Management Command.
- New facility category codes for the operations center and barracks associated with WTUs will be created. The unit operations center and barracks supporting the WTU will fully comply with the Americans with Disability Act (ADA) and the Architectural Barriers Act (ABA) to assure accessibility for wounded Soldiers. Acces-

sibility features over and above the ADA and ABA requirements will be provided based on the recommendation of the installation medical authority.

- Non-medical attendants for designated warriors in transition are authorized. The attendant can be a family member or associate who will be there to assist the single Soldier during rehabilitation. The Office of the Assistant Chief of Staff for Installation Management and the Army G-1 will direct garrisons to convert or divert Family housing units to unaccompanied personnel housing for Soldiers requiring a non-medical attendant. For those installations with privatized housing, garrison commanders are also directed to work with their Residential Communities Initiative partners to accommodate WTU Soldiers.
- Furnishings requirement for the WTU barracks and company operations facilities are to be developed. Currently, for newly constructed barracks, furnishings are centrally funded and managed at OACSIM.
- OACSIM, IMCOM, the G-1 and MEDCOM will publish interim facility standards for the new WTU and barracks facilities.
- OACSIM, IMCOM, G-1 and MEDCOM will use already existing standard facilities designs or, in accordance with the Army Facilities Standardization Program, initiate new facilities design teams for WTU company operations facilities and barracks.
- IMCOM will prepare appropriate budget submissions to support the new WTU operations facilities and barracks to the

required standards.

- The senior mission commanders on each receiving installation for warriors-in-transition initiatives will establish this program as top priority.
- Garrisons will be directed to plan and program for permanent facilities for this program.
- G-1 will authorize dual Basic Allowance for Housing for a warrior in transition who is receiving outpatient care at a different installation from his or her home station if the warrior in transition does not want to move his or her Family. Legislative change may be needed to make transitional warriors eligible for the various programs that offer assistance in the sale of privately owned homes.
- Installations will assure accessible routes exist to all facilities required by warriors in transition.

All Army organizations are reviewing policies and procedures necessary to accomplish the missions laid out in the AMAP and its associated operations orders. IMCOM and MEDCOM are working diligently to put the programs and facilities in place to ensure the Army takes care of its warriors in transition.

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repairs, replacements and minor construction; procures, installs, starts up and tests equipment; and performs maintenance on equipment installed under the FRR contracts.

"FRR provides the fastest solutions to existing building and/or infrastructure inventory requirements," Doss said. "We provide a 'relief valve' for districts and/or installations for repair and renewal work."



Schofield-Wheeler well's history runs deep

by Jeremy S. Buddemeier

At the bottom of a 1,200 foot tunnel on Wheeler Army Airfield, Hawaii, lies a precious resource most Soldiers and Family members will never see, yet can't live without — the Schofield-Wheeler aquifer. While the aquifer's maximum capacity is undetermined, it has faithfully provided water to the Schofield Barracks, Wheeler Army Air Field and Helemano Military Reservation communities for 70 years.

Each day, nearly five million gallons of water are pumped from the aquifer to storage tanks scattered around various Army communities in the island of Oahu's central section. The communities draw water from the storage tanks, which are constantly monitored and adjusted for demand at the waterplant control center.

The aquifer is buried hundreds of feet beneath the surface, yet it is refilled by rain. As rain water trickles down through volcanic rock, sediments are removed and the



Soldiers haul a water cart onto a railroad car in the early 1900s prior to the development of the Schofield-Wheeler well. Central Oahu inhabitants had to brave the primitive road to Fort Shafter or endure the "hardy" water from the Ku Tree reservoir. Photo courtesy of the Tropic Lightning Museum, Schofield Barracks, Hawaii

aquifer is replenished.

"The volcanic rock acts like a giant filter," Kent Anderson, a Department of Public Works water system engineer, said.

Water can take many years to travel from the top of the Waianae mountain range to the aquifer, he said. On a recent trip down the rugged 7-foot wide tunnel to the top of the aquifer, Anderson noticed water slowly dripping from stalactites on the tunnel's ceiling, which is unusual. He proposed the quick turn-around was probably due to heavy rains the past few months.

"The water is so clean ... 60-70 year-old pipes are still clean on the inside (and) look almost brand new," Anderson said.

Central Oahu was not always a bastion of pristine, accessible water. Prior to the well's construction in 1938, Soldiers drove horse-drawn carts down dilapidated roads to Fort Shafter in Honolulu or drew water from the Ku Tree reservoir near the present-day East Range on Schofield Barracks.

Before long though, trips to Fort Shafter became burdensome. Also, from the mid-1920s through the late 1930s, residents using the Ku Tree reservoir became concerned about the condition of the water.

"The water quality was really poor," Scott Daubert, a Tropic Lightning Museum technician, said. "Anytime you get water

from a reservoir, it's not the cleanest."

Anderson said there were also security concerns about the reservoir. They needed a better source for water.

The Schofield-Wheeler well was discovered and developed by renowned hydrologist Dr. Harold T. Stearns. Stearns produced geologic and hydrographic maps of all the Hawaiian Islands and even developed several methods for drawing water from aquifers.

Stearns and company originally intended to drill down below sea level until they hit fresh water. They were pleasantly surprised to find water almost 200 feet above sea level. According to Anderson, it is generally thought by hydrologists that the central Oahu aquifer is retained by dam-like volcanic dikes.

Nearly two years and \$371,571 later, The Schofield-Wheeler well was complete. In today's dollars, the well would have cost about \$4.8 million. It was the first well in central Oahu. The Ku Tree reservoir was no longer used and was drained completely in 1983.

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Wayde Nakai (left), water plant supervisor, and Kent Anderson, a Directorate of Public Works water system engineer, ride in a car down the tunnel that burrows about 1,200 feet at a 30-degree angle to reach the Schofield-Wheeler aquifer nearly 600 feet below ground. Photo by Jeremy S. Buddemeier



Fort Huachuca historic homes undergo restoration as part of neighborhood revitalization project

by Sherrie Stewart

Just standing on the tongue-and-groove plank porch of the Miles House in Fort Huachuca, Ariz., transports visitors to another time and way of life. The full-width porch faces west toward the green of the sloping parade grounds where sabers once slapped against tall, black boots and the echo of hooves marked the return of the 6th Cavalry from the search for renegade Apaches. In the distance to the north, the gray stone stables and mule barn, with the trap door used for hangings, still stand.

Inside the home's front door, a mounted plaque reveals its history. The two-story adobe structure was built in 1884 and originally cost \$4,500 to construct. The house was named for Lt. Gen. Nelson Miles who commanded the 6th Cavalry. Geronimo surrendered to Miles at Fort Huachuca in 1886. Today, in the freshly painted living room, workmen carefully sand and revarnish the red oak hardwood floors as part of the final touches of the house's restoration in preparation for its next occupants.

Down the street, angular supports hold up the disintegrating south side of the Wiley House. Cracks in the upper walls

allowed moisture to deteriorate the adobe near the base, causing the wall to begin collapsing. Out back, Glenn Gangaware, the adobe superintendent for subcontractor Mean Design, directs the on-site manufacture of adobe blocks that will be used to rebuild and tie the new construction into the old walls.

"We use the same adobe but increase the density to about 720 psi and rotate the blocks every fourth course to better tie in and support the structure," Glen said.

After the walls are repaired, stucco will be applied to the exterior to protect the new construction.

Inside the kitchen, John Taylor of the U.S. Army Corps of Engineers' Tucson Resident Office pointed out how new wiring is being hidden behind baseboards and door facings. The plaster appears grooved out to accept the new wires, then the walls are repaired as necessary before the facings are reinstalled. The integrity of the original walls remains while safer and more efficient electrical wiring accommodates today's electronic lifestyle.

These structures, part of a neighborhood revitalization project, must stay as close

to the original as possible. Their historical integrity is protected by restoring rather than discarding original components.

"Many of the windows are still original," Mike Brown said. "You can tell by the wavy or wrinkled glass and the lead weights." Brown is the project engineer for the Corps' Fort Huachuca field office.

These homes are part of a small cluster of older houses enveloped by new housing situated in a neighborhood called Cavalry Park. The historic homes, originally used as living quarters for high-ranking officers, also served as a hospital and as a morgue over the last century.

The entire neighborhood, including 10 two-story adobe houses, was made part of Phase One of the Fort Huachuca Neighborhood Revitalization Project. Work began during the summer of 2006. Awarded to SunStar LLC of Tucson, this \$8.1 million endeavor consists of the restoration of the 10 adobe single-family houses and 10 duplexes, with a projected time frame of a year and a half for completion. A \$4.9 million contract to SunStar for the second phase of this project began in July.

"The Corps looked for a contractor with expertise in adobe construction," Brian Childers of the Corps' Tucson Resident Office said, "and SunStar met the criteria."

Mike Zurcher of Sunstar spoke of one of the houses as being a part of the original camp built in 1882. He believes this structure is the oldest because of its lack of a stone foundation and unusual design.

"It may be an old carriage house," Zurcher said. "We've put that particular unit on hold until we reevaluate its special renovation needs."

These old homes have witnessed 130 years of military history at Fort Huachuca. Established in 1877 by the 6th Cavalry during the Indian Wars, the fort has a strategic location just 15 miles from the Mexican border that made it an essential outpost even after the Apaches surrendered. The 10th Cavalry, known as the Buffalo Soldiers, guarded the Mexican border from the fort for about 20 years beginning in 1913.

In the 1970s, the fort housed the U.S. Army Intelligence Center. Currently, the Army Information Systems Command calls Fort Huachuca home, linking the Army intelligence and information communi- ➤



Restoration of the 1884 Miles House in Cavalry Park at Fort Huachuca, Ariz., is complete. Photo by Mike Zurcher



USAG Red Cloud's and Casey's water system emergency response plans work

by Margaret Banish-Donaldson

The U.S. Army Center for Health Promotion and Preventive Medicine held a one-day tabletop exercise of tailored scenarios May 23 at the U.S. Army Garrison Red Cloud, South Korea, conference room. The exercise involved intentional contamination of water at USAG Red Cloud and USAG Casey. Representatives from the Directorate of Public Works; the Directorate of Plans, Training, Mobilization and Security (DPTMS); the fire department and the public affairs and environmental offices tested their water system emergency response plans to learn their strengths, weaknesses and inaccuracies.

"The emergency operations center (EOC) at USAG Red Cloud is the focal point for coordinating emergency response operations," said Jeffrey Waye, emergency operations and plans specialist, DPTMS. "That responsibility is one of our primary missions. We ensure sharing of the information relative to the potential threat."

After the EOC is activated, the DPW, the safety manager, the DPTMS director, the provost marshal, the 38th Medical Detachment commander and the installation fire chief investigate any suspected or confirmed water system threat or attack. The extent of damage or loss of service to any of the water systems dictates appropri-

ate emergency response actions.

"If contamination is an act of sabotage, we take appropriate action based on the nature of the contamination," said John Cook, USAG Red Cloud fire chief. "If we get two positives, we coordinate the collection and shipping of water samples to the 38th Medical Detachment lab in Seoul for further testing. We shut off the water until all contaminants are identified and the extent of the contamination is quantified."

In the event of a drought, USAG Casey has a contingency agreement to draw water from two sources available to the city of Dongducheon. Should such emergency arise, consumers can expect mandated water conservation.

Measures could include limits on laundry activities, a ban on sprinkling, suspended swimming pool operations and showering no more than once every other day, with five minutes allowed per shower.



Typhoon-generated flooding like this could cause water contamination, a scenario used by the U.S. Army Center for Health Promotion and Preventive Medicine-Pacific to test the water system emergency response plans at U.S. Army Garrisons Red Cloud and Casey. Photo courtesy of Installation Management Command, Korea Region

In severe shortages, prohibiting the use of personal toilets and establishing a water rationing program would be implemented.

"If evacuation of personnel is required, it must be planned, swift and orderly," said Don Needham, DPW director. "As long as contaminated water is not released into the atmosphere, evacuation to nearby locations is acceptable."

The EOC is responsible for predicting the potential toxic corridors and safe routes for evacuation if fire fighting activities are authorized.

"It's amazing to see how people work so well together," said Ron Schmidt, USAG Red Cloud deputy garrison commander. "This is what makes the inspection we had worthwhile. We have the ability to plan, practice and act in an efficient manner."

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ties together around the world.

As part of its mission, the Army Corps of Engineers designs and manages the construction of housing and facilities for the Army and the Air Force. The required scope of the Fort Huachuca Neighborhood Revitalization Project embraces an antiquated style of construction that demands an expertise with adobe, knowledge of outdated foundational structures and a sincere respect for the history held within the melting walls of these homes.

Through its work with SunStar and Fort Huachuca, the Corps revitalizes the Cavalry Park neighborhood into usable living quarters for current military personnel while maintaining its historical integrity.

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IMCOM announces fire, emergency services award winners

by Dale F. Means

The Army's top fire departments and firefighters for 2006 were announced by the Installation Management Command in June. They are:

Small Fire Department of the Year Award

Winner: Fort Sam Houston Fire and Emergency Services Department, Texas
Runner-up: Anniston Army Depot Fire and Emergency Services Department, Ala.

Large Fire Department of the Year Award

Winner: Fort Bragg Fire and Emergency Services Department, N.C.
Runner-up: U.S. Army Garrison Humphreys Fire and Emergency Services Department, South Korea

Fire Prevention Program of the Year Award

Winner: Aberdeen Proving Ground Fire and Emergency Services Department, Md.
Runner-up: Fort Carson Fire and Emergency Services Department, Colo.

Military Firefighter of the Year Award

Winner: Spc. Robert F. Chattin, Fort Rucker Fire and Emergency Services Department, Ala.

Runner-up: Pfc. Colin A. Winkelman, Fort Hood Fire and Emergency Services Department, Texas

Civilian Firefighter of the Year Award

Winner: Firefighter Johnny E. Grice, Fort Rucker Fire and Emergency Services Department, Ala.
Runner-up: Firefighter Kevin T. Cain, Fort Carson Fire and Emergency Services Department, Colo.

Military Fire Officer of the Year Award

Winner: Sgt. 1st Class Wayne J. Reinhardt, U.S. Army Engineer School, Fort Leonard Wood, Mo.
Runner-up: Staff Sgt. Lucius E. Kirkland, Fort Rucker Fire and Emergency Services Department, Ala.

Civilian Fire Officer of the Year Award

Winner: Fire Lt. Michelle Barnett, Kwajalein Atoll Fire and Emergency Services Department, Republic of the Marshall Islands
Co-runners-up: Fire Capt. Thomas Tillman, Fort Carson Fire and Emergency Services Department, Colo.; and Fire Capt. John DeFrancesco, U.S. Military Academy Fire and Emergency Services Department, West Point, N.Y.

Heroism Award

Winner (team award): Assistant Chief Joseph W. Brown, Lead Firefighter Troy K. Michels, Firefighter Tana S. Wooten, Firefighter Scott A. Sveum, Firefighter Julianne S. Fiala-Bradstreet, and Staff Sgt. Keith R. Hawkins, Fort Leonard Wood Fire and Emergency Services Department, Mo.
Runner-up (individual award): Fire Inspector Robert Backert, U.S. Army Garrison Mannheim, Germany

The winners will be recognized at the Army Awards Luncheon Aug. 22, during the annual Department of Defense Fire and Emergency Services Training Conference in Atlanta.

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Dale F. Means is with Headquarters, Installation Management Command. PWD

DoD firefighters take care of their own with leave donation program

by Bruce Park

Many Department of Defense firefighters are benefiting from a program called "Taking Care of Our Own." This program provides a simple means for DoD firefighters to help one another when medical situations prevent them from working. The medical situation could involve either a firefighter or a firefighter's family.

Prior to the Taking Care of Our Own program, when a firefighter's accumulated

leave was exhausted, he or she could be forced into leave-without-pay status, a nightmare for those who depend on a regular paycheck. The program makes leave donation personal. When a firefighter is in need, all other DoD firefighters are invited to donate one hour of annual leave to that firefighter. Donors know the individual's name, workplace and, usually, the medical situation. A firefighter needing help may choose to explain the medical situation or

to withhold the information.

One hour of leave is usually not much to donors but can be a godsend for the one who needs help. Serious medical situations like heart disease, stroke and cancer can result in weeks or months of missed work with loss of pay that can devastate a family. The program has existed for only a year and a half, yet several firefighters have received leave that sustained their families, sometimes for months. ➤



Children perish in fires in Family quarters that had inoperative detectors

by Bruce Park

Three children, ages 2, 6 and 9, died tragically in two separate family quarters fires on Army installations within a five-week period between April 25 and May 29. Although official investigations are still pending, preliminary reports indicate one or more smoke detectors had been disconnected in each fatal fire.

Smoke detectors — also known as smoke alarms — have reduced fire deaths by 50 percent since they were first introduced into homes, according to a Dec. 28, 2006, U. S. Fire Administration report. Forty-two percent of fire deaths occurred in the 10 percent of residences without smoke detectors. The remaining 58 percent of fire deaths occurred where smoke alarms had been installed, but they were operational in only 37 percent of these fires.

The two Army family quarters fires fell into the last category. Smoke alarms had been installed but were not in working order, and loss of life occurred.

What is Installation Management Command doing? Brig. Gen. John A. Macdonald, the IMCOM deputy commanding general, focused his NETCALL 2007-21, distributed June 25, on actions to make sure life-saving smoke detectors are operative in all family quarters.

What can installations do? Place command emphasis on the importance of smoke alarms in saving lives. Observe National Fire Prevention Week. Held every October, the week commemorates



A fire rages in a family housing unit. Photo courtesy of the Office of the Assistant Chief of Staff for Installation Management

the Great Chicago Fire of 1871. Use the occasion to designate a “check-your-smoke-detectors day” and to distribute the following advice to family housing residents:

Fire detectors — a sound that save lives:

- Never disconnect your smoke alarm.
- If your smoke alarm activates due to cooking or non-fire causes, clear the air by waving a towel around the detector. In some cases, the detector may have a “hush” button to silence nuisance alarms.
- Test the audible device on the smoke alarm by pushing the test button, if available, on the face of the detector.
- Plan and practice an escape plan two times a year, preferably one of those at

night. Make sure your family meets at one location, such as a neighbor’s home or other pre-designated location, safely away from the home and from access that would be used by fire trucks. In fact, “Practice Your Escape Plan” is the 2007 National Fire Prevention Week message.

- Finally, call your installation fire department if you have any questions. If asked, they may be willing to make a courtesy fire safety inspection.

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The program is simple. There are no costs, no questions asked and no consideration for rank, position, military service, past donations or past participation. When a firefighter qualifies to receive donated leave, the situation is shotgunned to all DoD fire departments, and each of the several thousand DoD firefighters are

invited to donate one hour of leave. Donor firefighters complete a couple forms, and the leave is transferred to the one who needs help. Leave not used is returned to the donor. Individuals in one military service may donate to a person in another military service, i.e., Navy firefighters may donate to an Army, Marine Corps or Air Force firefighter.

The Taking Care of Our Own program

allows firefighters with medical situations to focus on recovery rather than money worries.

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Fort Bliss, Biggs Army Airfield linked by new bridge

by Edward Rivera

When Fort Bliss, Texas, is mentioned, the word “expansion” follows closely behind. With the expected growth on the fort during the next several years, a new bridge was needed to link the main post to the major expansion areas of Biggs Army Airfield and East Biggs.

“This design-build project is a tactical vehicle bridge, which crosses over Airport Road, one of El Paso’s main roadways,” said Michael Bormann, project manager and leader of the Tactical Vehicle Bridge at Haan Road Project Delivery Team (PDT). “The vehicle bridge creates a new arterial roadway between Fort Bliss and Biggs Army Airfield, which will accommodate two lanes of heavy military tactical vehicles or four lanes of civilian-type traffic as well as pedestrians.”

The bridge is expected to handle increased military traffic volume to and from training ranges. It will also allow for quick access to the commissary, food courts, shopping and other Fort Bliss activities for Soldiers and their Families living in the Biggs housing complexes.

Meeting a July 21, 2006, award date required Herculean effort from the project delivery team. The large team consisted of members from the U.S. Army Corps of Engineers, Fort Bliss, the Texas Department

of Transportation (TxDOT), and the architectural and engineering firms. By acknowledging several assumptions, constraints and challenges early in project development, the team kept the project on track during construction and drove it to successfully meet the Army’s needs.

Design and construction challenges were many and varied. The team relocated and raised overhead power lines. They demolished an operational tactical equipment shop hardstand with environmental protection features. An active, 20-inch water main that serviced a large portion of Fort Bliss had to be sleeved without shutting down the main. In addition, coordination and traffic control with a large TxDOT road project located next to the bridge site had to be resolved and executed without road closures and with minimal cost and time effects.

“Extraordinary efforts were made by the Fort Bliss Directorate of Public Works, Fort Bliss Department of Energy, El Paso Electric Company, Rio Grande Electric Cooperative, Fort Bliss Water Services, TxDOT, the contractor J. D. Abrams and USACE to complete the coordination, approvals and actions required to quickly and successfully overcome these obstacles,” said Bormann.



Crews process and mix ramp embankment material on site while using a grader, a scraper and vibratory compactors to pack together large areas. Photo by Edward Rivera

The project was initiated concurrently with other Fort Bliss expansion projects and several other TxDOT projects. The other transportation projects included a main intersection at the entrance to Biggs Army Airfield and a new Inner Loop Freeway Project being built through the installation.

According to Bormann, TxDot originally planned a two lane bridge for civilian traffic that would be called Haan Bridge. However, the two-lane vehicle bridge in ►



Work crews raise one of 20 pre-cast bridge beams. Each weighs more than 26.6 tons and is 65-foot long. Photo by Master Sgt. David J. Breitbach



A military vehicle cruises over Haan Bridge. Although completed, the bridge won't be open to civilian traffic until adjacent road work by the Texas Department of Transportation is completed in September. Photo by Melissa House, Fort Bliss Public Affairs Office



Corps constructs fitness facility at Hanscom Air Force Base

by Ann Marie R. Harvie

By the end of the summer, members of the armed forces and Department of Defense civilians stationed at Hanscom Air Force Base, Mass., will enjoy a new fitness facility where they can work out on state-of-the-art equipment. The New England District of the U.S. Army Corps of Engineers is constructing the new fitness center, a build-on to the existing facility.

The \$9.5 million project includes construction of 41,600 square feet of new space and renovation of 7,800 square feet of existing space. The fitness center will have an elevated indoor running track that encircles the new multifunctional gymnasium along with three racquetball courts. It will also include family fitness, group exercise, cardio equipment and free weight rooms. The facility was designed so that natural light is abundant throughout. In addition, the New England District and Hanscom Air Force Base will coordinate so that multiple contractors will have access to the site to install bleachers, lockers, a rock-climbing wall in the lobby, and sauna and steam rooms in the locker rooms.

The project team overcame several challenges. Unsuitable soil consisting of peat and sand had to be removed from the site. Groundwater had to be pumped during all



Construction of the new Hanscom Air Force Base fitness center is underway. Photo by Ken Paton

aspects of the site work. Two 66-inch concrete river culverts needed to be stabilized, and three communication conduits relocated.

The greatest challenge to surmount, though, was the default by the original contractor. CNA Surety, Chicago, Ill., had to step in to assume responsibility for the contract. Meeting these challenges took a combined effort between the Air Force, the Corps and numerous contractors, according to project manager Ken Paton.

J&J Contractors of Lowell, Mass., is the current contractor. Maguire Group of Foxborough, Mass., designed the project. The new facility is 86-percent complete and is scheduled to be finished late this summer.

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TxDOT's project would not meet the tactical needs of Army Transformation.

TxDOT and the project manager developed an agreement whereby TxDOT would delay Notice to Proceed for its Haan Bridge project until July. At that time, TxDOT would have to commit to the construction or suffer penalties for the delay. If the military construction Tactical Bridge project was awarded in the meantime, TxDOT would modify its contract, delete the civilian version of Haan Bridge

and use the TxDOT construction funds for additional roadway construction on Haan Road.

The project construction began in August 2006 and was completed in May, two months ahead of TxDOT's adjacent intersection project. J.D. Abrams had submitted a proposal with a 300 calendar-day duration, which was accepted at the time the contract was awarded, reducing the planned length of the project by more than two months.

Bormann said that weather led to a

nine-day extension but, remarkably, there was no cost growth.

"For the PDT to endure the initial planning and execution phase challenges makes this zero dollar cost growth an outstanding and a remarkable milestone met by the team," he said.

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USAG Humphreys development rises from rice paddies

by Fred W. Baker III

As the U.S. military transforms its forces from a cold-war formation in South Korea, nowhere is the growth more visible than at the newly renamed U.S. Army Garrison Humphreys, which used to be called a “sleepy little camp with not much happening.”

As one of only two planned “enduring hubs,” USAG Humphreys is expected to grow by as much as 500 percent by 2012, rocketing from its current 3,500-troop population to more than 17,000, and making it the largest installation on the peninsula. Combined with Family members, civilian staff and contractors, the population is expected to grow to more than 44,000, according to official estimates.

USAG Humphreys is in Pyeongtaek City, about 55 miles, or a two-hour bus ride, south of Seoul. It is home to U.S. Army Garrison Command and the Area III Support Activity of the U.S. Army Installation Management Command, Korea Region.

The former Camp Humphreys, nicknamed “The Hump,” offered little to the troops serving there until about five years

ago. Most of the troops traveled about 25 miles north to Osan Air Base for the nicer amenities.

Now, the biggest problem the installation faces is not being able to build fast enough. In Rubik’s-cube fashion, engineers have to plan which buildings to tear down and which to build to maintain consistency in services. Nearly 95 percent

of the current buildings will be torn down and replaced, said Fred Davis Jr., who is assigned to the Korea Relocation Program Office of the Army Relocation Branch for the U.S. Army Corps of Engineers, Far East District.

Already in the past handful of years,



Fred Davis Jr., with the Korea Relocation Program Office of the Army Relocation Branch for the U.S. Army Corps of Engineers, Far East District, shows a rice paddy that will be drained and filled for development at U.S. Army Garrison Humphreys, South Korea. All top soil and growth must be removed before fill dirt can be placed. Photos by Fred W. Baker III

troops serving on the aviation installation have seen new Family housing, new barracks, a water park and a new post exchange and commissary complex. The intent, officials said, is to turn the installation into a “tour of choice.” This change would be a drastic turn from a decade ago, when it was largely a single-servicemember’s tour, offering Family housing only to those in senior leadership.

Under the transformation plan, all U.S. troops in South Korea will move south of Seoul. Officials will turn over to the South Korean government 104 camps and bases scattered across the country. Overall, by 2012, officials plan to reduce the 48,000-acre U.S. footprint in the country by two-thirds and reduce the number of troops from 37,500 to about 25,000.

New barracks are springing up on the installation where once only tents existed for training exercises. Because of the condensed population, officials are building high-rise complexes designed for servicemembers to live, work, eat and



Contractors fill in what used to be rice paddies at U.S. Army Garrison Humphreys, South Korea. In the background, new barracks are being built on a site that a decade ago was a tent city used during training.



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play all within walking distance.

By 2008, officials will have consolidated much of the 2nd Infantry Division, closed 36 camps and bases, and started developing the two enduring hubs. USAG Humphreys will be one hub combined with neighboring Osan Air Base, and USAG Daegu to the southeast will be the other, with its neighboring Marine Camp Mujuk and the Navy's fleet activities base at Chinhae.

USAG Humphreys will become home to both U.S. Forces Korea (USFK) and 8th U.S. Army headquarters, as well as a host of other tenant units.

Joint training facilities are planned for Kunsan Air Base in the lower southwest portion of South Korea, two more just south of Seoul and one to the north near the demilitarized zone.



A high-rise barracks is nearly ready to open on U.S. Army Garrison Humphreys, South Korea. The installation's population is expected to grow by nearly 500 percent over the next five years.

The USAG Humphreys Family member population is expected to grow by almost 1,000 percent, from about 1,400 to more than 13,000. In response, engineers are planning multiple housing projects that will offer parks, shopping, dining and entertainment, also all within walking distance. Two apartment-style Family housing units opened recently, with another scheduled to open in September. Future housing plans call for 33 more 12-story buildings housing up to 72 Families each.

Three elementary schools are planned, as well as a middle school and a high school. Currently, the post has an elementary school and a middle school. High school students ride buses north to Osan Air Base.

Seventeen building projects worth more than \$542 million are in design at Humphreys. Fourteen projects now under construction are worth more than \$215 million.

The cost of the relocation is largely being paid by the Republic of Korea government. It is shelling out half of the \$8.25 billion needed for the planned 630 new facilities at Humphreys. Other Korean government funding will pay another 22 percent, and private investments make up about 21 percent. The U.S. military construction costs are just under 10 percent. In exchange, the Korean government is getting back prime real estate in and around Seoul and in other hot spots in the country.

USAG Humphreys sits on about 1,200 acres now, but in three phases of land-use agreements, it's expected to grow to more than 3,500 acres. All agreements are in the works, officials said, and the deals should be closed by the end of summer.

Military officials believe these changes, combined with extended tours and more authorized Family accompaniments will help remove the decades-old image of isolated duty in run-down camps and will encourage servicemembers and Families to

welcome a tour of duty here.

"The move to (USAG) Humphreys, the consolidation of U.S. forces here in Korea, will allow us to concentrate our precious resources and increase the quality of life of our servicemembers a hundredfold," said Command Sgt. Maj. Barry C. Wheeler, USFK and 8th U.S. Army command sergeant major.

More than 90 percent of the troops serving there do so unaccompanied, but USFK officials are expected to soon ask the Defense Department for more than double the allowance for current command-sponsored Families, from 2,800 to nearly 6,000.

Some 3,000 non-command-sponsored families already are there, Wheeler said.

"They are bringing them because the country is a great place to serve. And they are electing with their pocketbooks to expend those resources to bring their Families because they are not going to be without them," he said.

Congress has to authorize lengthening the tours here, and the Korean government also has a say.

"When our servicemembers get back from a deployment from Iraq or Afghanistan and then find themselves on orders for Korea, they are going to (want to) bring their families. We may as well get it ready for them," Wheeler said.

"Not a day goes by that we don't think about the quality of life for our servicemembers," he said. "Our men and women serving here should know that the concern their leaders should have for their Family members is there, and we look for ways to improve it every opportunity we get."

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Fred W. Baker III is a writer with American Forces Press Service.



Israelis visit Grafenwöhr

by Justin M. Ward

The swooping cranes and beeping backhoes that pepper the landscape of any modern construction site do not usually draw many camera-wielding spectators. But don't tell that to the engineers working on the U.S. Army's \$700 million Efficient Basing-Grafenwöhr (EB-G) construction program in Germany.

In early May, several U.S. Army Corps of Engineers' project managers who work on this isolated northern Bavarian post displayed the progress of their hard work to about a dozen high-level delegates from various ministries in Israel. What the engineers view as routine business was an alluring attraction for the curious Israeli visitors. The dynamic and successfully managed EB-G program has been celebrated as an enviable paradigm for future large-scale construction projects in Europe.

The focus of EB-G is simple: to capitalize on the efficiencies involved in consolidating a command-and-control headquarters and six battalion-sized elements onto one installation, thereby maximizing readiness, operational control, force protection and quality of life. The implementation of EB-G, though, is intense. It involves erecting new headquarters buildings, barracks and motor pools. It includes laying down new roads, utilities and telecommunication infrastructure. And it also entails engineering new quality-of-life facilities, like a physical fitness center, dining facility and a recreation area around a small lake located on the main garrison.

The Israeli visitors were at Grafenwöhr to conduct an interim progress review for the ongoing engineering efforts the Corps is overseeing in Israel. This was their second tour of the American installation in as many years.

"Along with the formal briefings that we give, we normally try to work in a site tour and show off the things that the Corps is doing in Germany for our forces to give the Israelis some idea of the types of construction projects we work on," said Bob Kreinheder, resident engineer in the



Ed Argueta, program manager for the Efficient Basing-Grafenwöhr program, stands before one of the \$700 million worth of construction and renovation projects for which he is responsible. Photo by Brian H. Temple, U.S. Army Corps of Engineers, Europe District

Corps' Europe District's Israel Area Office. Kreinheder helped host the tour.

"I think what they're interested in today are the processes — figuring out what works and why," he said.

First on the tour was a new, garrison-administered housing complex called Netzaberg Village, for which the Corps is managing several quality-of-life facilities.

"What we're seeing now is the 'MIL-CON Island.'" said Walt Bogdanow, the Corps' deputy engineer on the installation as he led the tour. "It's a plot of land in the middle of these housing units where we have four projects — the school, the child-care center, the youth activity center and then the chapel."

Ears perked. Heads turned. Cameras clicked.

"The child care and youth activities centers are immediately adjacent to the schools," said Bogdanow. "So when the school is out, the kids can go to their respective areas. Small children go to child-care. The older children, from 10-16, go to the youth center."

Much like the pace of construction in



While touring the Grafenwöhr installation, high-ranking Israeli visitors gather outside the famous water tower, a half-timbered structure completed in 1910. The tour's purpose was to show the visitors the progress of the Efficient Basing-Grafenwöhr program, which builds up the installation while retaining traditional architectural styles. Photo by Justin M. Ward

EB-G, the district's engineering and construction efforts in Israel also move along quickly. Projects in Israel began almost 10 years ago with the signing of the Wye River Memorandum between the Palestinian Authority and Israel. Since then, many Wye River projects have concluded. However, many more large and accelerated projects are taking their places, keeping Corps employees there as busy as ever.

One Israeli sightseer commented that, much like the U.S. troops in Europe, the Israeli Ministry of Defense is currently planning a sizeable restationing of its troops.

"We are going to move ... a lot of units in the Army south to the desert, and we have to build new camps," said Levi Golan, head of the Israeli Ministry of Defense's ►



Corps builds for troops at Camp Speicher

by Julie Cupernall

A hot meal in a safe environment can be an important morale booster for troops. Often recognized for its mission to jumpstart infrastructure reconstruction in Iraq, the U.S. Army Corps of Engineers also supports coalition troops

with its building expertise. The Corps' Gulf Region North District is on track to complete construction on a new DFAC, or dining facility, at Camp Speicher in Tikrit.

"It will be a full service dining facility when it's done, and it's the only one in this



Workers set up for the foundation of the kitchen area for the new dining facility in Tikrit, Iraq. Photo by Lana Aziz, U.S. Army Corps of Engineers, Gulf Region North District

general area, so there is a great need for it," said Jeff Sedgwick, the Corps' project engineer.

The about \$8.5 million project is in the beginning phases of construction on the exterior walls. The cinder blocks being used are local; they come from a factory in the nearby city of

Irbil. Thousands of cinder blocks will be needed in order to finish on schedule. That means the project provides immediate support to the local economy as well as the long term benefit of support to coalition forces.

"We anticipate that the new DFAC will be completed by early August," Sedgwick said. "These types of projects directly benefit the troops here on base. It will be used by everybody here. It will serve three meals a day."

The Gulf Region North District was tasked with 1,500 projects in support of Operation Iraqi Freedom, at a cost of nearly \$2.6 billion. Gulf Region North has completed more than 1,100 of those projects.

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Department of Construction. "So we came here to see. And we saw a lot of things that can help us in the future to decide how to solve problems."

Although Israel's restationing is much smaller than the current plan for U.S. troops, it is similarly proportioned, said Golan. By understanding the concepts and challenges behind the successful business practices of EB-G, the Israeli Ministry of Defense is better able to plan its transition approach in engaging the Corps.

EB-G program manager Ed Argueta said he was proud to host the Israeli partners at the installation.

"In my opinion, EB-G is one of the most well thought-out installation developments," Argueta said, "and having

visitors come here to check us out sort of validates that."

The EB-G consolidation efforts are coming along smoothly, Argueta said. They will lower transportation costs, eliminate large swaths of land from the government's inventory and reduce U.S. Army Europe's operating costs significantly.

"We've met every milestone we've set out to meet, including the ones we didn't think we'd achieve," said Argueta. "We're working hard to ensure success."

One of the tenets that makes EB-G so successful is collocation, Argueta said. By locating the engineers and the construction representatives together with host-nation and customer representatives, communication is eased, which leads to improved understanding of the time, scope and cost requirements.

"It shortens the channels of communication, and, in the end, it helps the warfighter get quality-of-life initiatives faster and cheaper."

When complete in 2011, the EB-G initiative will have built a better understanding of the possibilities of adhering to time, scope and cost requirements and will have helped set the stage for a successful restructure of the U.S. Army's forces in Europe.

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Fallujah replacing septic tanks with wastewater treatment plant

by Norris Jones

Involving hundreds of Iraqis in its construction, an \$80 million sewer system is taking shape in Fallujah, Iraq. It's the biggest building project the U.S. Army Corps of Engineers oversees in Al Anbar Province.

Fallujah's new facility will use pump stations, trunk mains and a treatment plant to serve as the backbone for a citywide system. The project, now in its initial phase, will eventually connect every home in the city.

"That community has been relying on septic tanks, and the raw sewage is making its way onto the streets and into the storm sewers going directly to the Euphrates River," said Michael Jakubiak, part of a team of USACE engineers involved with the project. "So you have residents downstream that are taking their drinking water from that contaminated source. This project will improve that situation."

Jakubiak's office meets with the various construction firms for 13 separate contracts and with city and Iraqi ministry officials



An Iraqi worker bends rebar for 12-meter-wide inlet tanks at Fallujah's new wastewater treatment plant.

on a regular basis to ensure issues are resolved and the project moves forward.

"It's those city and ministry officials who will eventually take over operation and maintenance of the new sewer system, and we want to make sure it meets their standards," Jakubiak said. "They're fully engaged and eager to see this project completed."

His team also advises and guides the contractors.

"We're doing a lot of work to mentor them, especially in the areas of quality control and safety," he said. "Those are two key factors we continue to emphasize."

With the new system, two large pump stations will each have the capacity to handle 150,000 cubic meters daily. Fallujah's sewage will be sent to inlet tanks at the wastewater treatment facility, then to aerated grit and oil removal tanks, on to 65-meter-wide aeration tanks and then to settling tanks. The last step will be a chlorination contact chamber before the treated wastewater is released to the Euphrates River.

"There's no question the health of Fallujah's residents will be benefited by this project," said Jakubiak. "Our mission is to help the Iraqi people get back on their feet, and I'm proud to be part of this effort."

Jakubiak had been involved with sewer-related projects in Cary, N.C., prior to volunteering for a year's duty in Iraq.



Iraqi crews work on the 12-meter-wide inlet tanks at Fallujah's new wastewater treatment plant. Photos by Norris Jones

"This is a great assignment. We're helping a community with real needs," he said. "The local jobs created are a boon to Fallujah's economy. Those workers know they're making a difference."

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Fort Gordon opens new family housing

by Charmain Z. Brackett

In her 10 years of military service, Sgt. 1st Class Kristen Hughes has never seen anything like it, and she's impressed.

"This is the best on-post housing I've ever seen," said Hughes, one of three Soldiers who, along with their Families, moved into the newly constructed homes at Olive Terrace on Fort Gordon, Ga., after a ribbon cutting ceremony June 6.

The homes represent the first new housing construction at Fort Gordon in more than 30 years, and they won't be the last, said Col. John Holwick, garrison commander.

Officials from GMH, the post's Residential Communities Initiative contractor, and Fort Gordon broke ground on the site about nine months ago. Over the next 15 months, 310 new homes will be built on post. New construction will be in several locations including Olive Terrace and the new Lakeview Terrace.

The new housing is one significant way of improving the quality of life for Soldiers, according to Holwick.

"These projects positively enhance Sol-

dier morale," he said during the brief ceremony.

Those attending had the opportunity to view one of the completed Olive Terrace homes, which feature about 2,000 square feet.

The homes are larger than almost all of the current housing on post, according to Harry Bloomer, project director.

The Olive Terrace homes have four-bedroom floor plans, which is a plus for Hughes who has three children ranging from 2 to 14 in age.

"I've been here about 30 days," said Hughes. "I'd been beating the streets looking for a place when this came open."

In addition to the new construction, other homes on post will receive a complete overhaul.

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Charmain Z. Brackett is a correspondent for The Signal, Fort Gordon, Ga.'s newspaper. This article is reprinted from The Signal. **PWD**



Col. John Holwick (left), Fort Gordon garrison commander, gets lots of help during the ribbon cutting ceremony for new post housing June 6 from new residents, children of the Families that were among the first to move into the new housing. Photo by Jimmy Buffington, Multimedia and Visual Information Center, Fort Gordon, Ga.

Design guides for meeting energy-efficiency standards being developed

by James Paton

Design guides to achieve the design efficiency component of Section 109 of the 2005 Energy Policy Act, Public Law 109-58, are being developed, under a project funded by the Office of the Assistant Chief of Staff for Installation Management, by the Construction Energy Research Laboratory (CERL) of the U.S. Army Corps of Engineers.

Section 109 requires that federal facilities be built to achieve at least a 30 percent energy savings over the 2004 International

Energy Code or American Society of Heating Refrigeration and Air conditioning Engineers (ASHRAE) Standard 90.1-2004, as appropriate, if life-cycle cost-effective. In addition, the law says federal agencies must apply, if life-cycle cost-effective, sustainable design principles to the siting, design and construction of all new and replacement buildings. And if water is used to achieve energy efficiency, water conservation technologies shall be applied whenever such technologies are life-cycle cost-effective.

The design guides will provide ways to realize 30 percent energy savings over a baseline built to the minimum requirements of ASHRAE Standard 90.1-2004. CERL has contracted the National Renewable Energy Laboratory to assist with this work.

The project initially covers four building types: basic training barracks, permanent party barracks, battalion headquarters and tactical equipments maintenance facilities. Draft design guides of the energy- ➤



Ten primary health-care centers near completion in Basrah

by A. Al Bahrani

Ten primary health-care centers (PHC), designed and built by the U.S. Army Corps of Engineers, Gulf Region South District, to provide essential medical care to the people in the Basrah province of southern Iraq, were scheduled for completion in July.

“The new PHCs will offer much more than a standard health clinic for the Iraq people, because they will improve the preventative care and medical services in Iraq,” said Thomas Edison, chief of Engineering and Construction with the Gulf Region South District. “The health centers include a pharmacy, a dental area and an X-ray facility. Some have maternity facilities and a modern fire alarm system. They are of high quality and have an attractive design using creative architectural details.

“We believe that the PHCs will make health care much more accessible for the people of Iraq, and readily accessible quality health care will improve the health of all the Iraqi people,” Edison said.

Engineer Stanley Dowdy of the Basrah Area Office explained that Gulf Region South officials estimated each PHC will serve between 100,000 and 250,000 patients each year.

“I’ve got two PHCs in the area that are nearly finished — one in Az Zubair and one in Al-Qurna,” Dowdy said. “We also have separate contracts for equipment and medical supplies to furnish those centers.” The

Al-Qurna facility has since been completed and turned over to the Basrah Health Directorate.

Each health-care center costs more than \$1 million, according to a Gulf Region South project engineer Jermias De Dios. Training is required for all personnel who will occupy these clinics.

“We are working with the Iraqi Ministry of Health about providing or dedicating staff to operate these systems so that these clinics will remain operational,” De Dios said.

“Once completed, the clinics will relieve the overburdened outpatient care currently provided by older hospitals and reduce infant mortality by at least 25 percent nationwide,” he explained. “Also, they can make a big difference towards substantially improving the overall health of the Iraqi population.”

An Iraqi engineer with the Basrah Area Office said that the construction of these facilities makes an important initial step for community healthcare.



The recently completed Al-Qurna Primary Health Care Center in northern Basrah province includes physician and administrative offices, examination rooms, a pharmacy, a laboratory and a café. Photo by A. Al Bahrani

“All 10 PHCs will save Iraqi lives, provide family health-care services at the neighborhood level and employ more health-care professionals,” he said. “People throughout Basrah province will find it much easier to access quality health care at local PHCs.”

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efficient solutions to reach the 30 percent energy savings for basic training barracks, permanent party barracks and battalion headquarters buildings have been developed and are currently under review.

The guides contain a definition of the baseline building, including the modeling assumptions. Baseline and target energy

budgets for various energy-consuming components of the buildings are also defined. Finally, the guides include energy-efficient solutions to achieve 30 percent energy savings for the selected building types in each of 15 climate zones within the United States.

When finalized, these design guides will facilitate the ability of design engineers and the Army to effectively meet Energy Policy

Act of 2005 design efficiency requirements. The design guides are expected to be completed before the end of this fiscal year.

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Facilities Reduction Program toolbox boasts new, improved features

by Debra Valine

When you have a demolition or facility removal project and you're looking for answers as to lowest cost and best practices, where can you go to get quick, easy information? The Facilities Reduction Program Toolbox, developed by Frankie Friend and Associates for the U.S. Army Engineering and Support Center, Huntsville, Ala., provides answers to these questions and much more.

The easy-to-use web site, <https://frptoolbox.ercd.usace.army.mil/frptoolbox/index.cfm>, has three features, in particular, that walk Directorate of Public Works planners and project and program managers at Installation Management Command, the Office of the Assistant Chief of Staff for Installation Management or U.S. Army Corps of Engineers districts through a demolition or removal project. These major tools are the quick estimate, the advanced estimate and the library.

The **quick estimate** is used as a single facility estimator. Previously, the toolbox allowed the customer to input the least amount of information and get a range of costs.

"What we have done in the new version, is give users the option to input the specific installation and the tipping fees (for landfill disposal) involved and drill down to a finite cost in the quick estimate," said John Taylor, Frankie Friend and Associates. Specifying the project installation allows the calculator to adjust rates by location, giving the user a much more refined answer.

"I use the toolbox quite a bit," said Amber Martin, a project manager with Huntsville Center's Facilities Reduction Program. "Most recently, I used it to review information on Military Construction, Army funding. The DA Form 1391 is how the Army describes what they will construct. Within that, there is a policy requiring one-for-one demolition, which

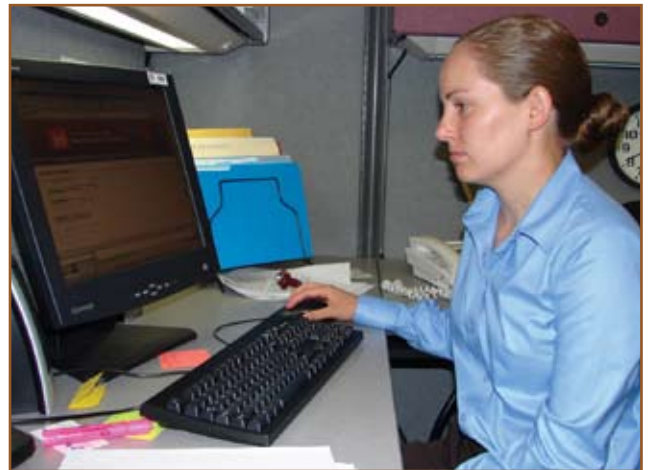
means that for every square foot they build, they have to take down the same amount of square feet. We are checking the information to make sure it meets that requirement as well as making sure there are enough dollars budgeted to remove what they listed."

Martin takes the building numbers, gets the specific data on the building and runs that information through the FRP Toolbox to generate an estimate for what it should cost to take the building down. She then compares that to what is listed on the 1391.

"Using the toolbox makes this process a lot easier," Martin said. "I work with details, and I need the level of detail that the advanced feature of the toolbox provides."

The **advanced estimate** feature allows a project manager to input information for multiple facilities. There is a shopping cart, like most Internet shopping sites. Multiple facility types, by common use or category code, can be added, and all the information the project manager needs is on the same page. There is also a mechanism for feedback for people who need to customize an estimate or ask a question.

Another step was added to the advanced estimate feature that includes an estimate of the quantity, by type of construction and demolition debris, that should be diverted from a landfill. This step lets project managers know if the project meets the new Army diversion policy. Grouping select facilities helps the planner best meet the project requirement for 50 percent diversion by weight from the landfill.



Amber Martin, a civil engineer with the U.S. Army Engineering and Support Center, Huntsville, Ala., regularly uses the Facilities Reduction Program toolbox as part of her job as a project manager. Photo by Debra Valine

When all the information has been entered, the project manager has a final, printable report that is well organized. It includes assumptions and best practices based on user input.

The **library** is the third component of the toolbox that has been improved. It now includes a search engine so project managers can find exactly what they need.

"The toolbox provides us a quicker and more uniform way to estimate demolition costs," Martin said. "The toolbox incorporates current industry standards and gives us a better cost estimate by using industry-based practices. The cost per square foot used to be \$30-\$40. The Army average for demolition is now around \$10 per square foot."

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Scrap broker gets best price for recyclables at Lake City removal project

by Debra Valine

The Facilities Reduction Program is always looking for new ways to lower costs to the customer while diverting the largest percentage of demolition debris from the landfill. Removing an outdated building at the U.S. Army Lake City Ammunition Plant in Independence, Mo., presented both challenges.

The Engineering and Support Center, Huntsville, home of the Facilities Reduction Program, is working with the installation, the U.S. Army Corps of Engineers' Kansas City District and Bhate Associates of Birmingham, Ala., to remove Building 3A from the Lake City Army Ammunition Plant. Local fire departments have also helped by keeping the building wet during certain phases of the demolition.

Building 3A is 211,000 square feet. In addition to nearly 3 million pounds of structural steel and appurtenances like conveyors, the building contains some 3 million pounds of equipment — some large and weighing tons — which had been stored there for years.

And it all has to go as part of the demolition.

The project started April 16 with asbestos abatement and soft demolition — the removal of internal fixtures. Staging of the big equipment started in early May; serious

demolition started May 14. As of May 15, the project was about 30 percent complete with an expected completion in mid-July.

“This will be the largest recycling effort that we have done on any demolition to date,” said Kevin Healy, Huntsville Center’s project engineer supporting the Installation Management Command, West Region. “When contractors go out to conduct the site visit, the contractor is required to solicit bids from local recyclers. They were offered \$20 per ton. Through our experience with the Facilities Reduction Program, we knew the price at that time should have been in the \$160-\$210 range per ton.”

To save the customer the most money possible, Healy took the issue to a programmatic support contractor who recommended using a professional scrap broker. The scrap broker used by the contractor negotiates with scrap buyers in the area to get the best price.

“What we are talking about is an average of \$175 per ton,” Healy said. “As of June 4, the contractor has submitted a proposal for approximately 1,900 tons. This will give us a net credit value of roughly \$250,000. That amount is subject to change. The contractor will apply that credit to the total demolition and removal cost, thereby reducing the overall cost to the customer.”

Not only will the project receive a far better price for



Kevin Healy (right), project engineer with the Engineering and Support Center, Huntsville, meets with Fred Kraft (left), Kansas City District of the U.S. Army Corps of Engineers, and Oscar Hayes, Lake City Army Ammunition Plant on-site engineer, to discuss the project to demolish Building 3A. Photos by Debra Valine

the scrap, there will be strict accountability of all scrap leaving the site. The broker provides the contractor a form that is used to record all of the scrap that goes off site and the price that will ultimately be paid for it, Healy said. The final column gets filled in when the checks arrives.

“You end up with a very good record of what was sent where at what price, and we can then verify that the payments were made,” Healy said.

“The unique thing is that, as with every other job where we are trying to meet the goal for minimum 50 percent diversion of waste from the landfill, we will not only meet the 50 percent, but we will also get back a large amount of money to help defray part of the project cost for the customer,” Healy said.

Bhate Associates has a team of 10 on-site for the demolition.

“We are taking ferrous and non-ferrous metals, wood and bricks to get ready for recycling,” said Robert Labadie, Bhate’s site superintendent. “We are looking at 100 percent recycling of the steel. Anything that can be recycled, we are recycling it.”

“The leadership is pleased with the progress of the demolition effort thus



Contractors with Bhate Associates, Birmingham, Ala., will sort through this metal and brick debris to get materials ready for recycling.



Fort Hamilton removal project is pilot for National IDIQ contract

by Debra Valine

The prototype project for the National Indefinite Delivery-Indefinite Quantity (IDIQ) contract for building demolition is completed. The project at Fort Hamilton, N.Y., included two buildings and one small utility room that needed to come down.

The buildings had contained an enlisted personnel barracks, a battalion headquarters, classrooms, an administrative center, a post-exchange warehouse and a storage facility. They also included two dining facilities. The two larger buildings totaled 103,348 square feet.

The U.S. Army Engineering and Support Center, Huntsville, Ala., used an Installation Management Command, Northeast Region, IDIQ award to accomplish the work at Fort Hamilton,

“When that first year ended, we converted it from one region to four regions, making it a national IDIQ,” said Michael Norton, the Facilities Reduction Program manager at Huntsville Center.

“The original cost estimate to demolish the two buildings was \$3.2 million,” Norton said. “We found a contractor who can do it for \$1.5 million, which includes the asbestos abatement. That’s half the cost to the customer.”

The project, which started April 30, was completed at the end of June. Huntsville Center worked with the New York Dis-



A crawler tractor from Charter Environmental Inc. works through debris from Building 408, a former barracks and law center at Fort Hamilton, N.Y. Photo courtesy of U.S. Army Engineering and Support Center, Huntsville, Ala.

trict of the Army Corps of Engineers, Fort Hamilton and Charter Environmental Inc. to bring down the buildings by traditional demolition.

As with all removal projects, as much material as possible was recycled or reused. The Army requirement is that 50 percent of construction and demolition debris by weight be diverted from the landfill. The contractor estimated that 95 percent of the debris would be reused or recycled in three categories: masonry, asphalt and concrete; land clearing debris; and metal.

“We are reusing the concrete from these buildings by crushing it and backfilling

voids, especially the ones left from the two mechanical rooms that are below grade,” said Raul Alonso, Huntsville Center’s project manager. There will be enough crushed concrete and cinder block to fill and raise the elevation 4-6 inches.

“We are also capping off the utilities and leaving in place,” Alonso said. “This is where the cost savings are being realized.”

Chris Ryan, the project manager for Charter Environmental, said tree branches were chipped, and the chips will be reused on site as a soil additive. The large tree trunks will be cut and used as heating fuel, and topsoil was stockpiled for reuse. In addition, the metals from plumbing and heating pipes, door frames, boilers, electrical conduit and concrete reinforcing steel were loaded into containers and sent to a scrap metal recycler.

The area will be restored as a grass ball field, according to Fort Hamilton DPW officials.

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far,” said Steve Brockman, the Lake City facilities manager. At this time, Army staff at Lake City is unaware of any plans to use the 3A area, he said.

The Lake City Army Ammunition Plant’s Fire Department and the Independence Fire Department have been helping with the project while getting valuable training time.

The ammunition plant is a 3,935-acre government-owned, contractor-operated

facility that was established in 1941 to manufacture and test small caliber ammunition for the U.S. Army. The facility has remained in continuous operation except for one five-year period following World War II.

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Fort Hood leverages technology for LEED

by Christine Luciano

As the Army transitions from the Sustainable Project Rating Tool (SPiRiT) to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system with the fiscal year 2008 Military Construction program, Fort Hood, Texas, is incorporating LEED criteria into CAMPS. CAMPS stands for Comprehensive Army Master Planning System, an interactive web-based planning tool that assists in decision making and creating a sustainable installation. Including LEED criteria in CAMPS will improve the installation's ability to meet standards of sustainable design and development.

CAMPS was developed by Fort Hood and Ecology and Environment, Inc. to assist in the property management and planning involved in sustaining the environment and maintaining training. It is an automated master planning system that includes tools for real property, master planning, National Environmental Policy Act, stationing, mapping, installation design guide (IDG), developments plans and projects. The IDG is one component of CAMPS that has become more efficient and effective in the web-based system.

"Since most IDGs become obsolete when you print them, the goal was to develop a system that was more interactive and could be easily updated," said Ron Bochenek,

environmental specialist for Ecology and Environment, Inc. Bochenek worked with Fort Hood's pollution prevention coordinator, Jennifer Rawlings, who is also a LEED-accredited professional, to incorporate LEED standards and criteria into building design.

"CAMPS is a dynamic and interactive compendium of tools that will build efficiencies into everyday planning and make the transition from SPiRiT to LEED easier," Bochenek said.

The user accesses the web-based system with a user name and password. Through CAMPS, the user selects a project type in the IDG, which produces different outputs and creates a to-do list that includes standards, criteria and recommendations for sustainable design and development to meet

the LEED Silver rating level. The IDG integrates data, Army standards and geographic information system technologies to help the user in design and environmental planning.

The IDG also provides a feature for users to upload documents that verify a LEED credit was used, while maintaining the overall LEED status of a project, and notifying the user when the LEED Silver rating level has been met.

Rawlings emphasized that LEED is important in reducing Fort Hood's environmental footprint and consumption of limited resources.

"CAMPS and LEED will further assist Fort Hood in incorporating sustainable practices for high-performance construction and enhancing the installation's 25 ➤



CAMPS home page



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year sustainable development and design goals," Rawlings said. "This will help improve the quality of life for our Soldiers, civilians, Families and communities, and, in turn, support the mission readiness at Fort Hood."

Currently, Fort Hood is in the process of designing two 5,000-square-foot office buildings to meet LEED Silver standards and be certified by FY 2008. One of the buildings will be the future Directorate of Public Works Environmental Office. This building will have solar panels and a rainwater collection system, and it will be completely constructed with a structural insulated panel made out of compressed

straw and oriented strand board. The other building is designed to have the first green roof on Fort Hood, active daylighting and xeriscaping with vegetation acclimated to Texas. From these pilot projects, Fort Hood will learn how to better implement the Army's environmental strategies and goals.

To comply with Executive Order 13423, Strengthening Federal Environmental, Energy and Transportation Management, Fort Hood is leveraging CAMPS to implement sustainable design and development for high performance construction. LEED is Fort Hood's tool to meet the building performance standard to implement sustainable strategies for construction and renovation.

CAMPS is an innovative resource for everyone on the installation from master planners to environmental personnel and facility representatives from major units. This efficient and effective web-based planning tool will help Fort Hood in standardizing and implementing sustainable planning, design and construction throughout the installation in support of mission readiness and environmental performance.

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FORT HOOD Comprehensive Army Master Planning System (CAMPS)

HOME LINKS RPMP NEPA STATIONING MAPPING **IDG** DEVELOPMENT PLANS PROJECTS ADMINISTRATION

Browse Standards **Create Project** View Existing Projects IDG Document IDG Administration IDG Comments

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To save as a project, please enter a Project Name below and click the Save Project button.

Project Name:

175 Record(s)

Site Planning Design		Standard	LEED Points
<input type="checkbox"/> No	General Site Planning	LEED-NC: SS Credit 5.2 Site Development, Maximize Open Space *OPTION 1* - Reduce the development footprint (defined as the total area of the building footprint, hardscape, access roads and parking) and/or provide vegetated open space within the project boundary to exceed the local zoning's open space requirement for the site by 25%. (Note: Choose only one OPTION for this credit)	1
<input type="checkbox"/> No	General Site Planning	OR, OPTION 2; LEED-NC:SS Credit 5.2 Site Development, Maximize Open Space - For areas with no local zoning requirements (e.g., some university campuses, military bases), provide vegetated open space area adjacent to the building that is equal to the building footprint. (Note: Choose only one OPTION for this credit)	1

Search included:
Project Origin: MILCON Project
Project Type: New Construction
Building Type (FCG):
Project Area (Visual Zone): Community Core
Subject Area(s): LEED Only
Keyword:

Reference Files:
[Design Team IDG Checklist ter](#)
[Exterior Color Chart](#)
[Exterior Materials Chart](#)

CAMPS project page



Fort Lewis Whole Barracks Renewal project designed with BIM

by Patricia Graesser

A Corps of Engineers military construction team used an innovative approach to provide affordable and sustainable living and working quarters to Fort Lewis, Wash., Soldiers. The Jackson Avenue Whole Barracks Renewal (WBR) in-house design team produced the design and specifications using three-dimensional Building Information Modeling (BIM).

The BIM modeling was the Corps' pilot study of the approach. It was conducted in cooperation with the Corps' Construction Engineering Research Laboratory.

"BIM is the wave of the future," said project manager J.D. Brigance. "We were the first team in the Corps to use it for military construction."

The construction duration of 540 days was also a first for such a large — \$50 million — military construction project and was prescient of MILCON Transformation imperatives, which were unknown at the time.

The team partnered with designers from a local architectural and engineering firm, individuals from the Corps' Walla Walla and Far East districts, and reviewers from Fort Lewis and Kansas City District. Teaming has been a constant theme of the project, has been conducted on a large scale and is continuing unabated into the construction process.

Team members researched lessons learned from recently completed WBR projects and vowed to focus the design on eliminating the need for modifications necessary on those projects. The team achieved extremely low cost and schedule growth during construction through continuous communication with all team partners.

At the start of design, Seattle District faced rapidly escalating construction costs and a tight labor market. The team, in conjunction with management, opted for a drastic change in the barracks design approach from concrete and steel to wooden construction materials. This altera-

tion involved changing almost every aspect of the design in every discipline. It required all new drawings and details, a multitude of new systems, new analyses of seismic and progressive collapse scenarios, new application of force protection criteria and more. Every engineering discipline was affected.

In addition, the introduction of the 3-D modeling design software, provided to increase productivity and reduce interferences between the designs produced by individual disciplines, presented its own challenges for efficient use.

"The learning curve was steep at first, but what it allows makes it worth it," Brigance said. "The system allows you to walk your customer through the completed structure before you begin construction. It also integrates all aspects of design, so that the model software can self-check for interferences between all modeled building elements, such as structural and electrical/mechanical design elements."

The team also designed the Jackson WBR to achieve a Leadership in Energy and Environmental Design-New Construction Gold sustainability rating, one of the few in the Army. This level was achieved in the design, but due to loss of scope at the time of award, Silver will be achieved by the actual construction.

"Achieving a LEED-NC sustainability rating at the Gold level had never been attempted before on a major MILCON project in USACE, to our knowledge," said



Fort Lewis's Jackson Avenue Barracks designers created four smaller buildings oriented around a courtyard of existing trees and added high windows to bring in more light and reduce electricity use. Photo by Bruce Hale

Brigance. "In order to achieve a Gold sustainability rating, sustainability features had to be considered in most every discipline."

The team modified electrical systems designs to use automatic-dimming lighting. This type of lighting features controls that sense daylight entering from high windows and reduces energy consumed for lighting. The added high windows were among many architectural features adopted after brainstorming systems and features that could attain the required points for a Gold rating, discussions of cost-benefit relations of possible selections and, finally, design and integration of the systems.

The sustainable strategies used, in addition to the daylighting and lighting controls included:

- 95 percent diversion of construction waste from the landfill by recycling or salvaging;
- Recycled content in structural and architectural materials;
- Reduction in storm water runoff and treatment of storm water;
- Low-flow plumbing fixtures for water conservation;
- Reduction in water used for landscaping; and
- 50 percent of wood from responsibly and sustainably managed forests. ➤



Energy and Water Reporting System links to real property database for greater efficiency

by James Paton

The Office of the Assistant Chief of Staff for Installation Management has linked the Army Energy and Water Reporting System (AEWRS) with real property data located in the Headquarters Executive Information System (HQEIS). The connection improves data accuracy and consistency by relieving installation energy managers of the burden of transcribing and inputting square footage as part of energy reporting.

The Army meets federal energy reporting requirements by compiling utilities data reported by installations into AEWRS on line at <http://aewrs.hqda.pentagon.mil>. Those requirements include reporting progress toward federal energy reduction goals measured in terms of energy per unit area, i.e., British thermal unit per square foot of buildings. For years, installation energy managers were required to enter total annual building square footage data in addition to their monthly utility consumption and cost data. That square footage data is reported by real property managers quarterly into the Army's real property inventory and HQEIS, the Army's official database

of record for building square footage data. With the linkage, real property data from HQEIS is imported directly into AEWRS.

The database query used to import real property data into AEWRS takes into consideration building type and ownership code to match appropriate buildings and building square footage to Army energy use. For example, the query excludes facilities with category codes for commissaries and ownership codes for off-post leased and privately owned facilities.

Normally, installation energy managers would not report commissary square footage or energy use into AEWRS as that data is reported by the Defense Commissary Agency. Similarly, installations typically would not report into AEWRS square footage and energy use of leased buildings in which the utilities were included in the lease, or privately owned buildings such as on-post commercial banks, so those buildings are also excluded from the data import query. However, some installations may have special situations that do not fully match considerations of the data import query.

The import of square footage data from HQEIS into AEWRS resulted in significant data changes at a few installations. These inconsistencies were most often caused by installation and sub-installation grouping convention or outdated real property inventories. Most differences were fixed by consistent application of facility exclusions and grouping conventions.

Any installation energy manager finding large variance between previous square-footage data reported manually into AEWRS and the imported square-footage data currently shown should confirm accuracy of appropriate data with their real property manager and report any data-import discrepancies to the AEWRS webmaster at aewrs@hqda.army.mil for resolution.

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The team was fortunate to have the services of three LEED-accredited professionals on the in-house team, and they worked with the architect-engineer design contractor to coordinate approaches and share ideas. This effort continues during construction to enhance sustainability of the structures and validate proper incorporation of the designed systems, features and processes to ensure that at least a Silver sustainability rating is achieved.

"The in-house design team kept our sustainability goals in mind throughout the design process and worked at every stage to maximize the sustainable aspects of the project, as well as the cost-effectiveness of the products and systems," said Anne-

Marie Moellenberndt, a mechanical design engineer and one of the LEED-accredited professionals on the in-house team.

"In many cases, a sustainable design choice led to an increase in cost in one area, but a decrease in another area," she explained. "For example, a better insulated building not only reduces the future energy use of the building but also reduces the size, and therefore cost, of the heating systems in the building. Finding and optimizing these trade-offs requires a lot of teamwork but results in a more sustainable building."

This barracks project allowed Corps designers to interact at the cutting edge of the sustainability industry. It provided team members with an advantageous head

start in 3-D design and in specifying and reviewing cost-effective and achievable LEED strategies in the new MILCON Transformation, design-build environment.

Bruce Hale, a member of the in-house design team, was selected as the Corps' Architect of the Year as a result of his work on this project.

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Army environmental programs make a difference

by Kristin Miller

Fort Hood, Texas; Fort Rucker, Ala.; and the Department of the Army received awards for contributions to the environment at the 2007 *White House Closing the Circle Awards* ceremony June 12.

“Acceptance of these prestigious awards confirms that Army sustainability is on the move and gaining momentum. We’re building green, buying green and going green,” said Tad Davis, deputy assistant secretary of the Army for environment, safety and occupational health. “I’m confident this recognition will spark others to action.”

Department of the Army received the *Sowing the Seeds Award* for the Army’s “Strategy for the Environment.” The strategy outlines the Army’s vision for the next 20 years and how its goals will impact the Army’s mission, the environment and local communities. It transitions the Army’s compliance-based environmental program to a mission-oriented approach based on the principles of sustainability.

Fort Hood’s Solid Waste and Recycle Team received a pollution-prevention award for its “Every Waste a Reuse Opportunity” program. Environmental experts

there trained more than 11,000 community members on recycling and environmental awareness. Fort Hood also developed partnerships with local, state, federal and private organizations to aid their environmental mission.

The post saved more than \$2.5 million in 2006 through its Qualified Recycling Program, compost recycle program, inert material management, deconstruction management, special waste management and the electronics waste recycling program.

“This award represents the hard work and dedication by Fort Hood’s environmental team to supporting the mission, serving the Soldier and protecting the environment,” said Col. Tori Bruzese, Fort Hood garrison commander. “This installation award reflects the passion that Fort Hood employees have in keeping Fort Hood ‘The Great Place.’”

Fort Rucker’s Aviation Center Logistics Command (ACLC) received an honorable mention for recycling. The command created a pilot program with a local industrial laundry to recycle absorbents used to wipe aircraft engines. The absorbents were pre-

viously discarded as hazardous waste after one use due to the presence of a toxic metal called cadmium.

The program successfully eliminated hazardous waste while also reducing aircraft cleaning costs. The absorbent material can now be reused as many as 10 times before being discarded, creating an estimated cost savings of about \$500,000 a year.

“This new process truly allowed greening of the current government practices through waste prevention,” said Robert Hill, deputy commander, Aviation and Missile Command, ACLC.

The *White House Closing the Circle Awards* is an annual program sponsored by the Office of the Federal Environmental Executive. The program focuses on the practices of sustainable building, waste prevention and recycling, green purchasing and electronics stewardship.

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Fort Rucker honored for innovative reuse program

by Daina Dowdy

The Army Aviation Center Logistics Command (ACLC) at Fort Rucker, Ala., received an honorable mention June 12 in the 2007 *White House Closing the Circle Awards* for its Absorbent Reuse Program.

“(The program offers) an opportunity for individuals throughout the Armed Forces and anyone within the Department of Defense to share information on what great things they’re doing to reduce waste,” said Genie Jones, Army Missile Command environmental engineer.

“It’s the first time I’ve put in for an application,” Jones said. “And being named an honorable mention — it’s exciting for myself personally and exciting for ACLC,” Jones said.

The Absorbent Reuse Program is a system in which absorbent spill pads, rags, low-lint towels, socks and gloves contaminated with oil, grease and hazardous materials are collected, cleaned using environmentally compatible dry cleaning solvent and returned to the same user.


“This new process truly allowed greening of the current government practices through waste prevention,” said Robert Hill, ACLC deputy commander.

The Absorbent Reuse program is the only process in the state that the Alabama Department of Environmental Management has recognized as a true reuse process, according to Jones.

“It’s not just recycling, it’s reusing,”

Jones said. “It’s our future. By focusing on waste prevention, recycling and green purchasing activities, we are actually strengthening federal environment, energy and transportation management.”

Traditionally, aircraft maintenance personnel at ACLC used various types of absorbents for collecting and containerizing aircraft engine oils and spilled fuels, and wiping oily and greasy parts, surfaces and hands. The absorbents were then discarded. The discarded material is disposed of as hazardous waste because of the presence of cadmium, a toxic metal commonly used in aircraft and aircraft components.

Currently, the cadmium-contaminated absorbent waste is Fort Rucker’s largest hazardous waste stream, with about 



Fort Hood wins federal award for waste program

by Christine Luciano

Fort Hood, Texas, was recognized by the Office of the Federal Environmental Executive with a 2007 *White House Closing the Circle Award* for waste and pollution prevention in the military category. The installation's solid waste and recycle programs were cited for developing many diverse programs and reuse opportunities for waste that resulted in a cost avoidance of \$2.5 million in 2006.

"Solid waste generation was determined to be Fort Hood's most significant aspect," said Jeff Salmon, Solid Waste Program manager. "Waste prevention became Fort Hood's greatest opportunity to improve on installation environmental performance."

Fort Hood's special waste management, electronics waste recycling, compost, deconstruction and qualified recycling programs contributed to the installation's mission to excel in solid waste reduction and recycling. For example Fort Hood's unique compost program sells Texas Department of Transportation and U.S. Composting Council standard compost and mulch through the Qualified Recycling Program (QRP). The program diverted 2,874 tons of waste material from the landfill and saved more than \$83,000 in disposal costs.

The QRP is another example. The Fort Hood program is the largest in the U.S. Army. In 2006, the installation processed more than 7,500 tons of recyclable material,

which generated more than \$1.5 million in revenue while avoiding more than \$217,000 in disposal costs.

Based on the concept "Every waste a reuse opportunity," these programs proved to be successful in saving the installation money, diverting materials from the landfill and promoting environmental stewardship.

Part of the installation's success was due to increasing environmental awareness and stewardship through training, outreach and assessments.

"It takes everyone's involvement, and that's the kind of commitment we have here" said Steve Burrow, Directorate of Public Works' chief of Environmental Programs.

The Environmental Trainers and Environmental Compliance Assessment Team provided environmental awareness training to more than 11,000 personnel.

"We need to recognize the efforts and performance of the civilians and the Soldiers who incorporate environmental compliance into their activities" said Randy Doyle, DPW's Pollution Prevention program manager. "The Environmental



(Left to right) Sgt. 1st Class Billy Arnold, Master Sgt. Carrie Glover and Sgt. Renada Rozier unload excess computer equipment during the Federal Electronic Challenge turn-in period from Nov. 15 through March 15. The Federal Electronics Challenge was one of the programs that supported Fort Hood's electronic recycling program. Photo by Christine Luciano

Division provided the resources, tools and training, but if it was not for the leadership commitment and the involvement of the civilians and the Soldiers, Fort Hood would not have an effective environmental management system."

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Christine Luciano is the environmental outreach coordinator, Directorate of Public Works, Fort Hood, Texas. **PWD**

great initiative."

Olinger said there are many positive aspects of the Absorbent Reuse Program.

"(This program is) important because we have enough waste in this world to fill up our landfills," said Olinger. "It saves the commander money, so more money goes for our troops in the fields. It saves the taxpayers' money. There are lots of positives."

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Daina Dowdy is a staff writer for the Army Flier, Fort Rucker, Ala. This article is reprinted from the Army Flier. **PWD**

(continued from previous page)

200,000 pounds disposed of annually at a cost of \$1 million. In 2004, 172,838 pounds of cadmium-contaminated absorbent waste was disposed of at a cost of \$940,239.

"When we were looking at ways to reduce our waste, the absorbent waste was our largest waste stream," Jones said. "We found a company who was willing to work and partner with us (to) create this program."

Cost savings after full execution of the program are estimated to exceed \$500,000 per year. The absorbents can now be used up to 10 times before they must be

discarded. Once discarded, the material is collected for recycling and made into absorbent socks for use in drip pans and for potential spill containment.

"Our goal is to continue reducing our waste, provide a good product to our users and to sustain this program, reducing our environmental footprint," Jones said.

Sandy Olinger, Aviation and Missile Command environmental engineer and the Acquisition and Compliance Team leader, said the award was well deserved by the team.

"They're looking for innovative ways to reduce waste and save the command money," said Olinger. "We like that. It's



Mason retires as Northeast Region's chief of Public Works

by Sandy Goss

A career of more than 31 years of civilian service drew to a close June 29 as Stephen S. Mason retired. Mason was the Installation Management Command's Northeast Region chief of Public Works since 2002. He had previously served as the chief, Installation Support Division, Training and Doctrine Command (TRADOC).

As the Public Works Division chief, Mason provided leadership, direction and guidance in the areas of environment, master planning, family housing, design, construction, operations, maintenance and repair for all 28 garrisons in the Northeast Region. He led a seamless transition of regional public works responsibilities from TRADOC to the Installation Management Agency, Northeast Region and then to IMCOM.

Mason's accomplishments were legion.

He led a team of engineering firms, historic preservationists and TRADOC and Fort Monroe, Va., officials to build a world-class fitness center in a facility listed on the National Register for Historic Places. The building was completely renovated, restoring significant historic features.

Following the devastation of Hurricane Isabel in September 2003, Mason took a leading role in response and recovery operations. His efforts led to the timely reopening of roads and bridges and restoration of electrical power by immediately leveraging the full capabilities of the Army Corps of Engineers.

His experience with local utility companies led to the development of additional service agreements with other agencies to provide the Army support during times of natural disaster.

Mason sponsored the first visit of the Virginia State Historical Preservation and Protection Office (SHPPPO) to Fort Monroe and greatly improved the Army-SHPPPO working relationship. This improvement resulted in SHPPPO's permit-



Stephen S. Mason
Photo by Sandy Goss

ting the deconstruction of dilapidated housing at Fort Monroe.

From buildings to bald eagles, Mason was deeply involved in all aspects of public works. He championed the protection of the bald eagle in the Northeast Region. Beginning around 2000, large numbers of this federally protected species were killed after colliding with the electrical infrastructure at Aberdeen Proving Ground (APG), Md.

Mason obtained funding for several measures to protect the eagles from the overhead wires. The number of mortalities declined but remained unacceptably high. Burying the lines was the definitive solution, but it would be costly and would involve the removal of unexploded ordnance. Mason worked to help APG officials bury the lines, because he believed it was the right thing to do.

Plans to relocate the Asymmetric Warfare Group (AWG) at Forts Meade, Md., and A.P. Hill, Va., were announced in December 2004, and Soldiers started arriving in mid-2005. The facilities planned for the Soldiers were quickly determined to be insufficient to handle the mission.

Mason was instrumental in getting additional space essential to the AWG at Fort

Meade, while also overseeing the movement of First Army East to Fort Meade. His efforts brought \$20 million to Forts Meade and A.P. Hill. In addition, he developed and programmed \$120 million worth of Military Construction, Army (MCA) projects supporting the AWG.

Mason championed and initiated regional efficiencies. His notable accomplishments included approval for front gate signs at 13 Northeast Region garrisons and regionwide use of Corps of Engineers safety inspections.

He also proposed a program to secure discounts from The Home Depot for Directorate of Public Works purchases that is currently being considered for Armywide implementation.

He envisioned, developed and implemented the Engineer Project Prioritization System and successfully lobbied IMCOM and the Office of the Assistant Chief of Staff for Installation Management to adopt it. The system is now an integral part of engineer project planning in all garrisons worldwide.

Mason put into operation the Army's Utilities Privatization Program, which contributed to the Northeast Region's recognition as the Army leader in utilities privatization.

He developed a nationwide bridge safety program. In addition, he reduced operating costs by about \$250,000 per year while maintaining performance levels on DPW contracts. A strong supporter of the Army's Enhanced Use Leasing program, he championed the program throughout the region.

Mason was an advocate for garrison requirements. His oversight and management of military construction programs and repair and maintenance projects were instrumental in supporting a 30 percent population increase at Fort Drum, N.Y. He supervised the transition of Army Family Housing at Fort Meade and at Fort Belvoir, Va., to Residential Communities ➤



Zedalis takes lead at IMCOM-Pacific

by Howard Sugai

In welcome ceremonies on Palm Circle at Fort Shafter, Hawaii, June 19, Debra D. Zedalis became the second director of the U.S. Army Installation Management Command, Pacific Region.

A veteran of 30-plus years of service with the Army, Zedalis is in charge of the management of all Army installations in the Pacific. She manages a staff of about 150 military and civilian personnel and oversees millions of acres of Army land and square feet of Army facilities throughout Alaska, Hawaii, Japan, Okinawa and Kwajalein Atoll. She is responsible for providing support for about 104,580 Soldiers, Family members and retirees, and 26,244 civilians, and she directs an annual operating budget exceeding \$760 million.

Brig. Gen. John A. Macdonald, deputy commanding general, IMCOM, officiated at the welcome ceremony.

“The Soldiers and Families in the Pacific area of responsibility are in good hands,” Macdonald said in his remarks. “Ms. Zedalis is a dedicated civilian with a very successful track record of working progressively diverse and challenging assignments for the past 30 years. She is a founding member of the team who helped transform the Installation Management Command into what it is today.”

In her remarks, Zedalis expressed her excitement at being the new Pacific Region director in Hawaii.

“It is now my great fortune to be able to live in paradise and to have the best job in IMCOM, to provide the finest service



Debra D. Zedalis
Photo by Molly Hayden, Pacific Media Publishing

and support to our Soldiers and Families assigned throughout the Pacific Region,” Zedalis said.

Most of her experience has been with garrisons and installations in Europe, she said, but she considers herself an avid student and is eager to learn about the cultural and geographic uniqueness that make the Pacific Region challenging and special.

Zedalis also reaffirmed her passion for and focus on supporting Soldiers and their Families.

“You have already heard me say, ‘Soldiers and Families’ several times this morning, and you will hear me repeat it often. Our work must, in the end, result in a direct benefit, service sustainment and support to and for our Soldiers and Families. It is an honor to serve the United States

Army,” she said.

Zedalis asked region personnel for their continued hard work, dedication and support.

“I need your ideas, your enthusiasm and your continued commitment to excellence,” Zedalis said.

In return, she pledged her utmost to take care of the IMCOM workforce.

“I have benefited from excellent leaders, exceptional co-workers, enhanced training and challenging assignments. I want you to have that same experience, and I look forward to celebrating your successes,” Zedalis said.

Prior to this assignment, Zedalis was the deputy to the garrison commander at West Point, N.Y. She began her federal service career as both a manpower and program analyst at Fort Knox, Ky. In 1988, Zedalis moved to Germany, serving in successive assignments as chief, Management Division, Office of the Deputy Chief of Staff for Resource Management; and chief, Installation Management Support Division, Office of the Deputy Chief of Staff for Personnel and Installation Management; culminating in her assignment as chief of staff, Installation Management Agency, Europe Region.

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(continued from previous page)

Initiative partners, created a new MCA and military construction prioritization process involving garrison functional staff and managed Northeast Region surplus employees without any adverse actions.

His leadership resulted in the establishment of the Executive Management Office

for Forts Monroe and Myer, Va., which improved management of essential quarters.

A superb leader, engineer and human being, Mason is perceptive and talented and was able to rally support for the organization. His counsel was sought by all. Subordinates, peers and superiors were tremendously affected by his constant

good-cheer, knowledge and willingness to lend a helping hand wherever needed.

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Tindoll becomes director at IMCOM-Southeast

by Charles Childers

Davis D. Tindoll Jr. assumed the position of director of the Installation Management Command, Southeast Region, during a ceremony June 25 at Fort McPherson, Ga. As region director, Tindoll will be responsible for organizing Army installation support and services for eight states and Puerto Rico, managing 15,000 employees and overseeing a \$2 billion budget.

“We will define excellence by two means — one in the quality of support we provide and second in the responsiveness to the needs of senior mission commanders,” Tindoll said. “Southeast Region will be ready to support the priorities and requirements of the senior mission commanders on each installation.”

Lt. Gen. Robert Wilson, the assistant chief of staff for installation management and the commanding general of the Installation Management Command, hosted the ceremony. About 200 guests attended, including Gen. Charles C. Campbell, commanding general, U.S. Army Forces Command, and garrison commanders and command sergeants major from 12 installations within IMCOM-Southeast.

“With change comes opportunity, and

our goal is to seize this opportunity to ensure we improve our installations as premier centers of readiness and support,” Tindoll said after receiving the organizational colors from Wilson. “The bottom line is that we, IMCOM-Southeast, are here to take care of Soldiers and Families.”

Tindoll comes to the IMCOM-Southeast after serving as deputy director of IMCOM-Korea since October 2004. As deputy director, Tindoll had responsibility for the closure, restationing and transformation of Army installations in South Korea. Before his assignment in Korea, Tindoll served as the chief of staff of the Southeast Region, Installation Management Agency, responsible for directing and coordinating the region staff in the management of 20 Army installations located in eight states.

Prior to civilian service, Tindoll was an Army officer for 30 years. He was the garrison commander at Fort Rucker, Ala., chief of staff of the Aviation Center and served in other key command and staff assign-



Davis D. Tindoll Jr. accepts the Installation Management Command, Southeast Region flag from Lt. Gen Robert Wilson, assistant chief of staff for installation management and the commanding general of IMCOM, during a ceremony June 25. Photo courtesy of IMCOM-Southeast

ments in aviation and cavalry units. He also previously served as deputy director of the Southeast Region.

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PWD



*Bill Sugg
Photo by Alexandra Stakbir*

Sugg retires

William R. Sugg III, deputy chief of the Public Works Division at Installation Management Command headquarters and chief of its Engineer Branch, retired Aug. 3.

He was responsible for Public Works business operations; facilities maintenance management; engineer training; engineer automation; Sustainment, Restoration and Maintenance; and municipal services. Among his many accomplishments are the creation of an accessible database for institutionalizing headquarters-level engineering knowledge, just-in-time furniture delivery and the development of met-

rics and a standard template for manpower and hiring decision.

Sugg began his 27-year federal career as an intern in the Directorate of Facilities and Engineering at Fort Gordon, Ga. He went on to work as a general engineer for the Department of Defense in a number of locations, including Virginia, Georgia, Germany and Belgium. He has been at IMCOM headquarters since 2003.

His immediate plans are to catch up on household maintenance chores. But he is not ready to stop working altogether. After a few months, he will begin to look around for employment, he said. **PWD**



Van Antwerp assumes command of Corps of Engineers

Lt. Gen. Robert L. Van Antwerp became the 52nd chief of engineers and commander of the U.S. Army Corps of Engineers May 18. As commander, he is also the functional chief of the Army's Career Program 18, which serves the Engineers and Scientists (Resources and Construction) career field. He assumed this command from Lt. Gen. Carl A. Strock who retired after 36 years of military service.

Van Antwerp has taken charge of the nation's leading public engineering agency. The Corps designs and manages military facilities construction for the Army and Air Force at home and abroad and provides design and construction management support for other Department of Defense and federal agencies. The Corps also plans, designs, builds and operates water resources projects. In addition, the Corps cleans hazardous areas across the nation through the Formerly Used Defense Sites program and the Formerly Utilized Sites Remedial Action Program and conducts state of the art engineering research and design at its Engineer Research and Development Center.

He was previously assigned as commanding general, U.S. Army Accessions Command and deputy commanding general for initial military training at Fort Monroe, Va. The Army Accessions Command consists of U.S. Army Recruiting Command, Fort Knox, Ky.; U.S. Army Cadet Command, Fort Monroe; and the U.S. Army Training Center, Fort Jackson, S.C. In addition, he exercised Department of the Army-directed executive agent authority over the Military Entrance Processing Command.

Van Antwerp has also commanded the U.S. Army Maneuver Support Center and Fort Leonard Wood, Mo., and U.S. Army Engineer School; the Corps' Los Angeles District during the Northridge Earthquake of 1994; the Corps' South Atlantic Division, Atlanta, Ga.; and the 326th Engineer Battalion, 101st Airborne Division (Air



Lt. Gen. Robert L. Van Antwerp addresses the audience after assuming command of the U.S. Army Corps of Engineers. Photo by F.T. Eyre

Assault) during Operations Desert Shield and Desert Storm in Saudi Arabia and Iraq.

His Washington, D.C., assignments have included: chief of staff, Headquarters, U.S. Army Corps of Engineers; the U.S. Army's assistant chief of staff for installation management; director, Office of Competitive Sourcing, Office of the Assistant Secretary of the Army for Research, Development and Acquisition; executive assistant to the vice chairman of the Joint Chiefs of Staff; and executive officer, Office of the Chief of Engineers. His other assignments were chief, Military Engineering and Construction Division, U.S. Army Western Command, Fort Shafter, Hawaii; executive officer, 84th Engineer Battalion, 45th General Support Group, Schofield Barracks, Hawaii; and instructor, Department of Mechanics, U.S. Military Academy, West Point, N.Y.

Van Antwerp graduated from the U.S. Military Academy in 1972. He completed Ranger, Airborne and Air Assault training, the Engineer Officer Basic Course and the Engineer Officer Advanced Course. He holds a master's degree in mechanical engineering from the University of Michigan and a master's degree in business admin-

istration from Long Island University in New York. He is a registered professional engineer.

From a U.S. Army Corps of Engineers news release. **PWD**

CALL FOR ARTICLES

The September/October 2007 issue of the **Public Works Digest** will feature

Energy and Water Conservation and Management

Deadline is Aug. 21

Submit articles to mary.b.thompson@usace.army.mil (202) 761-0022



Career program managers build the bench of future leaders

by Lt. Gen. Robert L. Van Antwerp

One of the most important duties for any commander or senior leader is succession planning — do I have the personnel prepared, trained and ready to assume positions of higher responsibility, specifically, my own job? An important ingredient toward accomplishing that duty is having a knowledgeable and resourceful senior manager at every Army activity dedicated to building the bench of future Army leaders — the activity career program manager (ACPM). ACPMs must demonstrate what I refer to as “the 4-Cs:” **character, commitment, competency and chemistry.**

From my perspective, the first trait any ACPM should possess is **character.** I believe that ACPMs must personally demonstrate the values of career development that they espouse for the entire workforce. The ACPM should show both professional and personal integrity toward career development for all employees in their organizations. Part of demonstrating character is communicating transparently with employees — that is, mean what you say and follow through on what you promise.

Second, successful ACPMs must be **committed** to the employees under their direction. No Army mission can be accomplished successfully without developing professionals who are both technically proficient and highly passionate about their work. This commitment must be congruent with our missions of program and project execution at all levels. If we don't prepare our employees for our missions, we will not be able to successfully execute them.

Again, transparent communication is the key to demonstrating commitment. If you promise opportunities, you must follow through.

Third, ACPMs must seek to build **competency** in their workforces. While practical experience through current work assignments is effective learning, it is not the sole method of building employee com-



Lt. Gen. Robert L. Van Antwerp
Photo by F.T. Eyre

petence. Previous columns have discussed the new Army Civilian Education System, long-term training and the CP18 Leadership Development Program as vehicles for developing management and leadership skills that are equally valued with technical knowledge.

Our employees need both “hard” and “soft” skills to be personally competitive in career development and ready to assume greater responsibilities within today's expeditionary Army.

At the same time, ACPMs must be competent in their knowledge of career development opportunities and the processes required to win those opportunities for their employees. They must recognize that access and knowledge to career development best starts at the local activity level.

The fourth trait of successful ACPMs is building team **chemistry** within their organizations. Can the ACPM, in concert with other senior leaders in their organization, establish and nurture relationships that create a culture of learning and leadership? Can the ACPM establish a climate where professional development and advancement are intrinsic to the organization? If there is a positive chemistry where career learning and development co-exist with daily execution of the organization's mission, employ-

ees at all levels will be better prepared and ready to take on the new challenges facing the Army.

As part of my focus on people and building the engineer team, I want to personally thank each of you who currently serve as ACPMs in your organizations. I also want to give you and others in your organizations who feel passionate about developing the civilian engineer team the opportunity to serve as ACPMs. I will send out specific information shortly on how to apply for these opportunities.

Whether you are an experienced ACPM or recently gained those responsibilities, you may ask where one can get the knowledge and skills needed to become successful career program managers. My answer is to attend the upcoming Career Program 18 (CP-18) Career Program Managers Workshop, scheduled for Aug. 15-17 at the Department of Defense Executive Management Training Center in Southbridge, Mass.

This year's workshop theme is “Developing Career Program Managers.” Keynote presentations will be created and presented by current career program managers. Information is available on the CP-18 web site at <https://eko.usace.army.mil/careerprograms/cp18/>. My point of contact for the workshop is Edmond Gauvreau, (202) 761-0936, DSN 763-0936, edmond.g.gauvreau@usace.army.mil.

I hope that you take advantage of the CP-18 Workshop to acquire and hone your skills to prepare our careerists to “Grow the Army.” I look forward to meeting many of you over the coming months to get your input and suggestions for improving Army civilian career development, thus making everyone Army Strong!

Essays on!

Lt. Gen. Robert L. Van Antwerp is chief of engineers, commanding general of the U.S. Army Corps of Engineers and functional chief of Career Program 18. **PWD**



Prepare now for acquisition career field transition

by John W. Wehmanen and Michael Ostrom

About 18,000 U.S. Army Corps of Engineers, Office of the Assistant Chief of Staff for Installation Management and Installation Management Command civilian positions from fields such as engineering, architecture, real estate, planning, industrial hygiene and program analysis will soon be screened for accession into the acquisition, technology and logistics (AT&L) workforce under the 2002 Defense Acquisition Workforce Improvement Act II.

If your position meets the definition, you will become part of the AT&L workforce in the facilities engineer career field. Your position will be coded as an AT&L workforce position in the applicable management database, and you will be told your rights and responsibilities as a member

The words above are virtually verbatim from an article in the *Public Works Digest* one year ago on this topic. Nothing has changed except the date the Army expects to start in earnest down this path. Staffers

at Headquarters, Department of the Army have been, and still are, meeting, talking and staffing proposals and plans, but the final decision to go has yet to be made.

It was expected last year that this effort would have started by now, but don't let that slow you down. One tip is this: at the Acquisition Support Center web site, <http://asc.army.mil>, scan the information for civilians. Start at the top and drill down, or go directly to <http://asc.army.mil/career/civilian.cfm>.

You can do this now before the program formally kicks off. It's easy, and you can familiarize yourself with the web site. After boning up on the AT&L workforce, there are a few steps from the site's list that you can accomplish to get ahead of the game:

Step 4 – Prepare an Acquisition Career Record Brief;

Step 6 – Prepare an Individual Development Plan; and

Step 7 – Become certified in your acquisition career field.

For now, there are only two courses available that will be required in the future for facilities engineer career field members: Acquisition 101 and Facilities Engineer 201. These courses, plus suggested degree and requisite experience, will lead you to your Level 1 or 2 certification. The capstone course will be Facilities Engineer 301, which leads to Level 3 certification. It is still under development.

Consider starting now. Get the first two courses out of the way. Not only will you be ready to meet a new requirement, you will learn something that will directly relate to your daily job.

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PWD

Fire and Emergency Services conference to be held

by Bruce Park

The Office of the Assistant Deputy Under Secretary of Defense urges fire department participation in the annual Department of Defense Fire and Emergency Services (F&ES) Training Conference, scheduled for Aug. 20-25 in Atlanta. This conference is held in conjunction with the International Association of Fire Chiefs (IAFC) Fire-Rescue International Conference and Exhibition.

The conference provides a unique venue for senior DoD F&ES personnel to meet with industry and government leaders and attend engaging educational training sessions. Attendees will also be able to visit more than 600 exhibits displaying the latest firefighting equipment and fire-prevention technologies.

The joint Army and Defense Logistics Agency (DLA) F&ES program will include the latest updates on structural, aircraft rescue fire fighting, and hazardous materials, chemical, biological, radiological, nuclear

and high-explosive — called HAZMAT/CBRNE — policies and programs. It will provide opportunities to network with participants from other federal agencies and the IAFC's 12,000-member organization.

Army training sessions will cover current staffing and equipment issues; new operational readiness inspection systems and formats; the current status of installation pre-hospital emergency medical services; and effective fire safety programs. Other Installation Management Command initiatives will be featured, such as Year of Manpower Task Force findings and updates on Common Levels of Support.

Separate meetings will address region-specific concerns. The following groups will meet during the week: IMCOM regions — West, Northeast, Southeast, Europe, Korea and Pacific; IMCOM Headquarters; and DLA.

Senior Army F&ES professionals need to attend this conference to keep abreast of

the rapidly evolving Army and DoD "First-Responder" mission. This conference also provides a unique Army and DLA training venue to meet formally and informally with more than 250 senior representatives from every level of Army and DLA command.

The DLA will hold its awards luncheon with the Army Aug. 22 and will host a number of DLA-specific meetings. The DoD conference culminates in an F&ES awards banquet Aug. 24 that recognizes the "best of the best".

The conference web site is <http://www.iafc.org/displaycommon.cfm?am=1&subarticlenbr=430>.

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