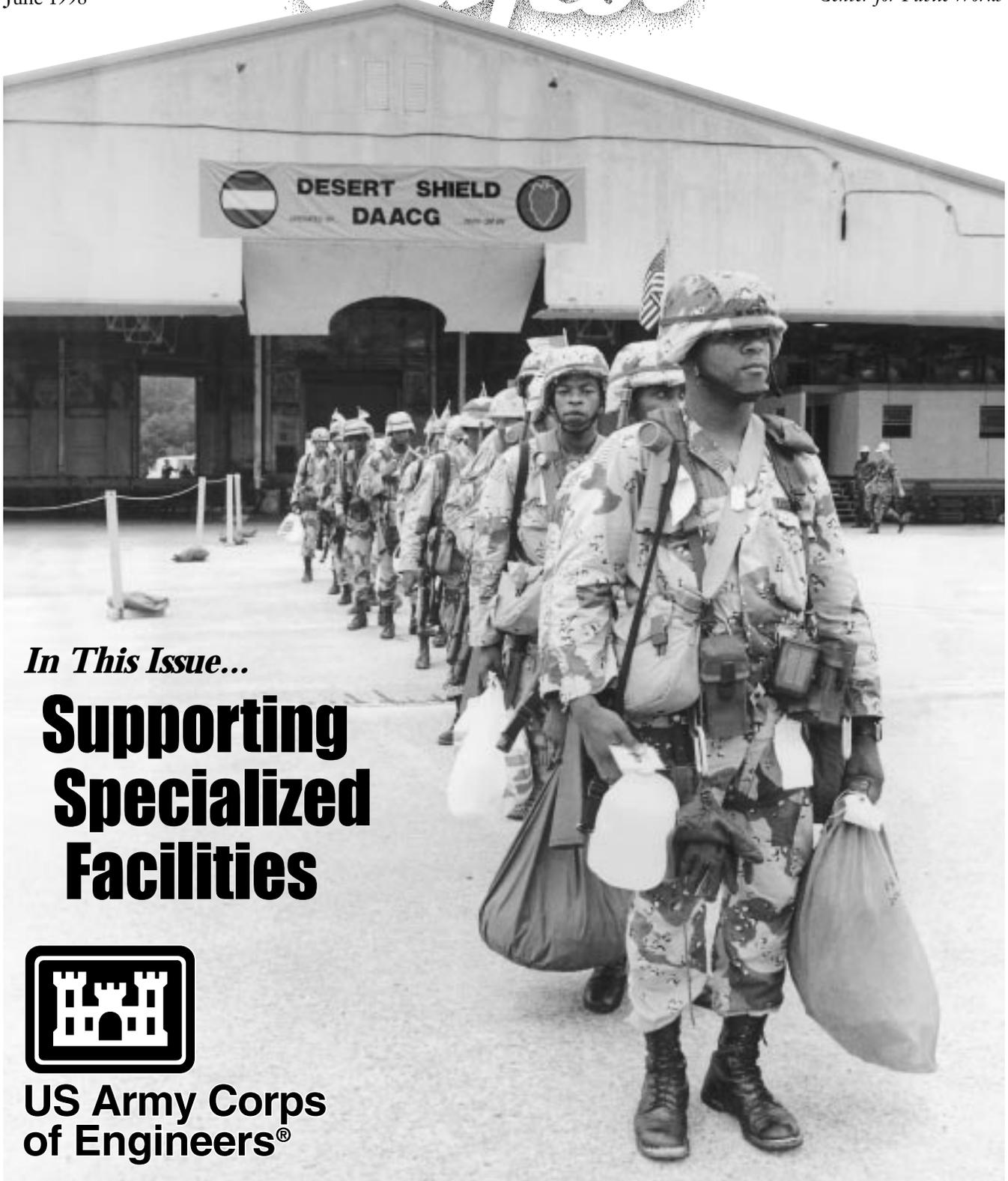


Public Works

Digest

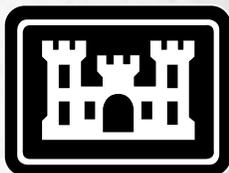
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Center for Public Works*



In This Issue...

Supporting Specialized Facilities



**US Army Corps
of Engineers®**



US Army Corps of Engineers®

ON THE COVER:

A larger, more up-to-date arrival and departure facility will replace the one from which troops deployed for the Persian Gulf during Desert Shield. (Photo by Jonas Jordan)

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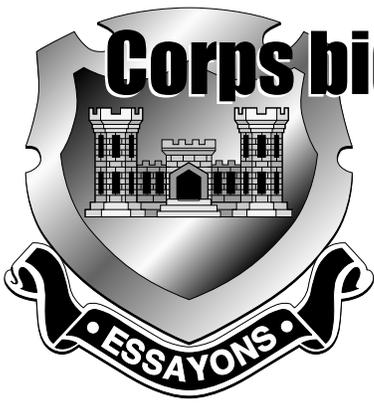
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Corps bids farewell to three SES members

The U.S. Army Corps of Engineers will lose some of its brightest stars this summer. With overlapping, illustrious careers spanning some forty-odd years, Edward (Ed) T. Watling, Lester (Les) Edelman, and Kisuk (Charlie) Cheung have helped the Corps maintain its prestigious standing as a premier engineering organization providing support to the nation and beyond. They will soon bid farewell to their many friends and coworkers, having well over a century of working with the Corps amongst them.

Ed Watling, currently the Director of the U.S. Army Center for Public Works at the Humphreys Engineer Center in Alexandria, Virginia, is responsible for supporting Directors of Public Works on Army installations throughout the world. He graduated from the Virginia Military Institute in 1949 with a BS degree in civil engineering and earned an MS degree in industrial engineering from Stanford University in 1959. A commissioned officer, he transferred to the Corps in 1953 and stayed until his retirement as a Colonel twenty years later. In between, Ed held several important positions, culminating in his being named Chief of the Facilities Engineering Division of the Directorate of Military Construction. After a three-year stint in the private sector as a vice-president and director of civil engineer-

ing for an architect-engineer company, Ed returned to the Office of the Chief of Engineers as a civilian, working in the areas of facilities engineering, housing, environmental engineering and military construction, and becoming a familiar figure all around the Army. A Senior Executive Service appointee since 1981, Ed received his 45-year pin last year.

Les Edelman received his JD from the Boston University School of Law in 1954 and LLM from the Columbia University School of Law in 1957. The recipient of many prestigious honors, including the Presidential Rank of Distinguished Executive in the Senior Executive Service in 1991 as well as the Presidential Rank of Meritorious Executive in the Senior Executive Service in 1983 and 1988, Les is familiar to many as the Chief Counsel of the U.S. Army Corps of Engineers, a position he has held since 1979. Emphasizing preventive law, Les has steered

the Corps towards becoming a part of the solution to the high cost of litigation. His career has been a platform for alternative dispute resolution and partnering techniques to take the place of costly litigation. He began his 40-year government career in 1958, serving in various assignments in Michigan, Illinois, California, and Washington, DC. From 1968 to 1979, Les was Counsel, Committee on Public Works and Transportation in the U.S. House

of Representatives, where he played a significant part in creating major legislation, including the Clean Water Acts of 1972 and 1977.

A native of Seoul, Korea, **Charlie Cheung** has remained fluent in the Korean and Japanese languages. His aggressive pursuit of a career in engineering includes studies at the Seoul National University in Korea, Kimball Union Academy in New Hampshire and Dartmouth College in New Hampshire, where he received an AB in

1953 and an MS in civil engineering in 1954. After two years in the U.S. Army in the field of psychological warfare and engineering and two more in the private sector, Charlie joined the Corps, progressing from structural engineer to Chief of Design to Chief of Engineering to Chief of Construction and Engineering, all in the Far East District. After a brief stay as the Chief of Engineering for the Alaska District, he became the Director of Engineering and

Program Management for the Pacific Ocean Division in 1974, where he remained for 21 years. It was here that Charlie was appointed to the Senior Executive Service in 1979. In honor of his outstanding service to the nation, he was twice awarded the Presidential Rank of Distinguished Senior Executive Service in 1982 and 1988 and the Presidential Rank of Meritorious Senior Executive Service in 1980, 1986, and 1992, as well as the Distinguished Executive Service Award from the Senior Executive Service in 1995.

Farewell, Ed, Les, and Charlie! Things just won't be the same without you! **PWD**



Ed Watling



Les Edelman



Charlie Cheung

For more information about these three retirements, please call the points of contact listed below:

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Les Edelman (August 3, 1998)– POC: Elnora Christian, (202) 761-0018/9

Charlie Cheung (July 29, 1998)– POC: Dorothy Butler, (202) 761-4439 DSN



*Army installations are complex places. They're home to all the facilities you'd expect in a small city—and they support the special deployment and technology needs of a modern Army. In this issue of the **Public Works Digest**, we showcase many of the ways the U.S. Army Corps of Engineers supports your installations. From the inner secrets of your computer systems and the air you breathe to your airfield pavements, excellent medical facilities and the way a family enjoys an outing at the bowling alley to better, smarter contracting methods—the Corps working hard to put the Engineer mark of quality on your installation's life.*

Huntsville Center designs battle plan for Y2K impact on facilities equipment

by Linda S. James

When the clock runs out and the date rolls over to January 1, 2000, most federal agencies believe they will have done everything possible to avoid the computer "disasters" predicted by many. But, according to Tahir Rizvi, of the Army Corps of En-

Y2K Myths

Tahir Rizvi, program manager for the Operations Maintenance Engineering Enhancement Program, highlights ten Y2K myths that can foil facility managers and plans to successfully address the Year 2000 compliance issues:

- Only computers are affected.
- We do not have to test the equipment if the vendors say it is compliant.
- If we test the components individually, we do not have to test the system.
- We don't need to contact the vendors. We can test it ourselves by changing the date.
- We have until December 31, 1999 to complete the Y2K work.
- It will be all over on January 1, 2000.
- If we check the equipment on one floor, we don't need to check other similar floors.
- All our new construction projects will be Y2K compliant.
- The vendor's service agreement covers Y2K compliance.
- The vendors have liability should a system fail. **PWD**

gineers Huntsville Center, managers may have overlooked a critical element of what has been dubbed in the popular media as the "Y2K Problem."

"Most of the information available to address Y2K has focused on the obvious computers and communications systems," said Rizvi. "But, it has overlooked the facilities equipment and related systems, which often have computers embedded in their operations. This equipment makes up the life-support systems for buildings and entire installations." And, he added, "If these systems fail, it could have a profound impact on life and safety."

Rizvi is the Huntsville Center's program manager for Operations and Maintenance Engineering Enhancement (OMEE). OMEE is the Department of Defense program for centrally managing operations maintenance support for facilities worldwide. Huntsville Engineering and Support Center is the Technical Center of Expertise (TCX) for the program, and provides support to all services, Army, Navy and Air Force. According to Rizvi, the Y2K problem affects facilities systems because they often implement commands based on date and time. He shies away from using words like "disaster" but, instead, cautions facilities managers not to underestimate the scope of the problem, nor to fall prey to some of the Y2K myths. (See *Myths at left.*)

Examples of facilities systems that may be affected by the Y2K issue include fire/life safety controls, emergency power systems, chillers, boilers, HVAC (heating, ventilation and air conditioning systems), elevators, security systems and electrical demand and load shedding systems.

"Every facility or building is different," explains Rizvi. "For instance, what might compromise safety at a hospital would only be an inconvenience at another building."

These systems often have computers regulating their operation for peak usage times or for maintenance schedules. For example, if the computer "thinks" a maintenance date is overdue, it can shut down the associated system. The result could be an elevator stuck on the first floor or the shut down of a ventilation system in the critical care department of the hospital.

The impact may be as trivial as inaccurate reports or as substantial as the complete failure of one or more critical systems. The differences in the facilities functions and the wide range of facilities equipment and systems makes the problem all the more difficult to tackle but not impossible. Rizvi and his team of operations maintenance experts were undaunted by the sheer scope of the problem at hand. As Rizvi described it, "It is war, and our objective is to develop a battle plan for defeating the enemy."

The result is an approach to the Y2K problem that directly addresses the impact to facilities equipment in six steps. What follows is a summary of the process that is outlined in detail in Rizvi's recently published "Year 2000 Compliance Study."

Step 1. Survey.

Conduct a survey of all facility systems and equipment that use computers or embedded microprocessors. This effort would include everything from reviewing equipment inventory, preventive maintenance lists and vendor service contracts.





Step 2. Identification.

Identify potential building systems or equipment compliance issues. In this step, equipment vendors should be asked for compliance documentation and testing procedures. Rizvi suggests all equipment and systems be "tested" for compliance to ensure that they are just that. If the system tests comply with Y2K, then no further action is necessary. Otherwise, on to step 3.

Step 3. Investigate/Develop Strategy.

In this step, investigate the issues identified through reviews with site personnel and equipment vendors; identify potential impact; develop a strategy for modification or replacement; and develop cost estimate.

Step 4. Funding.

Determine funding strategy.

Step 5. Implementation.

Buy any hardware or software necessary and install.

Step 6. Validation.

Develop testing of building systems and equipment.

While the six steps sound deceptively simple, Rizvi said they provide only a framework for action that requires a great deal of coordination and analysis. And, he added, a certain degree of expertise. That's where the OMEE experts at Huntsville Center can help. "As the Center of Expertise for Operations Maintenance, we can act as a consultant, if you will, to help facility managers move ahead on this issue," said Rizvi. "And, move ahead they must because the 'clock is ticking,'" he said. "We are in a time crunch now with some of the critical dates approaching in 1999."

Initially, the Y2K problem was expected to be only a two digit versus four-digit recognition problem that would occur solely on January 1, 2000. Now, a series of dates have been identified that could cause problems before and after the January 1, 2000 date. The earliest date, said Rizvi, is September 9, 1999. Why? Some programmers stored error codes in easy-to-remember locations

such as 9/9/99. To ensure that your system won't be brought to a halt, Rizvi, strongly recommends bringing all facilities systems into compliance by September 9, 1999. That's just one of the Y2K myths that Rizvi debunks in the "Year 2000 Compliance Study." Others include: "all new construction projects will be Y2K compliant" and "if you test individual pieces of equipment, it's not necessary to test the entire system."

Besides explaining away those myths, Rizvi and his team can help facilities managers through each step of the survey process and implementation. "We can help as little or as much as needed," he said. For those who want to read more about what Rizvi's team proposes in the six-step process, the "Year 2000 Compliance Study" outlining the process in detail is available on the Web at www.hnd.usace.army.mil/omee/y2k.htm.

POC is Tahir Rizvi, program manager for Operations and Maintenance Engineering Enhancement (OMEE), Huntsville Center, (256) 895-1532. **PWD**

Linda S. James is a public affairs specialist at the Huntsville Center.



Hunter Army Airfield's new Arrival and Departure Control facility is scheduled to be finished this August. It will contain areas for showers, cot storage and sleeping, and food preparation. (Photo by Jonas Jordan)

Savannah builds up Army airfield capabilities

by Verdelle Lambert

Hunter Army Airfield is a small installation situated on 5,400 acres in southwestern Savannah, Georgia. It is a sub-installation, part of the Fort Stewart/Hunter AAF complex, but it plays a big role in the nation's military defense.

At 11,375 feet, Hunter has the longest runway in the Army. It can accommodate any aircraft in the Air Force, including the C-5A Galaxy and C-17 Globemaster.

"We have the capability to get assets airborne far quicker than anyone else because of our ability to stage," said LTC Carey W. Brown, Director of Public Works for the Fort Stewart/Hunter AAF complex. This capability is critical to Hunter's role as a Power Projection Platform, allowing it to provide rapid armored-force projection to an area of operation. This means that Hunter is able to deploy not only its own and Fort Stewart troops but also any other military unit anywhere in the world with minimal notice.

Hunter has a troop strength of approximately 4,200 soldiers. It is home to both the 3d Infantry Division units and nondivisional units. The major divisional units at Hunter



are the 3d Infantry Division Aviation Brigade and the 603d Support Battalion (Aviation). Major nondivisional units are the 260th Quartermaster Battalion and the 559th Quartermaster Battalion. Major tenant units include the 1st Battalion, 75th Ranger Regiment; 3rd Battalion, 160th Special Operations Aviation Regiment; and the 224th Military Intelligence Battalion, plus various aviation support elements.

Fort Stewart, located about 41 miles southwest of Savannah, has a troop population of more than 15,800 soldiers. Savannah District supports both installations. Its design program for Hunter currently totals more than \$24 million (includes barracks replacement); construction, \$8 million; and environmental cleanup, a little more than \$1 million.

Major Corps projects at Hunter AAF

Brown lists new barracks, the Departure and Arrival Control Group (DAACG) operations facility, and a new tower as major projects for Hunter. The DPW office will design and manage construction of the tower.

“Fort Stewart and Hunter Army Airfield, in my opinion, have been neglected for a long time because of reduced funding,” said Brown. “We don’t have sufficient permanent facilities or even semi-permanent facilities to meet our needs. We’re still dealing with a lot of temporary facilities built of World War II wood that have outlived their projected usefulness.”

BARRACKS. New barracks for Hunter was one of 145 projects Congress added to the Pentagon’s military construction proposal and one of 107 that survived President Clinton’s line item veto in October. According to

Brown, the \$11.5 million authorized for barracks construction is a drop in the bucket compared to the \$54 million that is needed. “The \$11.5 million will give us space for probably 180-190 soldiers out of a requirement of 860 spaces that we need in new construction,” Brown said. “It does not address our



Fred Gotthardt, project manager, works out of the district’s one-man office at Hunter AAF. Here he inspects structural steel used for the DAACG. (Photo by Jonas Jordan)

need for revitalization of the three pinwheel barracks: that equates to about \$57 million for total revitalization.” The pinwheels are not standard Army barracks; they were built when Hunter was an Air Force base.

Brown said the \$11.5 million has a high probability of being Corps driven. “I don’t have the manpower here within the DPW to take on major projects like that,” he explained. “My operation in construction-inspection is a very small

force that has 250 projects going on simultaneously and only 10 people to keep up with that many different contractors.”

DAACG. “The DAACG operations facility is something Hunter and Stewart have needed for many years,” said Project Manager Frederick Gotthardt, who manages Savannah District’s one-man office at Hunter. “Right now soldiers deploy out of an old World War II hangar.”

The new \$8 million DAACG operations facility has three sections: a terminal, an operations area, and a combined pallet storage and cargo processing area.

“The new facility will be quite an improvement,” said Gotthardt. “It will be 72,000 square feet— large enough to accommodate 4,600 soldiers. The troops will be able to shower, sleep, and eat there.” The terminal will be equipped with shower facilities, cot storage and sleeping areas (should the troops need to stay for an extended period), and a food preparation area.

“We’re approximately 87 percent complete at this point in time,” said Gotthardt, noting that construction will be finished by mid-August 1998. ACC Construction Company of Augusta, Georgia, is the contractor, and VRL Architects of Jacksonville, Florida, designed the facility.

ENVIRONMENTAL CLEANUP.

One of the hazardous, toxic and radioactive waste (HTRW) sites identified by the DPW for cleanup is the fire training pit, where different types of jet fuel were used to start fires that the post fire department then extinguished as part of its training exercise.

“Our HTRW Section did soil borings in the area around the site to pinpoint the extent of the contamination,”





said Gotthardt. "They sent the samples off to the lab for analysis and have provided the analytical data to the contractor. The work calls for removal of aboveground tanks, simulators and concrete. A good portion of the area will be excavated—the contaminated soil hauled off, clean soil brought in, and the area back filled and grassed."

The project began last month and will probably take three to four months to complete at a cost of \$800,000.

TAC SHOP. One of the projects the district completed about a year ago was the \$7 million Consolidated Tactical Equipment Shop for the Aviation Brigade. "We maintain over 500 pieces of equipment— anything that has a wheel," said Chief Warrant Officer Angel Morales, brigade maintenance officer. "I would say that the new shop is saving us about 48 hours per vehicle versus the old shop."

MARINE CORPS RESERVE CENTER. Several months ago the district renovated Hunter's old commissary building for the Marine Corps Reserve Center, formerly located on Wheaton Street.

"We did considerable demolition inside the building, added partition walls, bathroom and shower facilities and totally renovated the interior of the building," Gotthardt said.

"I was very satisfied with the work that Harbor did, and Fred Gotthardt was outstanding as the project manger," said CPT Dan Matthews, inspector-instructor. "He was hard on them when he needed to be and worked with them

Hunter Army Airfield— historical perspective

In 1929 Savannah purchased the 730-acre Belmont Tract belonging to J. C. Lewis for \$35,000 to establish a municipal airport. In September of that year, having constructed a runway and several buildings, the city officially opened the facility that eventually was to become Hunter Army Airfield. Eleven years later the airport was named Hunter Municipal Airfield in honor of GEN Frank O'Driscoll Hunter, a Savannahian and World War I flying ace.

Since its opening, Hunter has gone through many reincarnations: During World War II, it was home to the Army Air Corps. When the facility was returned to the city, many of its buildings were leased to industrial plants; an orphanage was located there and the University of Georgia established an extension campus on

part of the old base. After the reactivated Second Bomb Wing moved to Hunter in 1949, the city and county purchased 3,500 acres of additional land around the base for future expansion to entice the Air Force to stay, later selling the airfield to the federal government for a token payment of one dollar. When the Air Force vacated the base, the Army moved in (during the height of the Vietnam Conflict) and established a flight-training center.

After two years in caretaker status (1973-75), Hunter reopened as a support facility for the reactivated 24th Infantry Division (Mechanized) at Fort Stewart. Today it is a major flight-training center for the Army. It is also home of the U.S. Coast Guard Station, Savannah—the largest helicopter unit in the Coast Guard.

PWD

and got a lot of things done that I think a lot of people wouldn't have been able to do.... This building is very large and very adequate to our needs."

The future

"Sometime the latter part of next year we're scheduled to build a medical/dental facility at Hunter to replace the old facility," said Gotthardt. "We also have a project coming up for an SOF (Special Operations Forces) company administration building for SOCOM (Special Operations Command). Their primary station area is Fort Bragg, but they have a small detachment here at Hunter."

By the year 2000, Brown expects to see the new barracks take shape, the DAACG site finished, the tower completed or in construction, and a commercial contractor han-

dling maintenance and repair of all new family housing at Hunter, including construction of approximately 44 four-bedroom units.

"I would venture to say," summarized Brown, "as money becomes tighter in our civilian budget, we'll be forced more and more to go outside and seek help from the Corps to help solve some of our problems. We'll probably tie into any existing repair contracts or, even more, into their A-E contracts or their in-house capability to do design for us. So I see the Corps becoming quite an active member of the DPW and, who knows, some years down the road it may be more than a liaison person from the Savannah District Corps of Engineers sitting in the DPW office." **PWD**

Verdelle Lambert is a public affairs specialist with the Savannah District Public Affairs Office.

Are you on the *Digest* distribution list?

If not, give Linda Holbert a call at (703) 428-7931 DSN 328.





MEDJOCs—Medical Command's best kept secret

by Anita Horkey

It's one of the best kept secrets in the Medical Command.

And the Corps of Engineers' Fort Worth District would like to change that.

"We want medical facility managers to know that MEDJOCs are an option for minor construction and repair jobs," said the district's Al Khatena.

MEDJOCs—medical job order contracts—are regular job order contracts with a twist. While they use a unit price book to establish competitive, firm-fixed prices and deliver a project faster than traditional design-bid-build contracts, the MEDJOCs have been designed *specifically* for medical facilities with a great deal of input from Greg Christensen at MEDCOM, Mike Sartori at the Health Facilities Planning Agency and Roy Hirschak at Brooke Army Medical Center.

That's good news for medical facility managers, according to Khatena, who heads the district's MEDCOM Support Team which administers the contracts.

"Unfortunately, because of limited resources, the installation Directorate of Public Works can't always provide medical facility managers the level of service they require," Khatena said. "If the DPW can't meet the project's time, cost and quality requirements, the facility manager should consider the MEDJOCs a viable alternative because they've been designed specifically for medical facilities.

"The MEDJOCs' unit price book contains medical-specific items," he explained. "Plus, the contract requires the contractor's key employees have substantial experience in medical facilities work."

For example, the minimum qualifications for the contractor's program and project managers include a four-year degree in engineering, construction or business management. The program manager must have ten years of experience and the project managers five years of experience in medical facility construction, as well as three years of experience in job order contracting.

The project engineer must have a degree in engineering and be a registered professional engineer with ten years of experience in medical facility

construction, while the safety engineer, technical staff, project superintendent and other key employees must all be familiar with medical facility projects.

"When you put all those elements together, it's very hard to find a contractor that has all that," Khatena said. "But we did."

J&J Maintenance, Inc., of Austin, Texas, is the contractor for both MEDJOCs, one that serves the northern part of the United States and one that serves the southern portion. J&J has a national presence with established medical contracts and a proven track record.

"J&J is highly respected in Army medical facilities," Khatena said. "They're willing to go the extra mile. They consider themselves a partner with MEDCOM and will do much of the legwork for the facility managers."

Working with a great contractor is just one of the benefits of using the MEDJOCs, Khatena said. He quickly listed others: Facility managers don't pay a management fee because MEDCOM pays for the Fort Worth District to administer the MEDJOCs ... They also don't pay the nominal work plan cost if the construction is awarded ... The unit price book ensures price stability ... Project execution is much faster than typical design-bid-build, as well as 10-15 percent cheaper ... Construction starts upon award of the task order ... The MEDJOCs provide for a wide variety of projects....

In other words, the MEDJOCs are the ideal augmentation to the DPWs for projects in the \$25,000-\$2 million range, Khatena said. Others agreed.

Katrina Gregory, facilities manager for Blanchfield Army Community Hospital at Fort Campbell, has used the MEDJOC (south) on two projects: reroofing a dental clinic and renovations in the radiology department.

"The product we got was excellent," Gregory said. "We're very happy with it."

Gregory said the contractor worked well with the hospital staff, was ex-

tremely cooperative and did the necessary coordination. "Both buildings were occupied at the time, and

they ran 100 percent while they were doing the work," she said.

Hirschak, facilities manager for Brooke Army Medical Center and facility director for the Great Plains Regional Medical Command, is using the MEDJOC (south) for an interior classroom addition, climate-controlling two warehouse bays, renovation of restrooms and replacing two elevators in barracks, and installing a secondary main waterline for the medical center.

He said he's satisfied with the timeliness and quality of the work performed, and has, in fact, received compliments on the new waterline from some of the local DPW employees.

While the MEDJOCs' price book "makes things cut and dry," the MEDJOCs' greatest appeal is the medical experience of the contractor, Hirschak said.

"The beauty of this is it's more geared to medical," he said. "In the medical world, you have a problem with timeliness and you have to be aware of the environment. If you do something like turn off the electricity, you could affect someone's life. Having a contractor familiar with medical work is good."

Tom Dimmer, facilities manager for Darnall Army Community Hospital at Fort Hood, said he recommends using the MEDJOCs for two reasons: the contractor and Fort Worth's MEDCOM Support Team.

J&J provides a "good, qualified, dedicated effort and are familiar with the complications of working in a medical environment," said Dimmer, who's used the MEDJOC (south) for minor construction within the hospital as well as a small renovation project and a parking lot expansion at troop medical clinics. "It's a mechanism for a quick turnaround. The Fort Worth team understands our need for good responsiveness and they're supporting us real well with that."

Obviously, the MEDJOCs are not the solution for every project.

"The facility manager has to take it





Full-service engineering support is lifeblood of Europe Region Medical Command

by Torrie McAllister

For Europe Region Medical Command facilities, engineering is a matter of life and death.

"If an oxygen system in surgery fails and the built-in alarm doesn't go off because there is a simultaneous circuit failure at an outlet, brain damage occurs within eight minutes. For us, preventive maintenance is like preventive medicine. It's vital for our patients' well being," explains Jim Medbourn, Facilities Chief for Medical Activity Wuerzburg.

"If there were a death at the hospital that wasn't attributable to sickness, natural causes or injury, investigators would

be quick to inspect the facility operations and activities of the engineers," he said.

For Medbourn, "engineers" means a partnership forged between his Facilities Branch staff, the Corps of Engineers and contractors that the Corps manages. They ensure that whatever engineering contingency arises, 67th Combat Support Hospital is prepared.

"Medical Command focuses on total life cycle facility management," Medbourn, a former Wiesbaden Deputy DPW, said. "These are the most technically intensive facilities I've encountered in my career. Medical accreditation from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) depends on the engineer's ability to prove we've systematically handled preventive maintenance, repairs and systems improvements."

With the hospital and 39 medical, dental and veterinary clinics scattered from Bamberg to Bad Aibling, the Wuerzburg Medical Activity has an in-house staff of seven preventive maintenance and project managers who plan, program and organize the work.

They rely on the Corps of Engineers for technical expertise and to cost effectively and efficiently match up contract methodologies with engineering problems. In many cases, this means synchronizing the activities of several contractors to keep project sequences and hospital operations flowing smoothly.

For example, a JOC contractor may be doing asbestos abatement at the same time that the Medical Remediation contractor is renovating the psychiatric clinic. All the while, the Operations and Maintenance Engineering Enhancement (OMEE) contractor is working preventive maintenance on utility systems. Their efforts have to be coordinated to minimize the impact on doctors and patients.

Europe District Project Engineer Steve Mlecik works in Medbourn's office, shoulder to shoulder with the Wuerzburg Medical Activity staff. Mlecik works with the OMEE contractor and is the contracting officer's rep-

resentative (COR) for the Medical Remediation Contract. He works with the medical staff to develop scopes of work and prepares the delivery orders and government estimates. He manages and inspects projects, and documents preventive maintenance. He also taps the services of planning, design and environmental experts at District Headquarters in Wiesbaden for support.

Europe Region Medical Command now taps the Corps of Engineers for full-spectrum engineering support for all medical facilities in Germany. Europe District has collocated a project engineer at the Landstuhl and Heidelberg Hospitals in addition to Wuerzburg. They serve as the MEDCOM facility managers' single point of contact for the Corps.

At Europe District headquarters in Wiesbaden, Doug Baird is the Medical Facilities Program Manager. He works with the Europe Region Medical Command Engineer MAJ Guy Kiyokawa and his staff coordinating medical projects. Europe District's medical support to the ERMIC program currently includes 70 projects in design or construction.

At the Landstuhl Regional Medical Center, Facility Manager CW3 Mike Arseneau and Corps' Project Engineer Robert Steen worked together to award over \$1.7 million in projects and delivery orders for FY97. Arseneau has 24 outlying clinics in Germany and is also responsible for clinics in Belgium and Italy.

A \$2.5 million renovation of the health clinic at Baumholder is currently under construction—the second phase of a three phase improvement.

"One of our special engineering challenges is project phasing," Kiyokawa said. "We have never closed our medical operations. We carefully phase projects in stages that allow us to transition clinics, patients and equipment into different parts of the facility as needed. We start working transitioning issues early in design because it affects the entire life of a project."

(continued from previous page)

on a case-by-case basis," Khatena says. "They have to ask, 'Can the DPW provide the level of service I require? Would another type of contract work better?' But in most situations, the MEDJOCs are the perfect answer."

And that's the message Khatena is spreading. He's pitching the MEDJOCs to all medical facility directors and managers who will listen.

One of them is Barney Richmond, facility director for the Western Regional Medical Command. Richmond is using the MEDJOC (north) at Madigan Army Medical Center for an elevator renovation project after hearing Khatena's strong sales pitch. While the work plan has just been developed, Richmond has high expectations.

"This is going to work well," Richmond says. "I know you have a good contractor. I know J&J and the quality of their work. I also know the people involved, and they wouldn't let it work any other way."

☎ POC is Al Khatena, chief, MEDCOM Support Team, (817) 978-3032. **PWD**

Anita Horkey is a public affairs specialist at the U.S. Army Corps of Engineers Fort Worth District.



DeCA strives for state-of-the-art U.S. grocery stores for Europe

by Torrie McAllister

Italy is the latest beneficiary of the Defense Commissary Agency's major initiatives to put commissary shopping in Europe on a par with major American grocery stores.

The 22nd Area Support Group broke ground on a new store in February, and construction on a new store for Aviano is also scheduled in March.

A new \$15 million store in Mannheim should be ready for shoppers by summer and a new commissary for Heidelberg is under design.

"I think you will like it," Mr. Robert Tate, Director of the European Commissary Region, told the Vicenza community who gathered to launch the \$6.6 million project. "Your new store will be two-thirds larger than the current store with double the sales area. We've also included the latest in state-of-the-art meat, produce, and hot food deli sections. The hot food deli will feature fresh cooked meals for busy families to take home and warm up in the microwave. We want to offer you the type of pasta, salad bar, cafe and bakery items shoppers find at Albertson's and other major grocery store chains back home."

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At Heidelberg, Facilities Manager CW2 Tom Black and Corps' Project Engineer Mike Coggin developed over 40 delivery orders for nearly \$1 million in repair projects. Heidelberg has 23 outlying clinics.

"We are currently working on a design to dramatically improve the quality of care environment for patients in our major outpatient clinics," Black said. "We are completely renovating Building 3617. We will be realigning functional relationships between the clinics to enhance efficiency and modernize the standard of care."



A groundbreaking ceremony was recently held for a new commissary in Vicenza, Italy, scheduled to open Fall 1999. Joining forces to celebrate are (from left to right) Europe District Commander COL Mike Barry, 22nd ASG DPW Dave Thomas, Corps of Engineers Italy Resident Office Engineer CPT Craig Magerkurth, DeCA Europe Director Robert Tate, and Vicenza DeCA Europe Deputy Patrick Nixon.

The new Vicenza Commissary is scheduled to open its doors in fall 1999. In addition to building new commissaries, DeCA has a major program to improve many older commissaries in Europe.

DeCA is currently investing \$12 million to modernize commissaries in Europe over the next two years. Renovations are in the works for Ansbach, Baumholder, Grafenwoehr, Sigonella, Rota, Incirlik and Izmir. New refrigeration systems are being designed for Menwith Hill and Alconbury in the United Kingdom. Smaller improvement projects such as roofs and floors are being done at many other stores.

"Europe was ignored during the drawdown and our older facilities deteriorated. Now we are seeing a buildup of investment," said Rick Westmoreland, DeCA Europe Region Engineer.

Europe District has also developed OMEE hospital maintenance contracts for the Air Force for hospitals in Frankfurt, Germany and Incirlik, Turkey. Current efforts are underway to develop an OMEE contract for Army facilities in Italy.

All maintenance, repair and modernization projects are aimed at improving the quality of care for the military and their families in Europe and are part of Europe Region Medical Command's Facilities Master Plan. **PWD**

Torrie McAllister is the public affairs officer for Europe District.

"We are expanding sales areas, changing layouts, and creating hot food carry out and deli areas wherever possible," he said. "We are improving operations and replacing old equipment. We want to give shoppers what they see in the States, even in our older stores."

"DeCA is taking a very consumer-oriented approach to updating sales areas, said Otto Schick, the DeCA Program Manager for Europe District.

The Corps of Engineers' challenge is to minimize disruption to DeCA customers and keep the design and construction process as quick and economical as possible," he said. "Military shoppers come here with expectations based on their stateside experience. DeCA needs a flexible architect-engineer firm that can quickly adapt U.S. commercial retailing design concepts to the European environment. A German design manual to expedite their renovation and construction programs is one of our top priorities."

Commissary shoppers pay 5 percent of their food dollar for improved store facilities and equipment.

"This is your store," Tate reminded Vicenza shoppers. "You've paid for it. We're just the managers. We're proud to be able to give it to you."

COL Charles Munson, Commander of the 22nd ASG, said the new commissary starts a significant journey in improved quality of life and readiness for the command. "This construction is an example of what is possible when two countries, the U.S. and Italy, cooperate in a construction project," he said. **PWD**



New Air Force entertainment center sets pace for NAF

by Torrie McAllister

Europe District helped Commander COL Scott Gration, and the 39th Wing unveil the future of non-appropriated fund (NAF) family entertainment at Incirlik Air Base on March 6.

Air Force families celebrated the double grand opening of two, new state-of-the-art facilities—a \$2 million Magic Carpet Bowling Center and Family Center, and a \$2 million American Youth Activities Center.

“Air Force leadership has a long standing commitment to quality of life,” COL Gration told families who gathered for a Spring Fling Family Thing Day, that closed the base early to celebrate the community milestone. “Today we open two new facilities illustrating that commitment. You will get to enjoy what our predecessors envisioned as these buildings were programmed, planned and funded over five years ago.”

Located across the street from each other, and within a block of the swimming pool, mini-golf and base theater, the two new facilities are the centerpiece of a recreation hub for the American community.

The Magic Carpet Bowling and Family Center is the first of its kind for NAF but probably won't be the last. USAFE Director of Air Force Services Arthur Myers predicted that Incirlik's family entertainment center concept will set a new trend for NAF worldwide.

What began as a bowling center was redesigned into a family entertainment center that features something for everyone. In addition to ten lanes of bowling, it offers a TV sports bar with disco, a family snack bar and an indoor playland for children.

The Family Center replaces the dilapidated old bowling center which was plagued by electrical, heating and cooling problems. Mold and moss grew on the walls, and deep indentations from

years of bowling marred the lanes.

On the lanes, bowlers can observe themselves to improve their technique with video bowl, or tune into the closed-circuit TV to watch their children in the playroom.

Older children can amuse themselves with more than a dozen video games. A lane-side food service allows teams to order food electronically and receive a message when their order is ready for pickup.

“We really wanted this to be a family place,” said P.J. Beaulieu, the Family Center manager. “People like bowling but young families find it hard to come if there is nothing for the children. Now they can tell the kids ‘go crazy in the playroom,’ while the adults have fun too.”

Europe District architect, the late Semih Akyol, and the Turkish A/E Altan-Tuncer, designed the Magic Carpet Bowling and Family Center, reflecting Europe Services Squadron Commander Kent Sjoland's vision of family recreation.

The American Youth Activities Center is also state-of-the art. It replaces a facility built over 30 years ago, long before the Air Force set standards for youth facilities. It is twice the size of the old center and offers twice as many activities.

Special areas were designed for the teen center, a school-age after school program, structured recreation and social activities, as well as programs for the Boys and Girls Club of America.

The gym floor doubles as a skating rink and there are separate rooms to accommodate the special needs of music, computers, arts and crafts, dance, gymnastics and martial arts. New playgrounds are being added this summer.

Corps of Engineers Project Engineer Daniel Brueggenjohann led the efforts of Europe District and the TUSEG area office working with the Turkish construction Firm Kuliak to complete both projects on time and within budget. Oryal Aktasli was the Corps' project manager. **PWD**

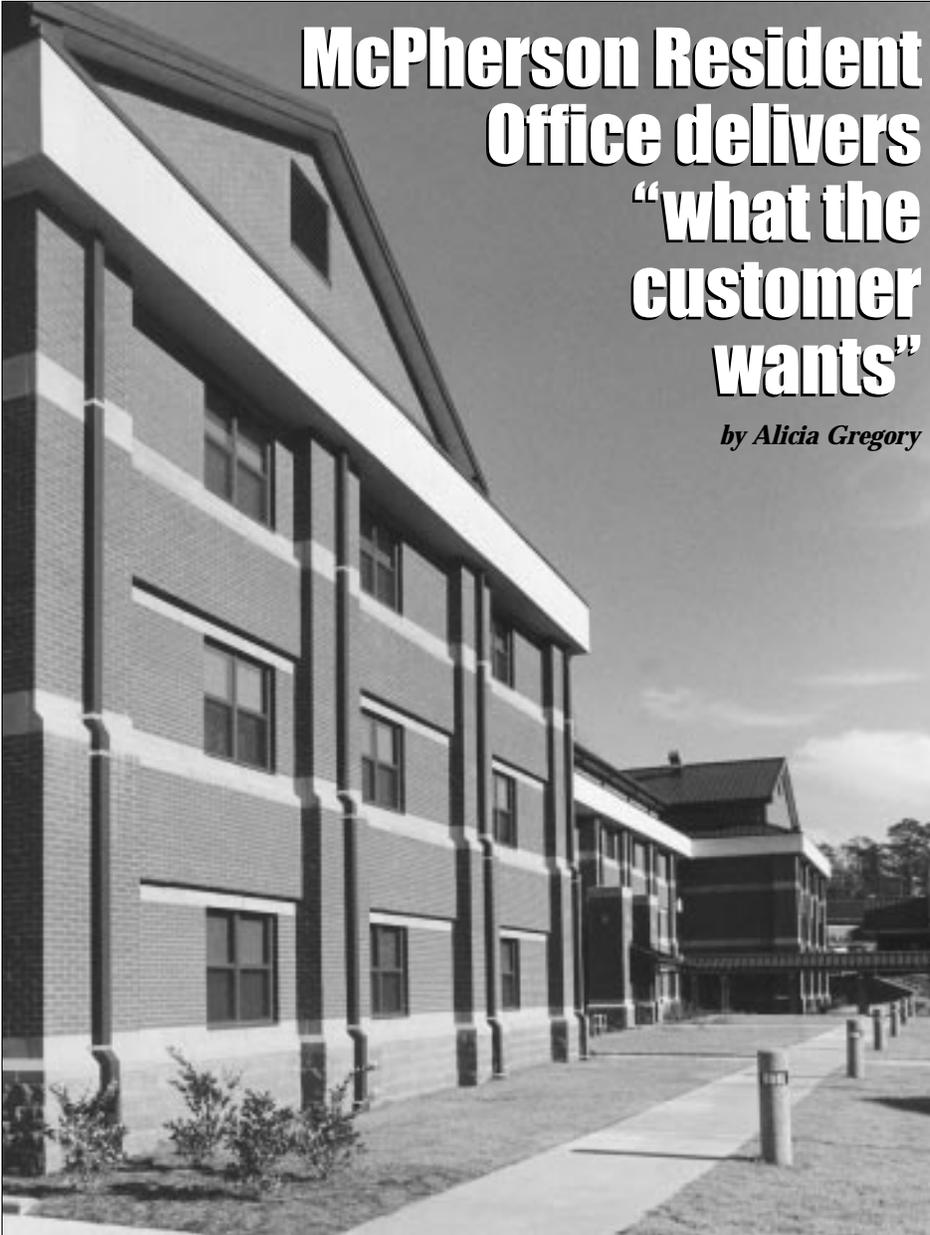


39th Wing Commander Col. Scott Gration rolls out the first bowling ball to open the Magic Carpet Bowling and Family Center at Incirlik Air Base. (photo by Torrie McAllister).



McPherson Resident Office delivers “what the customer wants”

by Alicia Gregory



The Audie Murphy barracks incorporates the Army’s “one-plus-one” standards to provide a better quality of life to McPherson’s single soldiers.

Although small in area, Fort McPherson and its sub-installation, Fort Gillem, provide support to some of the most significant organizations in the Army.

Both installations are located just outside Atlanta, Georgia. Fort McPherson is situated on 487 acres and is home to Forces Command (FORSCOM) headquarters—the Army’s largest major command— U.S. Army Reserve Command (USARC) headquarters, and the Third U.S. Army headquarters. Fort Gillem occupies

more than three times the acreage of Fort McPherson. Its tenant organizations are the Second U.S. Army headquarters, the U.S. Criminal Investigation Command (Third Region) headquarters, the U.S. Criminal Investigation Laboratory headquarters, U.S. Army Second Recruiting Brigade, and the Army and Air Force Exchange Distribution Center.

“We have just completed more than \$60 million in projects, and future projects at both McPherson and Gillem total more than \$5 million,” said Harry

Ike, resident engineer at the district’s Fort McPherson Resident Office.

The McPherson Resident Office supports construction at Fort McPherson, Fort Gillem, Camp Merrill, and Army Reserve centers in north Georgia. The office was established when construction began on the Forces Command Headquarters building in 1983 and consists of six full-time employees, with support as needed from the Robins Air Force Base Resident Office. Ike has been the resident engineer since August 1997.

“This is the place where the action is,” Ike explained. “Decisions must be made quickly.” Ike thrives on the fast pace, and there is a sense of family between the team members in this small field office. “The success of any resident office is totally dependent on the people working there,” he says, “and I have very talented people here.”

Ike’s relationship with the contractors is effective, and he also has a special kinship with them, having been a private contractor himself. “The contractor is out there trying to do a good job while making a profit,” Ike said. “It can be frustrating at times for both the contractor and the customer; my job is to work with both to produce a quality end product.”

The U.S. Army Reserve Command and Control Center, which was turned over to the command last September, is a project that has exceeded the customer’s expectations. Designed in less than a year, the facility won first place for building design in the Public Works building category from the Georgia chapter of the American Concrete Institute. The design was also nominated for an award in the Corps of Engineers Design and Environmental Awards program. The \$29 million building has more than 220,000 square feet on its five floors and houses approximately 850 military and civilian employees and has a three-story, 600-car parking garage.

The resident office recently turned over two other projects: an \$11.3 million medical/dental clinic and the \$25.7 million Audie Murphy Barracks.

Also completed were the \$4 million family housing project in Dahlonega, Georgia (for Camp Merrill soldiers and their families), and a \$1.5 million up-



Left: The recently completed Lawrence Joel Health and Dental Clinic offers a state-of-the-art outpatient treatment facility for the McPherson military community.

Below: Features, like this spiral staircase, are one of the reasons the USARC building's design won first place from the Georgia Chapter of the American Concrete Institute and a merit award in the 1998 Chief of Engineers Design and Environmental Award Program.



Above: Steve Browning, Jr., superintendent, Conner Brothers Construction Co., Inc.; Jack Shupp, Ft. McPherson's master planner; LTC Robert A. Dunn, director, Directorate of Installation Support; and Harry Ike, resident engineer at the district's McPherson Resident Office, review modifications to the Audie Murphy barracks complex dining facility.



More than 800 civilian and military employees moved into the \$29 million U.S. Army Reserve Command (USARC) building last September.

(Photos by Jonas Jordan)



Corps' Huntsville Center establishes Indoor Air Quality Program

by Kimberly Speer

The health and safety of soldiers and civilians in the workplace is affected by many different factors, but one of the most significant is indoor air quality. According to Robert Olcerst, Ph.D., of Brujos Scientific Inc., the problem is so significant that it could become "the liability of the 90's for mechanical engineers, tenants, and building owners."

For government and military facilities, indoor air quality is a particularly vexing problem. Limited operation and maintenance funding, and government agency lease agreements may make proactive improvement measures difficult, but the investment can result in substantial cost savings, and can increase productivity and ensure the health and welfare of workers.

In fact, money spent to improve indoor air quality can have a significant return on investment. A "sick" building may decrease productivity and increase absenteeism because of poor environmental quality. But conversely, an indoor air quality improvement that results in an increase in productivity of only 15 minutes per day can save organizations a substantial amount of money. Just imagine the dollars lost each day to employees distracted by cold, heat, stuffiness, odors, headaches, itchiness, or other uncomfortable malady contributed to by poor indoor air quality.

The cost of designing a good system is much less than correcting a poor one. In fact, "The cost of 'fixing' a sick

building can far exceed the initial construction cost," said Dr. Olcerst. He stated that in some recent projects involving "sick buildings," which required major design and maintenance improvements to bring the indoor air quality up to habitable standards, the cost to correct the Heating, Ventilation, and Air Conditioning (HVAC) system exceeded the initial cost of constructing the entire building.

But government agencies may have some cost-efficient alternatives and options to consider to ensure design and maintenance standards are met. The U.S. Army Corps of Engineers has traditionally handled such functions and, together with its mechanical engineering skills, experience with large-scale projects, and remediation capabilities, it can provide various mechanisms and options for construction and maintenance.

To support the Corps' geographic districts, or to perform work outside of their capabilities and scope, the U.S. Army Engineering and Support Center, Huntsville has developed an Indoor Air Quality Program.

The program operates under its Operations and Maintenance Engineering Enhancement charter, and offers the

proper personnel, equipment and contract vehicles to provide complete indoor air quality services including HVAC evaluation, test and balance procedures, commissioning services, design evaluation and modification, and identification of proper maintenance procedures.

Huntsville's competitive engineering services are geared toward the rapid response required by indoor air quality problems. "We have an experienced team that includes mechanical engineers, safety engineers, industrial hygienists, project managers, and contracting specialists," said Alicia Allen, Program Manager, Huntsville Center.

The Corps of Engineers uses the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Standard 62-1989, Ventilation for Acceptable Indoor Air Quality, which is accepted as an industry standard for design and construction projects.

"The potential need for this program in the future is great. Driving forces such as professional standards, and the increasing emphasis on the health and productivity of the workforce, and the potential for litigation make indoor air quality an issue for the 90s. The time to prepare is now," noted Allen.

POC is Alicia Allen, program manager, (256) 895-1552. **PWD**

Kimberly Speer is a public affairs specialist at the Huntsville Center.

(continued from page 10)

grade to the water treatment plant at Camp Merrill, which includes a 300,000 gallon water-storage tank.

New military construction projects in the works include the \$3.1 million Military Entrance Processing Station (MEPS), located at Fort Gillem, and the \$3.8 million Combined Club for officers and enlisted soldiers at Fort McPherson. The Combined Club is a shared design/build project between the Savannah District and the Seattle District, with the Savannah District performing quality assurance on the project.

Military construction projects aren't the only projects ongoing. "We recently started working on a \$500,000 Energy Conservation Improvement Program to replace lights in several of the installation's buildings," said Ike.

"Customer service is very important to us," Ike continued. "To ensure we give the customer what he wants, we keep in constant contact and have established good working relationships with the Directorate of Installation Support and the users."

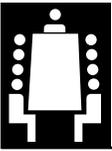
According to Dunn, that relationship has been successful. "I am pleased

with the commitment the district has shown," he said. "We have developed a strong partnership and, hopefully, will be co-located within the next few years.

"We are all part of the same engineering team," concluded Dunn. "It takes dedicated project engineers, good contractors, and our partnership with the Corps to produce success.

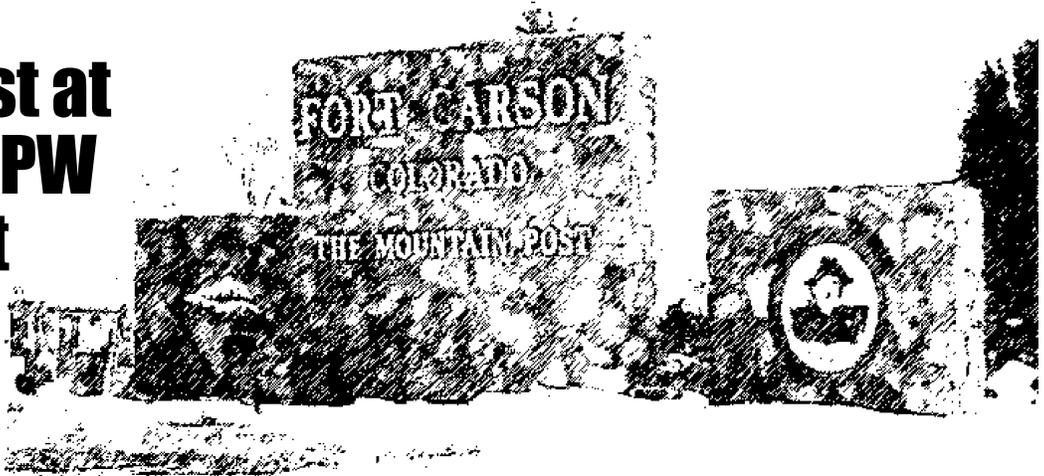
POC is Harry Ike, Resident Engineer, (404) 464-2303. **PWD**

Alicia Gregory is a public affairs specialist at the Savannah District Public Affairs Office.



Mountain post at pinnacle of DPW management

by Penelope Schmitt



“There’s gold in them hills . . .” in the form of superb DPW business management

practices. In the shadow of Cheyenne Mountain, at Fort Carson, Colorado, morale, team spirit, innovative thinking, excellent design, top notch contract management, and the best of traditional DPW work management all conspire to put the installation at a pinnacle of quality.

Ten years of contracting out

While many installations are gearing up to fight the A-76 battle with an in-house work force and no experience of contracted operations, Fort Carson has a decade of know-how in the bank. Deborah Duncan, Deputy DPW at the Mountain Post, is most concerned about getting the solicitation just right—not about life after A-76.

“Once you get through the initial pain,” Duncan said, “there are many advantages. With no in-house blue collar work force, we have very few federal union issues. We have no hassles with a Civilian Personnel Office. We are totally flexible. We can move to a new project whenever we’re ready. Need 10 new guys tomorrow? If we can pay for it, we can have it.”

“Part of what makes this work is, we have a great Directorate of Contracting here, and we work well with them. We are not on our first contracted operation, but we are working on the solicitation for our third contract. I also have done a lot of contracting work myself. This is not a job where you can just think of yourself as an engineer. You have to be seeing yourself in charge of a business. I’ve gone to the videoteleconferences on Acquisition Reform. I know about the rules and how they work.”

“We’ve been at a most efficient operation for quite a while,” Duncan said. “We have 65 people in our Fire Department, we have a cadre of 95 others—engineers and architects who do our design, contract management personnel, and business management and planning personnel. That’s about it.”

Fort Carson’s DPW has learned how to make the most of the contract relationship. “We now have a cost plus contract. The contractor is doing about \$12 million a year in Service Orders, pervasive maintenance, utility operation and grounds management,” Duncan reported. “They also do preventive maintenance on utilities.” Quality Assurance on service orders is done by one staff member through random sampling and checking.

“We have a few things we want to do better in the next round,” Duncan said. “This contract—our third—will be pretty much an oral solicitation. This time we want to fine tune the language. We want better performance by the contractor in supplying data that works properly with government automated systems. We want to challenge some of the standards we’ve had—like why is 30 days an acceptable time to complete a service order?”

Traditional tools still work

Part of the installation’s effectiveness comes from planning and tracking work meticulously. “I was tremendously impressed to see that Fort Carson still does a complete Component Code Inspection,” said Pete Sabo, CPW’s Director of Facilities Management.

“If this is a business, I’m the CEO,”

Duncan responded. “I want an Annual Work Plan that makes sense and gives me concrete evidence that we are executing the right things. ISR (the Installation Status Report) is a good tool for units, but it’s pretty generalized. Wouldn’t want to rely on it totally as an indicator. In fact, we do a lot of Quality Control on that to make sure the inspection results make some consistent sense.”

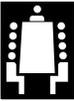
Duncan sees the more detailed Component Code Inspection as a key to credibility with her commander. “It enables us to make a concrete Annual Work Plan, to report against that work plan, and to prioritize our unfunded requirements. The Garrison Commander and the Commanding General pay attention!”

Holding onto Design

While many DPWs have seen design as a good candidate for combining forces with Engineer Districts, Fort Carson has preferred to hold this capability in house—at least for now. “Architect/Engineers just don’t get rich on us,” Duncan said. “We have the cadre to a minimum—one of everything: civil, structural, mechanical, electrical and architectural. We do \$15 to \$20 million worth of design a year. It’s a business strategy for us. While other installations are asking for design funds to support a special program, we are ready to obligate because we have used in-house design resources.

Regional contracts

Building on their excellent DPW-DOC relationship, Fort Carson has launched a number of joint-service regional contracts—“Purplesavers”—for Job Order Contracting, ▶



Purplesaver contracts

by Penelope Schmitt

“We’re blurring those boundaries!” said Deborah Duncan, the Deputy DPW at Fort Carson. She was speaking of the “uncrossable” lines between military services.

The logic of economics broke barriers between Army and Air Force partners in the Rocky Mountain region, as they joined up to award regional contracts for refuse removal and disposal, paving and Job Order Contracting.

“It just makes sense to set up geographic regional partnerships,” Duncan said. Fort Carson is working with the Air Force Academy, Falcon Air Force Base and Peterson Air Force Base. There’s nothing “green” or “blue” about the tasks these installations selected for partnering:

Taking out the trash— Their first success was a regional refuse contract set up according to commercial industry specifications. “We inserted government boilerplate in the Air Force Academy section of the contract,” Duncan said. “We were interested to see if it costs us any more. Surprisingly, commercial

specifications with government boilerplate generated the same level of savings as straight commercial specifications. The contract savings emerged at \$60 to \$70 thousand for each partner.

“We put together a solicitation that could be awarded in several ways. Businesses could bid on refuse management for one installation or for all, or for any combination. Each installation awarded an individual contract off one solicitation and each installation saved about 25 percent on their refuse management costs.”

Fixing the potholes— The Purplesaver paving contract is set up in a different way. “We let one contract, against which all participants— this time excepting Peterson AFB— can make delivery orders. There is some negotiating with this one. We have to work out among ourselves to prioritize whose

projects go when,” Duncan said. Sharing the cost of administering a single contract among four installations cuts way down on overhead. The efficiencies make any scheduling challenges well worth the time.

Tackling minor construction— All five installations participate in the two Purplesaver JOC contracts. “These are 8A type contracts,” Duncan explained. “There’s a \$50 million maximum on each. That gives us all plenty of room to work.”

Doing more with Purplesaver— Duncan sees regional interservice contracting, the Purplesaver way, as an excellent option for other aspects of DPW management. “We could use this to lease and manage heavy equipment, accomplish housing referrals, or do custodial services,” she said. “These are all things that lend themselves to reasonably uniform scopes of work, and— especially in the equipment management area— they show great promise for getting economies of scale.” **PWD**

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solid waste management, and paving. Duncan sees further potential in the areas of equipment leasing and housing referral. (See related story above.)

Working with the Corps

Duncan showed interest in some of the regional work management options opening up with the Corps of Engineers. “We beat the Corps to it when it came to establishing a ‘forward presence,’” Duncan said. We did it the other way around— by putting one of our folks forward with them. My staff member, Warren Beiby, does a fantastic job of interfacing on Corps-related projects. Instead of accepting a Corps forward assignment when the District proposed it, we have chosen to use the funding designated for that position to support Corps projects being done here at Fort Carson. Because we have Warren and he’s so well read-in, the money

is worth more to us.”

Collocation initiatives with Omaha District will probably move forward over the next two years. “We foresee at least a 10 percent cut next year,” Duncan said. “I have been managing our vacancies very carefully to give us the most possible flexibility to meet that. But further pressure on our already MEO-slender organization probably means deciding which *functions* we won’t do any more— not salami slicing. The Corps may be our best option when it comes to finding another source for specialized functions. Also, plans are underway to consolidate the Fort Carson Area Office within the DPW.

Changes on the way

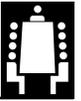
Up to now, the installation has been able to maintain control of its destiny through a variety of flexible moves. “We’ve managed vacancies carefully,” said DPW Dennis Fontana. “We know it makes sense to wait, to reorganize

ourselves if we need to make the best use of the terrific staff we have. That’s been done several times. We’ll do it again next year.”

Taking control with tailor-made responses to problems is characteristic of everyone here from the Fire Department to contract management. (See stories on pp.27-29.) The Defense Department’s serious look at privatizing Army family housing started here, with what the installation called an “Affordable Housing Initiative.”

Some of the initiatives have worked well, and will keep on working. Others are running against the walls of massive downsizing and legal challenges to the installation’s Commercial Venture Initiative for housing. The next two or three years will see Fort Carson through some major changes. This creative and innovative DPW is one to watch! **PWD**

Penelope Schmitt is the chief of CPW’s DPW Liaison office.



POAs of installation support

by Justine Dodge and Jean Bahen

Today's ideas spell the future for tomorrow's Directorate of Public Works at the Rock Island Arsenal.

The team forging the future of the DPW is creating a Plan of Action (POA), which uses creativity and innovation to determine the operating procedures of tomorrow's DPW.

"The POA is a working document and will become the book of standard operating procedures for running the DPW test," said Dan Holmes, resident liaison officer and DPW program manager.

The POA is the latest step in the partnership between the Rock Island District, Corps of Engineers and the Rock Island Arsenal's DPW. This partnership is part of a two-year test under an Army initiative called Functional Area Assessment, Issue 7S. Its purpose is "to obtain maximum benefit from Army engineer resources," said Holmes.

The formal test begins at the Arsenal in October of 1998 and involves the

transfer of all installation support activities from the Arsenal to the Corps of Engineers. If everything goes well, the transition will go so smoothly that customers will not notice the difference, said John Ruble, operation maintenance public works project manager. The purpose of this test is not to change the services provided to Arsenal customers by the DPW, but to improve the efficiency of those services, said Holmes.

"Day-to-day implementation of the test is guided by a POA," said Holmes.

"This is a working document that is 225 pages and growing. It is changing and living, it will present and record how the process is occurring."

The POA examines each functional area of the DPW and determines how to "prevent duplication and improve efficiency," added Holmes.

It will present concrete methods for



Rip-rap is placed in an asphalt parking lot to prevent further erosion from run-off water.

the test and the procedures to measure the success of the project.

To ensure the test goes smoothly, 15 joint organizational working committees and 12 technical committees were created to oversee the effectiveness of the partnership. Monthly Joint Commander Reviews will monitor the program to ensure that it meets Army test objectives.

The team has set forth guidance on one innovation already. Contract acquisition procedures at the Arsenal have been streamlined. ➤

"Making it work"

Day-to-day implementation of the test at Rock Island Arsenal is guided by a Plan of Action (POA). The POA uses the general goals of the Memorandum of Agreement and documents the development of the test details. A working plan, the POA is updated frequently.

Sections of the Plan Of Action

- Goals and Test Objectives
- Existing Public Works Services and Organizations (Pre-test)
- Existing District Organization and Support Capabilities (Pre-test)
- Organizational Partnership Strategies
- Technical Strategies
- Performance Measurements/Metrics
- Partnership Summaries (Transition Schedule)
- Memorandum of Agreement

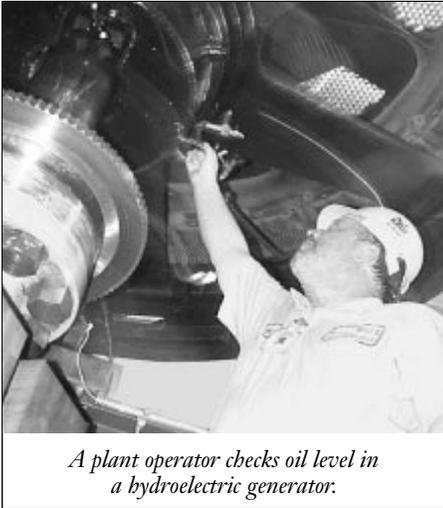
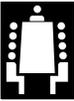
Organizational Partnership Strategies

- Command and Control
- Residual Public Works Engineer Support
- District Public Works Organization (Alignment of PW and District)
- Contracting Options and Schedule
- Contract Management
- Counsel Support
- Human Resources Considerations
- Information Management Support
- Logistics Support
- Public Affairs Support
- Real Property Considerations
- Resource Management Support
- Safety Considerations

Technical Partnership Strategies

- Engineering Operations
- Environment, Natural, Cultural Resources Support
- Engineering, Plans, Services
 - Project Reviews and Approvals
 - Drawings
 - Job Order Contracting
 - Specifications
 - Geotechnical
 - Cost Engineering
- Department of Public Works Logistics
 - Coal Purchasing and Management
- Utilities
- Buildings and Grounds
- Fire Prevention and Protection
- Administrative Functions
- Engineer Resource Management

PWD



A plant operator checks oil level in a hydroelectric generator.

The DPW used to function with five contracting acquisition offices—this has been reduced to two. By reducing the number of contracting organizations that support the DPW, we have eliminated layers and simplified procedures, saving both time and money, said Holmes.

Another benefit of the partnership has been the placement of contracting officers directly in engineering offices, said Ruble. This speeds up the contracting process by allowing direct contact on a daily basis, he said.

The POA is outlining a procedure for streamlining contract administration and project management, said Holmes. (See article "Making It Work" on p.15.)

If this test proves successful, the future of installation support may change for the entire Army. Based on the results of the Arsenal test, the Corps' military support mission could expand to encompass installation support for all Army facilities.

"It is our goal to provide this service (installation support) at a competitive price through a highly skilled, motivated and trained workforce," Holmes said.

POC is Dan Holmes, Resident Liaison Officer and DPW Program Manager, (309) 782-1067. **PWD**

Justine Dodge and Jean Baben work in the Public Affairs Office at Rock Island Arsenal, IL.

Reform, transform?

by Karl Thompson

Today, more than ever before, we face a blitz of reforms that involve new legislation, new contract vehicles, and new business practices. One reform that has had a heavy impact on the Engineer community is Acquisition Reform (AR), although I prefer to call it Acquisition Liberation. Through AR, we are seeing significant savings, reduction of paperwork, and less of the dangling strings that normally accompany changes of this magnitude.

Acquisition Reform is simply getting rid of non-value added processes. This requires a team effort and participation from all concerned parties, with everyone having a vested interest. Furthermore, we can no longer afford to simply measure in short-term dollar savings. Historically, we have relied on cost-based contracts tailored to actual or projected cost of items or services. Now, DoD is promoting the use of performance-based requirements that address agency needs not only in terms of capability, but also on extended life cycle costs and best value. For instance, past performance and quality are now considered on a "best value" award, instead of automatic award to the lowest price quoter. All you need to do is notify suppliers, when soliciting quotes, that the contract will be awarded on best value (FAR case 94-770, §13.106-1(9)(1)). By doing so, you may prevent a poor performer from becoming a liability, and avoid a potential contract dispute.

If you are interested in keeping up with the latest acquisition changes, the Office of Deputy Under Secretary of Defense (Acquisition Reform) has created a home page for this purpose. It contains useful information to help keep you abreast of what has changed, what will change, and how it will affect you. Items of interest include the latest in Acquisition Reform, ongoing initiatives, and an interesting section on DoD success stories. It also provides links to other offices and organizations associated with AR. The address is www.acq.osd.mil/ar/.

While significant progress in Acquisition Reform has been made, more is sure to come. However, the real challenge is in carrying out all of these changes. Traditionally, and unfortunately, as deregulatory programs filter through command channels, additional strings and requirements are placed on them that not only clutter up and impede the process, but negate the projected benefits. These same strings tend to handicap the very people that the paperwork and workload reduction and cost savings were supposed to benefit. Therefore, it is critical that you evaluate self-imposed restrictions and requirements to ensure value is added.

Acquisition Reform will work—if you let it! **PWD**

Karl Thompson is a logistics management specialist in CPW's Facilities Management Directorate.

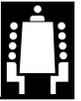
Borrow that Bobcat

Fort Carson's Repair and Utilities and supply shops counted up the cost of sending customers downtown to rent tools. Larry Haack, chief of the supply and R&U branch saw an opportunity for big savings.

"Sure, this is the era of switching to credit card purchases, but when the price is \$400,000 a year, you think again!" said Haack. "That's what rentals would have cost the installa-

tion. Instead, we maintain a supply of small tools, chain saws, rototillers, and even Bobcats. We issue them to customers on a hand receipt."

"The customer has to go through our R&U class first, so we know they're able to handle the equipment we're lending them. It works very well. This is one case where a little paperwork is way more cost-effective than plastic!" **PWD**



BPC Supply Subcommittee works on streamlining operations

by Karl Thompson

Several years have passed since the BPC Supply Subcommittee was formed. We have seen rapidly changing business practices that had major impacts on the Engineer community. Also, we have seen dollar constraints that make the true cost of doing business more visible not only to us, but to those who hold the purse strings.

DPW supply operations continue to be a natural focus of attention, since this is a major expense. Many installations are caught in the wake of new business approaches to supply, including privatization, DPW/DOL consolidations, outsourcing, requirements contracting, and expansion of the credit card program. Fortunately, today, we have more opportunities than ever before to increase efficiencies and productivity. We must continue to look for ways to streamline the supply operation along with procurement policy and procedures without degrading operations.

In this light, the BPC Supply Subcommittee continues to provide an informal "hotline" to appropriate policy makers so that supply-related issues and problems or initiatives can be analyzed, researched, and if appropriate, implemented. We are dedicated to aligning our business practices with business practice changes while ensuring cus-

tomers responsiveness and satisfaction are not jeopardized.

Currently, the BPC Supply Subcommittee members are:

- FORSCOM.....Pat Forrister
- TRADOC.....Joan Plourde
- USMA.....George Alvord
- USAREUR.....Nate Stevenson
- USARPAC.....Ernest Woody
- AMC.....Tom Bird
- MDW.....Phil Roberts
- 8th Army.....John Burch
- DA DCSLOG.....Earl Stinson
- ACSIM.....Larry Black
- CPW.....Karl Thompson, Scott Monaghan

Our most recent meeting was 8-9 April 1998, at Fort Lee, Virginia. Issues the Subcommittee discussed and ranked were:

- a. Final review of draft AR 420-18.
- b. Review and comment on IFS supply basic course.
- c. HAZMAT reporting requirements (new FAR clause).
- d. Good ideas/initiatives/problems.
- e. Develop a supply operation position and approach to a performance work statement that includes government-furnished supplies and equipment and mandatory sources of supply (government or contractors).

Unfortunately, due to the significance and amount of effort associated with reviewing the draft copy of AR 420-18, we were not able to take any action on the remaining items. These were tabled and will be worked as time permits. Specific recommendations and suggestions concerning AR 420-18 were to:

- Include a section on property book accounting.
- Resurrect and include an Internal Control Checklist as an appendix.
- Define and develop performance standards for Engineer Stock Record Accounts (SRA).



- Include a section on contracting out supply.
- Develop a HAZMAT section that would explain usage, tracking, and reporting requirements.
- Include a section on shelf-life management.

Additionally, several other matters were discussed that will require further action:

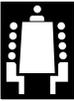
- Consolidate Subcommittee comments on the IFS supply basic course as they come in and provide them to the course manager.
- Coordinate with the Equipment BPC Subcommittee on government-furnished equipment and the equipment portion of draft AR 420-18.
- Research the possibility of developing a cross-training program for Facilities Engineer supply personnel.
- Explore the possibility of developing a PAM that would outline Engineer procedures and serve as a basis for training newly hired/placed personnel. This could also include guidance on how to operate in an Engineer environment.

We continue to welcome ideas and suggestions. We would also like to thank management for their continued support by allowing key personnel to participate in the Subcommittee meetings. Without the assistance of these subject matter experts and their invaluable insight, we could not have achieved the results we have. Through their involvement, we can and do have a positive impact and affect on our customers.

POC is Karl Thompson, CECPW-FM, 703-428-6301 DSN 328, e-mail karl.s.thompson@cpw01.usace.army.mil **PWD**

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Fort Lee— a growing “city” on the edge

by Jim Furr



Soldier One-Stop Facility

Fort Lee, Virginia, is home to the US Army Combined Arms Support Command (CASCOM) whose mission is to “develop and evaluate combat service support and logistics concepts, doctrine, and planning factors for the Army.” We’re also the home of the U.S. Army Quartermaster Center and School, the Army Logistics Management College, and HQ, Defense Commissary Agency. Like most installations, Fort Lee operates much like a city in providing BASOPS support/services. And like cities, we are faced with the same infrastructure, funding and people challenges now and for years to come.

As Fort Lee catapults into the future, we see much construction underway all around post. We have been fortunate in that as we complete all types of renovation and new construction, we have been awarding new projects in their wake.

Here are just a few of the numerous utilities and infrastructure repair projects recently completed or underway:

- Jackson Circle family housing replacement project— construction of 132 two-story townhouse units, featuring the latest amenities enjoyed in the private sector.

- Phase I of Harrison Villa housing project— construction of 135 units at a cost of \$20 million.
- \$5 million, 32,000-square foot Soldier One Stop facility.
- \$250,000 Quartermaster Museum addition— funded by the Quartermaster Foundation.
- \$5 million in a variety of barracks renovation projects, including multiple barracks HVAC replacements and complete latrine renovations in 13 barracks postwide.
- \$25 million Whole Barracks Renewal complex with individual rooms and private bathrooms.
- \$10 million underground electrical project, including an underground electrical system, cable TV, energy monitoring system, fire alarm system, and exterior lighting for the main cantonment area.

At mid-year FY 98, we find many new projects beginning construction and several more in the planning stages. With FY 97 funded projects, year-end dollars, FY 98 allocations, and several tenant activities’ funding, we successfully boosted our ongoing construction on post to \$101 million under construction at one time.

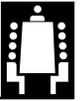
Despite the gloom and doom on the horizon, FY 98 is a healthy year for construction on post. However, as the dollars continue to disappear, the future will bring only “special” funded projects such as:

- Army’s WAC museum funded with BRAC dollars.
- PX addition for a Four Seasons store planned and funded by AAFES.
- Multi-million dollar Defense Commissary Agency HQ addition funded by DoD.

The recent construction success at Fort Lee is attributed to the outstanding DPW folks who employ creativity locating funding sources, apply smart business decisions, develop regional contacts/partners, and primarily, maintain a sharp focus on our primary mission— serving/supporting the soldiers who live/work/train here.

However, even with the very good fortune of two neighborhood replacements, the fact remains that we have to reduce the number of housing units on post, even with a shortfall, and we still have 50 percent of our housing units coded red on the FY 98 Installation Status Report (ISR) due to condition/standards. There is more work to do.





While we're grateful for the opening of the new Soldier One Stop facility, we're still on the edge with the fact that without Phase II, we will still have many of the Garrison organizations, which provide important business/customer services, housed in deteriorating, temporary WWII wood buildings.

TRADOC has been a leader in "set asides" for Barracks maintenance and repair funding in recent fiscal years. Nevertheless, these dollars are still too few, and soon to be less, to begin to get us ahead of the necessary barracks repairs. The edge remains the fact that although these dollars have been precious in that they prevented us from getting further behind, i.e., maintain current level, we haven't gotten ahead. Perhaps the new definition for getting ahead will be to simply keep things from getting any worse...

As one of the initial Whole Barracks Renewal projects for the Army, we have been fortunate in upgrading dilapidated 40-year-old buildings into outstanding assets for our permanent party soldiers. However, there was a price to pay for this. After our WBR projects and those of other installations were underway, the Army learned that it's cheaper to tear down and build new, rather than incur the continual "surprise" construction encountered with total renovation. The good news is the standard is now replacement in lieu of renovation.

We were also fortunate to fund the first phase of our underground electrical project, which essentially repairs/replaces original primary and secondary service on post, and upgrades to the



New Army family housing units.

badly needed additional service for current day automated Army installations. The edge part is that we still need the other phases as our infrastructure continues to age.

The future belongs to those who can manage change, feel comfortable with breakdown maintenance, and survive the stress of trigonometric workloads with arithmetic numbers of people and dollars. We've witnessed the passing of preventive maintenance in recent years, and sure enough, it has led to where we predicted—breakdown maintenance. It is an obvious fact that it costs less to make proper repairs/maintenance over time than to replace at time of failure. Many of us work on installations where the BASOPS is funded at much less than our annual requirement. This will continue to lower our ISR C-ratings, boost the BMAR charts, degrade living/working conditions on post, and lead to compounded breakdown maintenance requirements.

As we meet the challenges of tomorrow, the facilities engineering business will continue undergoing surgical extractions with issues such as commercial activities, Army Family Housing privatization, consolidations of functions, utilities privatization, mergers with

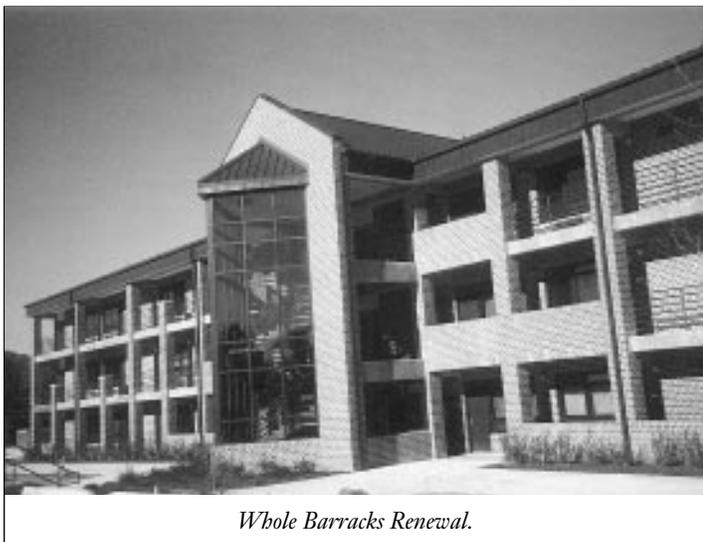
other organizations, BRAC, QDR cuts over the next couple of years, shrinking OMA dollars (how many have any discretionary OMA left), and a host of other popular political initiatives. For us to think/operate like a business will require business authorities, freedoms and resources.

Amidst the furor, the key will be to focus on areas of productivity. We will need to take advantage of some of our more outstanding tools, such as the Job Order Contract (JOC) and the Architect-Engineer Initiative (AEI), that have resulted in savings of millions of dollars at our installation alone. The Army's Demo program has helped reduce the footprint, but we have to be careful that the dollars decremented from the budget match the actual savings from demolition. Alternative funding sources are big business for DPWs as well, and with some creativity, we can take advantage of special funds such as Strategic Mobility Fund, Utilities Modernization, ECIP (energy), AFEP (energy), Lease of Assets, fenced MACOM pots, DoD sources, tenants, AAFES, NAF, regional "outside the gate" sources, and a host of others.

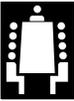
To rise to the challenge, we must not only change the way we do business, but change the way we think. The gray gets a little darker, and creativity must rise to brilliance.

☎ POC is Jim Furr, (804) 734-4545 DSN 687, e-mail: Furr@Lee-dns1.army.mil **PWD**

Jim Furr is the Chief of the Engineering Plans & Services Division at the Fort Lee DPW.



Whole Barracks Renewal.



Corps simplifies contracting for military customers

by Tim Dugan



The Defense Printing Plant at Fort Rucker, Alabama, was built under the ID/IQ contract.

The U.S. Army Corps of Engineers' Mobile District has been working to simplify contracting procedures for military installations. Their goal is to provide first quality engineering services and respond quickly to customers' needs.

IDT contracts

One successful innovative contracting method is Indefinite Delivery Type (IDT) contracts for work on small projects at Army and Air Force installations.

"IDT contracts were designed to address the critical need at military installations for a mechanism to allow for the rapid issuance of task orders for various construction projects valued between \$250,000 and \$1 million," said Ed Slana, District Contracting Division chief.

Allowance can easily be made for projects under \$100,000 or up to \$3 million. "Such requirements have typically been contracted as 'stand alone' Invitation for Bids (IFB) by the Mobile District on behalf of its Army and Air Force customers," Slana said. "Such IFB methodology requires a rather costly and time-consuming advertising process per action."

No negotiations are allowed between the government and potential contractors once bids have been publicly opened. Under normal circumstances, an IFB takes a minimum of 60

calendar days to advertise, receive bids, and award a contract, Slana said. IFB procedures represent a solicitation process which will lead to an awarded contract (firm fixed price contract, IDT contract).

The IDT format has allowed the District to compete only once for the basic contract and then issue simplified task orders to the winning proposer for a multi-year (i.e., three years, \$4.5 million per year, \$13.5 million total) period at the specific installation.

"The IDT format contains pre-priced labor rates for all anticipated occupational categories—with profit and overhead factored in and all material costs to be negotiated separately under each order," Slana said. "These IDT instruments allow for all manner of construction up to the stated task order ceiling contained in the basic contract."

Contracts at Forts Rucker and McClellan have a \$1 million task order ceiling. The contract at Redstone Arsenal has a \$3 million task order limit. "Redstone got a higher limit because the value of anticipated tasks would approach that amount," Slana said.

An IDT (Indefinite Delivery Type) contract is an actual contract which has already been advertised and awarded. "Since the basic contract has already been awarded, all the government has to do is go to the vendor holding the contract and initiate immediate discussions or negotiations on the particular

scope of work at hand," Slana said. "No new advertisements or time-consuming bid periods are needed to negotiate a task order." These IDT formats also allow for architect-engineer design work by the contractor in the development and finalization of the project scope. Once negotiated, a task becomes a firm fixed price contract and is administered the same as any other FFP contract.

RFP improve quality, flexibility

Most IDT contracts in Mobile District are awarded via the RFP method, versus the IFB process, Slana said. An RFP is a solicitation for services or supplies, including construction, where the government is competing its requirement among vendors on "best value" approach. "Best Value" means the prospective offerors provide a technical/management proposal and a price schedule to the government which will carefully evaluate each offer in terms of the best combination and trade-off of cost and technical capability.

The RFP process allows for direct negotiations with all proposers deemed to be in the "competitive range." There are no public bid openings, and proposals are received without competitors knowing who has submitted an offer. An RFP takes a minimum of 90-120 days to award due to the more intricate negotiations conducted by the government review panel.

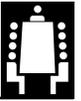
However, the RFP ultimately provides the government with much greater insight into the overall capabilities of a given vendor's technical, management, and pricing approach on a given requirement or the scope of work, he said. "This means the government selects the firm with the best overall combination of technical capability, past performance, and price."

The District does not have to award to the low bidder as it would if it were following the typical IFB process, he said.

ID/IQ contracts

The ID/IQ concept took concrete shape when five task orders for about \$1 million were awarded at Redstone in September. This amount has increased





to \$5.5 million in the first six months of the contract.

“This had not been done before,” said Area Engineer Jimmy D. Stevens, of the Corps’ North Alabama Area Office, Redstone Arsenal. “When the idea of an ID/IQ contract with design capabilities was initiated, there was a lot of skepticism about the design capabilities being in a construction contract. It took about a year to get this approved.”

Stevens said there are different federal regulations and statutes that cover design and construction. “But they were able to work through this,” he said. “It requires more work at the field office, since we do all the government estimates and negotiating. But it’s worth the effort.

“It’s another tool that the Corps has developed to support the DPW and it’s breaking new ground,” he said. “We had task order contracts for design and other task orders for construction, but we didn’t have one for both.”

Stevens said despite the extra work for the area office staff, they like it because it provides their customers more options on how best to accomplish needed work for the nation’s defense. Issuing a task order is also much more economical than normal procurement



DPW, hospital, Corps and other officials meet to discuss the work to renovate the hospital under the ID/IQ contract at Redstone Arsenal, Alabama.

methods, reducing the cost from \$10,000-\$15,000 to less than \$3,000.

“It’s also good for little jobs. The different customers on base may have \$50,000 to \$100,000 and they want to remodel a room or put an addition on their building. We are able to take these tasks under the ID/IQ, design and construct it for them in a short period of time.

“The good thing about ID/IQ is its design capabilities. Redstone’s JOC contract (job order contract) does not have

this capability, nor does any other current task order contract,” Stevens said.

Design for the projects varies. It might be done by the base, the base’s open-end A-E contract, the Corps, or the ID/IQ contractor. “You can’t use ID/IQ strictly for design,” Stevens said. “That’s not the purpose. It’s a construction contract with design capabilities used only if that’s the expedient way to go. If there’s time, we’ll follow the normal process of getting somebody else to design it, but a majority of ID/IQ projects don’t have the time.”

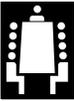
The ID/IQ contract is for \$4.5 million per year and \$13.5 million per contract period. “Once you go to \$13.5 million, you have to go to a new contract,” Stevens said. “The contract period is the base period plus two extensions, ending when you get to \$4.5 million or 12 months, whichever comes first.”

Projects at Redstone Arsenal range from \$80,000 to \$3 million. “We can go above or below those amounts if the contractor and the contracting officer agree,” Stevens said.

Stevens said because of the ease and quick turnaround of projects, ID/IQ will continue to get a lot more use. “It’s a thing of the present and the future that combines an open-end A-E contract and an open-end construction contract. You can go to the contractor with a fully designed project or no design and say, ‘We want a 50x100 metal building with 12 windows and sheet



Project Engineer Claudinette Purifoy with the Corps’ North Alabama Area Office inspects building 5681 at Redstone Arsenal, which will get a new roof under the ID/IQ contract.



This commercial laundry facility at Fort Rucker, Alabama, will be demolished under the ID/IQ contract.

rock walls.' He gives us a proposal, we settle it, and then he builds it."

Area Engineer Don Skipper, of the Corps' South Alabama Area Office at Fort Rucker says, "With the ID/IQ contract, the District can be more responsive to Fort Rucker, since physical

work can start within weeks of giving the task order to the contractor.

"We can eliminate the long process of advertisement and award and the long design process," he said. "Thus far, we have issued 10 separate task orders on the contract with a value of more than \$2.1

million, ranging from building demolition to construction of a new facility."

The contract is set up for small dollar type work, generally less than \$500,000, but it could be larger, Skipper said. "While it places more burden on the field office, it does give us more knows in the construction process. Fort Rucker DPW and users now see progress within weeks, not months or years.

"It's a real tool for the customer," Stevens added. "It will become even more so as the military keeps downsizing."

POC is Ed Slana, Mobile District, (334) 441-6501, e-mail: edward.m.slana@sam.usace.army.mil **PWD**

Tim Dugan is a public affairs specialist at the Mobile District, U.S. Army Corps of Engineers.

(Photos by Tim Dugan)



Professional Development

Let CPW set up your next conference/workshop!

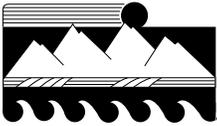
In addition to training, the Professional Development and Training Division of the U.S. Army Center for Public Works is also in the business of coordinating and supporting Corps approved conferences and workshops. The division presently coordinates the annual USACE DPW Training Workshop (Worldwide), the annual Utility and Energy Training Workshop and the semi-annual Combined Users Training Workshop. We in the Professional Development and Training Division believe we can coordinate your conference in a professional manner and at a fraction of the cost of an outside contractor. Give us an opportunity to coordinate your next conference/workshop and see for yourself. For more information, please call Jim Ott at (703) 428-7217 or Tom Cook at (703) 428-6036. **PWD**

Registration information for AFIT courses

The Civil Engineer and Services School (CESS) at the Air Force Institute of Technology (AFIT) accepts all applications on a "first-come, first-served" basis. There is no tuition cost for U.S. government employees attending CESS courses. Employees of companies or corporations under contract to the Armed Services may attend on a "space available, tuition pay" basis.

For Army employee registration, please process a DD Form 1556 through the U.S. Army Center for Public Works (CPW). The Engineer and Environmental Management training courses offered by AFIT are conducted at Wright-Patterson Air Force Base, Ohio. For schedules and course descriptions, please see the CPW home page at www.usacpw.belvoir.army.mil; click on "Training" → "Other Training Resources" → "Air Force Institute of Technology" → "The Civil Engineering and Services School."

For more information, please contact POC Tom Cook, CECPW-FT, at (703) 428-6036/DSN: 328; FAX: (703) 428-7541; e-mail: tom.e.cook@cpw01.usace.army.mil **PWD**



Army and Navy combine cleanup forces

by Alicia Gregory

On the football field, it takes all the players working in sync to make the plays and ultimately win the game. But unlike their classic football rivalry, the Army and Navy were on the same team this time, working for the Department of Treasury.

The Army and Navy combined forces to clean up hazardous and toxic waste at the Federal Law Enforcement Training Center (or FLETC, as it is commonly called). And they did it in less time and for substantially less money than it would normally cost.

About FLETC

Headquartered in Glynco, Georgia, FLETC is the largest of the FLETC training centers and the largest law enforcement training facility in the United States. It occupies more than 1,500 acres, with modern, specialized facilities for driver, marine, physical techniques, computer, and firearms training; student dormitories and classrooms; and office and warehouse space. In addition to offering law enforcement training to more than 70 agencies in the federal government, FLETC also provides training assistance to foreign governments.

For the three agencies on this team, FLETC, the Environmental Detachment Charleston, and the Savannah District Army Corps of Engineers, this was a first. It was the first time the Savannah District had contracted with another federal agency to do environmental remediation work at a federal site.

Scope of work

The job was to remove 39 underground/above ground storage tanks (UST/ASTs) and the surrounding contaminated soil (if necessary) from FLETC, which is the site of a former



An old oil/water separator is pulled from the Federal Law Enforcement Training Center (FLETC) job site.

naval air station. The job started September 14 and the detachment finished it in just four weeks.

"That's a month for 35 USTs, two ASTs, two oil/water separators and all associated piping," said David Barber, district project manager for the FLETC job. "That is pretty phenomenal."

Most old USTs have no protection against spills and overfills and are likely to corrode and leak, causing nearby groundwater and soil to become contaminated. The Environmental Protection Agency requires that all existing USTs be protected from spills, overfills, and corrosion; be replaced with new USTs that have spill, overfill, and corrosion protection; or be removed by December 22, 1998.

Benefits working with a federal agency

"We had been doing work down here for several years, and the customer wanted the Corps to perform the UST pulls," explained Barber. "Together with James Jones [senior environmental specialist with FLETC], we had to decide whether to go with a contracting mechanism to do the optional work or have the environmental detachment do

the work. Our contract for removing USTs had expired, and we were in the process of acquiring a replacement one. Because the client needed the work done right away, the Navy Detachment unit was the clear choice to do the work in a timely manner. The benefits of going with the Navy were: (1) they're a federal agency, so transferring funds was easier; and (2) the required work documents were fewer and simplified. Consequently, the cost and time involved in establishing and administering a contract were a lot less.

"We were able to scope the work and get these guys working in less than a month, thus meeting the customer's needs," continued Barber.

Using traditional or conventional approaches, the field work was estimated to take 10-12 weeks versus four weeks, with the detachment working 12-hour days, seven days a week.

The detachment's estimate for this project was \$247,746. Once the work was completed, the actual cost was \$230,000.

"More government agencies should try to utilize a program like this," said Jones. "We would save more money



for the government and taxpayers by using our own people.”

“When you factor cost savings for contract administration, the ease to manage scope and changes, and the time saved, FLETC saved approximately \$125,000 and six months by having the detachment do the work,” said Barber.

“With the detachment being a government entity, we entered into a reimbursable order,” explained Mike Sydow, project manager and district liaison with the Navy detachment. “If there is a cost issue, it is a direct cost issue as opposed to a fixed price contracting mechanism where, if something is out of scope, you typically have to stop the project. A telephone call, fax or simple memorandum of technical direction is all that’s required for these guys to keep going.”

About the Navy detachment

Created in 1996, the detachment is under the Naval Sea Systems Command and is headquartered at the former Charleston Naval Base. They provide engineering and environmental support services and are currently involved in more than 100 environmental projects in 15 states.

The detachment is about 160 strong and made up totally of federal employ-

(from left to right) David Barber, project manager; a supervisor with the Environmental Detachment Charleston; and James Jones, senior environmental specialist with FLETC, have an on-site conference.



ees, about a third of whom work in engineering and administration, and the rest, in operations.

“This is working out really well for us,” explained Dennis Hall, project leader for the Environmental Detachment Charleston. “We were all laid off at the shipyard and would have been displaced federal workers, but instead, we are out here doing work beneficial to the federal government.”

The detachment was created when officials from Charleston and Mare Island (California) shipyards got together and decided it would be faster and less

expensive to use employees working at the closing shipyards to do the naval shipyard environmental cleanup.

“We worked with nuclear submarines when we were stationed at the Charleston Naval Shipyard,” explained Hall. “But environmental and nuclear-type work are very similar, but with different rules. We had to learn the regulations for working in soil, UST, and asbestos, although we did work with asbestos before. We have been working with USTs now for about a year and a half, having pulled about 175 USTs as a detachment.”

Hall said the detachment doesn’t wait for work to come to them. They go out to different military installations looking for environmental jobs with brochures in hand. “In fact,” said Hall, “we have a group of people going up to Washington, D.C., to talk with the General Services Administration about doing some work for them.” Some services they are performing for the Savannah District include: UST/AST cleaning and removal; lead-based paint surveys and abatement; asbestos surveys and abatement; firing range restoration; and building demolition.

“This is a great tool,” said Jones. “The government should use the most cost-effective and feasible way to do cleanups. If we have the personnel within the federal government to do this work, we should use them. It makes no sense to go anywhere else.”

POC is David Barber, Project Engineer, FLETC, (912) 652-5835. **PWD**

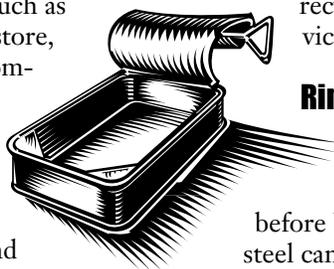


Workers with the Environmental Detachment Charleston remove piping associated with one of the underground storage tanks at the FLETC job site.



Recycle steel cans from food service and maintenance facilities

Steel cans are found in food service and maintenance facilities on most Army installations. The most common are the one-gallon or Number 10 cans, used for bulk food or for paints. Other steel cans, such as those seen in the grocery store, are also found in home, commercial, and institutional kitchens. Steel cans, lids, and closures are recyclable and should be recycled. In fact, all steel products are recyclable, and

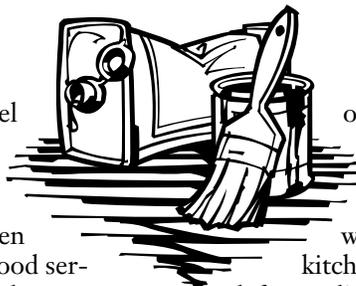


about 65 percent of the steel produced in the USA is recycled.

Here are some important steps to remember when recycling empty food service and paint steel cans:

Rinse out food cans

Steel cans must be rinsed because they are usually stored for awhile before being recycled. Rinsing the steel cans requires only the removal



of most food particles.

Cans should be rinsed without wasting water.

To make the best use of water already used in the kitchen, rinse steel cans in leftover dishwater.

Empty paint cans

Partially full cans should be used up or returned to a materials management center for reissue. Empty cans and dry out the remaining thin layer of paint on the inside of the containers.

Aerosol cans

Use up the contents of the can. Remove the plastic lid. The nozzle may be left on the can.



Crush the cans

While not necessary for recycling, flattening the emptied cans both provides visual confirmation of emptiness and takes up less space in storage and transportation. To flatten a non-aerosol can manually, first trim the bottom end from the can in the same way the lid was removed. Then step on the body of the open-ended can to flatten. Aerosol cans should be punctured and flattened using can-crushers designed for aerosol cans. Specialty equipment to empty and flatten cans may be purchased through government sources or locally.



1998 DLA Environmental Products (EP) Catalog

The fourth edition of DLA's Environmental Products catalog is now available to customers in electronic format on the World Wide Web. This year, approximately 15,000 hard copies were mailed to DLA customers worldwide. A CD-ROM version of the catalog is enclosed with each hard copy printed this year.

The 1998 catalog contains over 850 national stock-numbered items in 19 product categories. **New categories** this year are reusable batteries (alkaline & NiCad) and alternative refrigerants (EPA SNAP-approved). Categories printed in earlier editions, such as Petroleum, Oils & Lubricants and Firefighting Equipment, have been expanded by adding new items or additional national stock numbers.

The DLA EP catalog is a user-friendly publication which clearly suggests alternatives to previously used products or processes. These alternatives may be non-ozone depleting, less toxic or promote recycling and waste minimization.

New technical data for the solvent categories in 1998 include flashpoint (if lower than 141 degrees Fahrenheit), class II ozone depleting chemi-

cal ingredients, if any, and toxicity data, such as LD 50, where available for the blended product.

The catalog also has an expanded points of contact section which will help customers request additional information from any of the DLA supply centers.

To be added to the mailing list for hard copies of the EP catalog, please call DSCR's Product Marketing Division toll free at (800) 345-6333 or DSN 695-5699. Multiple copies for large organizations or for use as student handouts are also available.

Most catalogs published by Defense Supply Center Richmond are available on the Internet at <http://www.dscr.dla.mil>. You can view and download catalogs and actually place MILSTRIP requisitions for any DLA-managed NSN while on line.

If you have any questions about the EP catalog or DLA's environmental products, please contact Stephen Perez, DSCR's Product Executive for Environmental Products, at (804) 279-6054 or e-mail: sperez@dscr.dla.mil 



New sled scoops sludge

by Cris Sawyer

There are many Army installations using wastewater lagoons that were built 20 or more years ago. Over time, these lagoons accumulate thick layers of sludge on the bottom. If the sludge layer becomes too thick, some solids will washout with the effluent, potentially violating the discharge permit.

The problem is more serious in cold regions, where sludge accumulates more rapidly due to slower biodegradation rates. The conventional approach is to drain the lagoon and remove all sludge with a large dredge. The drawback, however, is that the treatment plant must be shut down if there is no alternate capacity to treat wastewater while the lagoon is out of service.

The U.S. Army Cold Regions Research and Engineering Laboratory (USACRREL) in conjunction with the U.S. Army Center for Public Works (USACPW) has developed a new device called a "sludge sled" for removing sludge while the lagoon remains in operation.

The sludge sled is a large scoop with a submersible pump and hose connected to a receiving apparatus. The device collects sludge by sliding along the bottom of the lagoon on runners. The objective is to remove a portion of sludge equal to the amount accumulated since the last collection, creating a steady state where the lagoon never exceeds its sludge-holding capacity. Using the sled, an operator should be able to remove enough sludge in a few days each year to control the level of sludge in an average lagoon.

The total cost of the prototype device (including pump and hose) used in the demonstration, was less than \$4,000.00, which compared to conventional dredging, which can cost anywhere from \$40,000 to \$70,000, is very affordable. The cost of the sled is almost negligible when you subtract the cost avoided by lack of down time.

For more information, please contact Cris Sawyer at (703) 806-5206 DSN 656 or e-mail: cris.e.sawyer@cpw01.usace.army.mil

PWD

Cris Sawyer is a chemical engineer with the U.S. Army Center for Public Works.

Army Pollution Prevention Investment Fund

The DoD/Army is focusing on a few critical environmental areas, one of which is pollution prevention (P2). Jan Menig, Deputy Assistant Chief of Staff for Installation Management, speaking at the 1997 DPW Worldwide Training Workshop urged conference participants to focus on proactive ways to save money now being spent to correct environmental problems. "Focus on more cost-efficient compliance through prevention," she said.

A practical source of help for bases taking up this challenge is the Army's Pollution Prevention Investment Fund. The Army has programmed \$49.8 million over the POM years of FY 1999-2003 to achieve reductions in the cost of compliance with environmental regulations. The funding will be focused on projects that promise the highest return on investment.

DLA's P2 Products and Services: For ideas on putting this fund to work for your base, check out the 850 national stock numbered items spread over 19 product categories in the 1998 DLA EP catalog. (See p.25.) Products that may be eligible for reimbursement under the P2 Investment Fund include antifreeze recyclers (including filters & chemicals), partswashers and weapons cleaning systems, reusable batteries and charging stations, spill control and cleanup products and a wide variety of solvent alternatives. Check with your installation environmental and budget offices to confirm whether specific items are eligible for this funding.

There are different technical specialists for each commodity at DSCR and the other DLA supply centers. For more information or a copy of the DLA EP catalog, e-mail Steve Perez at sperez@dscr.dla.mil or call (804) 279-6054 DSN 695. **PWD**

Baker's dozen alternatives to hazardous pest control products

The DLA Environmental Products Catalog for 1998 (see p.25) provides 13 environmentally-oriented pest control products you might consider as part of your installation's Integrated Pest Management Plan. The products range from brand name roach and ant bait stations (Combat/Max-force) to energy-efficient electronic flying insect traps, which will help you reduce insecticide use at your base.

Chigg-Away, 3M Ultrathon, Cutters and Permonone Tick Repellent are various insect repellents highlighted under "Integrated Pest Management Products" in this year's catalog.

These products are available on direct vendor delivery contracts which incorporate electronic data interchange (EDI) procedures. This means the customer gets fresh stock, speedy delivery and reasonable prices which, as always, include shipment worldwide.

If you have any questions regarding Federal Supply Class 6840 insecticides, herbicides, repellents, disinfectants, deodorants or pesticide equipment, please contact your Command entomologist or the DSCR chemist, Clifford Myers, at (804) 279-3995 DSN 695, FAX: (804) 279-6008, or e-mail: cmyers@dscr.dla.mil. Mr. Myers is the DSCR representative on the Armed Forces Pest Management Board.

DLA EP Catalog: To obtain CD-ROM versions of the EP catalog, please call (800) 345-6333, DSN 695-5673, or e-mail: sperez@dscr.dla.mil. To view the web version of the catalog, please visit DSCR's home page at www.dscr.dla.mil. **PWD**



FIRMS reaches full bloom— Armywide deployment nears

by Penelope Schmitt

Working harder can't be the answer for the Army's fire departments. With reduced staffing and budgets, they are working out at the edge of their capabilities. Working smarter has to be the solution.

FIRMS, the Fire Information Resource Management System, is how Fort Carson's Fire Department spells "SMART." "Look at the Army's budget for fire protection and prevention," said Chief Verne Witham. "We spend \$160 million a year to protect a \$175 billion real property inventory. Added to that, we've taken \$25 million in losses every year for the past four years. That's an annual cost of 10 percent of the inventory. Got to shave that!"

Better management of resources, people and property, as well as enhanced ability to respond in emergency, are the best answers Witham's department could think of. Almost a decade ago, they began to automate the fire department.

Now the system they started and developed with the help of CERL, CPW and many subscribers, is approaching maturity as a Windows-based system

that can improve management of nearly every aspect of the fire and emergency response network on installations.

"It's time for us to launch this program effectively Armywide," Witham said. "We know there are 125 installations out there using FIRMS in a variety of earlier versions. We wanted to share from the beginning, and we have. Now we are at a point where having a consistent system with proper technical support is critical. We need a hotline. But maintaining software and handling queries really aren't appropriate tasks for a Fire Department. Believe me, we have a lot of other important things to do!"

"We are looking for a way to find two-year interim support to manage the software and get technical services and support," Witham said. The near-term plan is to develop and implement a conscious deployment strategy. "Bruce Park, the ACSIM's policy proponent for Fire Prevention and Protection, intends to mandate the use of FIRMS on Army installations. We have a 25-person user group called the Fire Protection Automation Task Force. It includes Dave Tomlinson from CERL,



The FIRMS Training module tracks firefighters' certifications, training attendance and future training schedules.

Jerry Spence and Tom Dolen from CPW, and technical people from every command."

"We want to sit them down and go through the new upgrade with them in a train-the-trainer exercise. Our first goal is to get 24 sets of discs out to all MACOMs, including DLA, and install them. With the help of those key people, our installation staffs can easily be trained," Witham said. "On a basic Windows system, you install the programs and follow the instructions—that means you have to read the 'READ ME' files."

FIRMS now fields seven modules

What does FIRMS do that a good, stubby pencil manager can't? The system is the source of accurate, up-to-date, almost instantly accessible data on everything a firefighter needs to know to manage his program—or to fight fires and emergencies **NOW**.

Hose. "You're talking about the arteries, the lifeblood of a firefighting system when you talk about hoses," Witham said. The Hose module tracks the manufacturer data and wear and tear data on all hoses in the department. FIRMS improves our accuracy and saves us a lot of time in making multiple entries of hose tests.



The Facilities module can save an inspector three to five manhours a week, increase productivity and maintain accurate inspection histories.



The Hydrants module helps ensure that the grid systems and valves are working.

Hydrants. “If your house is on fire, you want the hydrant on the street to be putting out plenty of gallons per minute,” Witham explained. “We use the Hydrants module to make sure we know if our grid system and valves are working.” The standard is 65 pounds per square inch of pressure in a residential system. “Routine testing often uncovers valve and leak problems. We go out and flow the hydrants. FIRMS calculates flow tests and calculates the water available in the system. It also maintains system history. Where were the problems? Were they fixed? When? Who reviewed to see that the system is operating right? FIRMS helps us make sure this is all done.”

Facilities. “Inspections are critical to prevention. They also take a lot of time and manpower. The FIRMS Facilities module can save an inspector three to five manhours a week—that’s an extra half-day of work. The system increases productivity and maintains accurate inspection histories.

The system generates a report that both lists and describes violations. Corrections can be entered and dated to update records the moment the customer or facility comes into compliance. “We can dictate and enter a report on the day of the inspection. No gap between being there and getting the record straight means increased productivity and higher accuracy.”

Personnel. Fire Departments have some unusual human resource management challenges. “We have to maintain medical histories and histories on our staffs’ exposure to hazardous substances,” Witham said. In addition to the important personnel data you would always expect, FIRMS is built to include critical medical information and to meet the National Fire Protection Association’s requirements for histories of exposure to hazardous materials. “We can record blood types, exposure to asbestos, disease vectors and all sorts of other critical information,” Witham said.

Training. State-of-the-art is a moving target in the world of Fire Protection. Continuous training in this specialized and often dangerous work is prized—and priceless. FIRMS can do a great job of tracking our firefighters’ certifications, training attendance and future training schedules,” Witham said.

Maintenance and Inventory, two new modules recently added to the FIRMS suite of management tools, and the **Administrative and Dispatch** module, will make it possible to put a complete management system at the fingertips of every Fire Chief and his staff.

“These modules make it possible to track preventive maintenance on all our equipment and our 25-vehicle fleet. It gives us a great way to do good quality control and quality assurance with our contractor,” Witham said. “Inventory

gives us the same excellent record-keeping strength. Who has that sub-hand receipt? Where are the signature records? No questions.

“As for **Dispatch** and responsiveness—that’s where we’re really making the rubber meet the road,” Witham said. “We have the program on laptops in our trucks as well as on PCs at the fire house. We can take photos and other information and transmit them immediately, to help with handling a HAZMAT situation.

“We want to be able to upload IFS data. Floor plans and other DPW mapping data are the next step. Eventually, we will have the ability to flash CADD/GIS data over and show exactly what they need to see at the scene,” Witham said.

Hooking up to FIRMS benefits

“This system has been a great help to us and many others in the past. Now it’s a lot better,” Witham said. It enables you to:

- Meet your AR 420-90 Requirements
- Meet DODI 6055.6 Requirements
- Meet your NFPA Requirements
- Meet your OSHA Requirements
- Increase your productivity

“Plus, FIRMS automates the record-keeping and management functions of the fire department and provides timely, accurate data for fire fighters at the scene of an emergency. It really doesn’t get any better than that!”

How do you sign up for the latest version of FIRMS? In June, 125 copies of the new version will be distributed to every installation fire department. “We hope everyone who hasn’t paid their \$500 maintenance fee this year will decide that this new Windows-based version is so great they just have to send us some money!” Witham said. “Then we’ll be able to finish the DISPATCH module.” Sounds like it’s time to climb aboard that truck!

 For more information about FIRMS, visit the FIRMS website at owwww.cecer.army.mil/armyfire/home.htm.

 POC is Nancy Roberts (719) 526-9356; e-mail: robertsn@carson-dpw.army.mil 



Fire Extinguishers—users should be responsible



At Fort Carson, Units own 'em!

When the Fort Carson Fire Department managed the fire extinguisher system for the installation, they paid big bucks playing big brother. "Units had no real responsibility for their extinguishers," said Fire Chief Verne Witham. "They were using them to play games and cool beer. Our surveillance cost \$250,000 a

by Penelope Schmitt

year and required two full-time people to run it."

"Now we have turned the responsibility for maintaining the extinguishers over to the Units. They pay for maintenance with their own IMPAC cards." Servicing and filling is done in down-

town Colorado Springs. "We do require an annual inspection of the gauges to make sure they will work. We have somebody on duty to do that on Wednesday afternoons. And when we walk the buildings, we do inspect the extinguishers we see there."

But routine maintenance is strictly a unit responsibility. They are required to check their extinguishers with a certified technician once a month. "Since they now have to use their own funds, the extinguishers no longer get misused and wasted so much," Witham said. "We have brought our personnel time down to one afternoon a week. It's better all around."

Fort Carson builds E-911 capability

by Penelope Schmitt

"We saved two lives last year." That's Verne Witham talking, Chief of the Fort Carson Fire Department. The two people still among the living were saved by the Fire Department's E-911 emergency response center, a capability the department has been building up over several years.

"We built the center ourselves, in a vintage 1942 fire station." Witham said. "We have done all the plumbing and wiring. We created our own automation. Our people react off computers and monitors. Fort Hood operates its E-911 from a Killeen police station. We do it here. We dispatch Military Police, ambulances, emergency medical technicians and other E-911 calls."

"We would like to combine the Fire Department and ambulance services. Because the hospital is shorthanded, they are only able to respond to about 70 percent

of E-911 calls. The Fire Department responds to 110 percent! We are out there on all emergency calls. We have now put IV (intravenous) and defibrillator capability with trained people in every engine company.

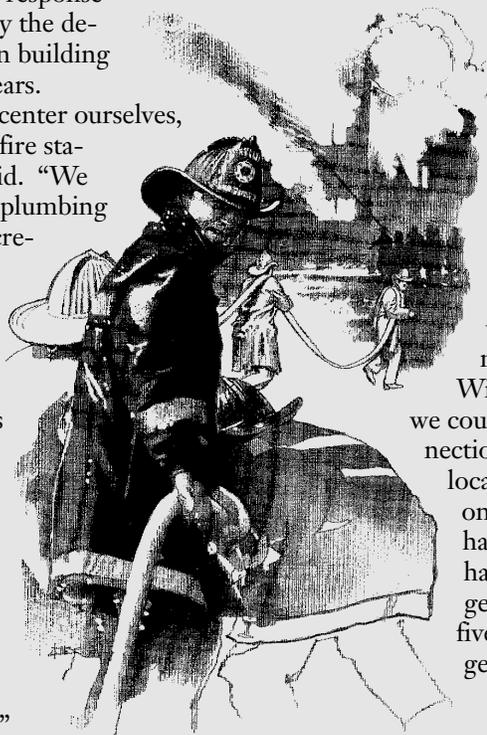
That's how we were able to save those two added lives."

Next up for the department is an effort to get CADD/GIS capability on its computers.

"This would help us respond even more quickly,"

Witham said. "Then we could make the connection with the exact location while we're on the move. We have worked very hard to put this together. It took us five years of effort to get the added manpower to staff the center. Tom

Dolen, the Fire Prevention specialist at CPW, was a big help. We're plused up from two to five dispatchers and we're doing even better than before." **PWD**



In family housing—more a hazard than a help

In a recent dialogue around the Army, DPWs agreed: providing fire extinguishers in family housing is both expensive and hazardous. As Fort Carson's Fire Chief points out, maintaining unit fire extinguishers cost the installation a quarter of a million a year until the equipment was turned over to unit control. This is a bill—and a labor expenditure—most installations just can't afford.

Moreover, Fire Departments are in agreement that when fire strikes, residents shouldn't stay to fight it. They should get out of their homes as quickly as possible, making sure that all family members are safely away from the fire. Trying to operate an extinguisher only delays the moment when expert help can arrive.

COL Dennis Fontana, Fort Carson DPW, pointed out that every PX sells good-quality extinguishers for those family members who want them and are willing to take the responsibility for having and using them properly. Even so, DPWs and Fire Chiefs agree, when residents see smoke or flame, the right place to go is OUTSIDE NOW! **PWD**



The COTS assessment at Fort Eustis— a model testing method

by Ken Ralph

Why not use commercial off-the-shelf (COTS) software? That

question was strong in the minds of many two years ago, as the Army pushed toward private sources for more operations. In July 1996, a team created by ACSIM and the USACE Directorate of Military Programs (the FIST PAT) decided it was time to test COTS for use in Army Directorates of Public Works.

The test, conducted at Fort Eustis, Virginia, was a model for giving a new system a “fair shake” and for determining what the real consequences of change might be.

The first step was to select a COTS that appeared to have potential for success. The FIST PAT thought the Facilities Management (FM) Enterprise system, developed by AEC Data Systems, Inc., had the best chance of supporting the same functions as IFS.

Then, the team decided what they were looking for in the test. They sought answers to these questions:

- Can a COTS support DPW business processes without modification?
- What existing business rules, policies and procedures stand in the way?
- Which IFS functions can be replaced with COTS?
- Are any functions unique to the Army—do they require continued government support?
- Can a COTS database be mapped to and update a government maintained database?

A follow-on PAT known as the Business Enhancement Software Test (BEST) took on the task of testing and evaluating the FM system. Fort Eustis DPW volunteered to conduct the test with the help of the ACSIM-sponsored DPW Business Practices Committee and volunteers from other installations.

The Approach

BEST decided to conduct the test in two phases. The first phase would be a standalone test to discern COTS’ abili-

ty to support DPW business requirements. The test used Fort Eustis data in a controlled environment. In the second phase, the COTS was to “go live,” using FM in a production environment and mapping data from FM to a government database.

The test was designed to analyze the performance of six primary functional areas: Real Property, Work Management, Work Estimating, Project/Contract Administration, Supply and Financial Management. These are each supported by FM and represent the primary functional areas of IFS as well.

Preparation

Six user groups, one for each function, established test criteria. Each group met for a week to identify the core products and services of their business functions. They also targeted critical data, and created a set of test scenarios. Since the test was a zero based needs assessment, they didn’t consider availability of automated support. Each scenario described a business process supported by automation, the critical data, automated process, and expected results.

In total, 57 people representing installations from all major commands identified 102 core products or services, 422 related processes, and 301 test scenarios. None of the participants was exposed to FM or to any other COTS. Their work was facilitated by the use of groupware and a support team from SRA International, Inc., and Calibre Systems.

For nearly a year, a team of personnel from USACERL, AEC Data Systems, USACPW, and USAICSSC-DCL conducted data mapping. Their goal? To create a data warehouse that would enable the Army to use existing software to perpetuate existing system interfaces. Here’s how they went about it:

- The team created a specification workbook to identify and document the IFS-CS (Client Server) data in

each of 24 different interfaces. The notebook contains an interface glossary, an IDEFIX

model of the data relationships and a series of matrices depicting the data.

- Using a discovery process, the team attempted to identify FM sources for the same data.
- Next, they created maps to describe each data association, and added them to the notebook.
- Last, they implemented the maps using a data warehousing software product with its own meta database to ease extraction, transformation and movement of data between databases. The maps were to be initiated daily by the DPW SA/DBA before processing the IFS-CS end-of-day cycle.

In total, the team identified 512 IFS-CS data elements that sustain existing system interfaces. This represents 38 percent of the total number of all IFS-CS data elements (1360). When the mapping analysis was completed, less than half of the required data was available in FM. As a result, only the STANFINS interface could be fully implemented without supplementing FM in some way.

A contract team developed software to convert IFS-CS data to FM data to help initiate the test. They also created a custom Standard Operating Procedure (SOP) which describes the use of FM in an Army DPW environment.

Procedures

Even before starting the test, the BEST team decided not to test two functional areas: Real Property and Supply. Why? Findings from the mapping preparation revealed significant shortcomings in FM that would adversely affect the DPW.

Phase One of the test took place in February 1998, evaluating each of four functional areas. Each area was tested for a week. Evaluators from 15 different installations and Fort Eustis received an FM overview, hands-on training in their respective areas, and a tour of all the test scenarios in that area. They





had ample time to exercise the system and discuss its merits and shortcomings.

Evaluators scored both FM and IFS on the system's ability to support each scenario using the following rating scheme:

- 1 - Exceptional Support to the Requirement
- 2 - Exceeds Requirement
- 3 - Meets Requirement
- 4 - Partially Meets Requirement
- 5 - Provides No Support for Requirement

Participants also commented on each scenario and assessed their functional area. Calibre Systems, an independent contractor having no interest in the outcome, recorded findings and outcomes.

Conclusion

Inability to implement two functional areas; significant shortcomings in four remaining functional areas; and inability to provide more than half of current interface data led the BEST team to recommend the test end at the conclusion of Phase One. ACSIM and USACE leadership accepted this recommendation.

It isn't practical to totally replace IFS with a single new COTS system, given the current environment of unique Army data reporting and system interface needs. However, COTS systems have much to offer, and should continue to be pursued as an optional alternative to government-developed software whenever it makes business and economic sense.

It's also important to consider installation resources available to support a transition and relearning workload before moving to a COTS. A wholesale system replacement, no matter how good, is time consuming. During this test, Fort Eustis was undergoing an A-76 study and a consolidation study, and working privatization issues. Little time was realistically left to consider new automation and related business process changes. An incremental approach to COTS will minimize this burden.

Test participants found the process a very objective method of evaluating software, and recommended that future evaluations use the same approach.

They also appreciated the opportunity to participate in a test which could ultimately affect their own daily operations. **PWD**

COTS test finds commercial software doesn't yet fit bill

by Ken Ralph

The teams that tested a Commercial Off-the-Shelf system (FM) for compatibility with facilities management business processes (IFS) in the Army tested and scored several aspects of the system in depth (*see preceding article*). Here's what they found.

Work Management

Both FM and IFS received similar scores. Evaluators agreed that FM could adequately serve the business needs in this functional area. FM does a better job serving remote customers and supporting a scheduled equipment preventive maintenance program. But since it does not distinguish between Service Orders and Work Orders, these are more cumbersome to record and process. FM also does not handle unscheduled preventive maintenance.

The Army business practice inhibitors to COTS implementation include work classification, the distinction between funded and unfunded costs, and the need to track approval limitations related to these items.

Work Estimating

Again, FM and IFS received comparable scores. FM's strength is its ability to access any price book structured in Construction Standards Institute (CSI) format, including R.S. Means and Job Order Contracting (JOC). It could not import MCASES standards, but could be custom-programmed to do so. FM can also evaluate differences between government and contractor estimates to support JOC.

The primary FM weakness is its implementation of Engineered Performance Standards (EPS). AEC converted the EPS to CSI format, so that they could be used in FM like any other CSI standard. As a result, the EPS functions of nomograph computation, time slotting, and cost recalculation are not available. Nor could FM apply shop effective rates to calculate labor cost estimates or determine equipment use estimates. Phase swapping and copy job functions

are not available in FM, although they may be added in a future release.

FM creates Bills of Materials. However, the decision not to use FM supply function created a significant problem with supply catalog access and maintenance.

The Army business practice inhibitor to COTS implementation in work estimating concerns the target of EPS utilization for in-house estimates. Current doctrine prescribes 75 percent utilization.

Financial Management

This function is extremely difficult to support with COTS, because the Army has many complex data coding structures in its accounting and reporting systems. As expected, FM couldn't adequately support these data needs nor the financial interfaces that use the data.

FM supports four basic Elements of Resource (EOR): labor, material, contracts, and equipment purchases. It can't handle labor break-outs such as civilian/military, equipment rental and depreciation, and other miscellaneous costs. It also has no vehicle to translate to the EOR structure used in AR 37-100.

FM can't distribute shop stock material costs selectively to in-house work such as service orders. Nor can it charge equipment usage (rental and depreciation) costs. During the test, work-arounds were created for these shortcomings, making it cumbersome to record labor.

FM supports credit card use through a separate screen that identifies the transaction, card number, and amount. Charges are posted to the appropriate work request, and the system provides reconciliation reports. But FM can't distinguish between OMA and Stock Fund. Army evaluators also noted shortcomings in returns and corrections.

FM supports the recording and cost of utility consumption, but not utility sales. Supply costs can't be recorded in FM without using the FM inventory (supply) module. ➤



Several policies and business practices inhibit COTS in the financial arena. These require an effective system to:

- Communicate with Army accounting systems, none of which have much in common with COTS. Appropriated, non-appropriated and DBOF accounting procedures compound the differences.
- Handle the many codes the Army uses to break out information about the Army Management Structure and its derivatives, like Appropriation, Program Element, MDEP, Tech Data Activity Codes, and a variety of special-interest coding schemes.
- Track costs and monitor approval limitations by work classification (for example, maintenance versus repair).
- Apply directed utility sales categories and rates.
- Apply established rates for equipment rental and depreciation to equipment used to accomplish maintenance and repair work.
- Follow rules and procedures for recording commitments, obligations, expenses, and disbursements, and the individual transactions that support them.

Project Acquisition and Contract Management

Evaluators found both IFS and FM were inadequate to serve this function. Both systems provide some contract management capabilities—but their focus is on post-award activities, rather than pre-award. Neither system supports project development, design and acquisition.

Evaluators saw a need to create a bid schedule that includes options to exercise many types of contract vehicles. Also missing were the abilities to build and issue modifications, track submittals, track current working estimates by work classification, and track approvals back to the authorizing work requests.

A project acquisition module should provide automated links to SAACONS (or SPS) DCAS and each of the Army accounting systems. Neither system supported these requirements.

Policy and business practice issues that inhibit COTS in this area include the Federal Acquisition Regulation (FAR), procurement related data requirements, (particularly those in SAA-

CONS), and the need to track approval limitations by work request and work classification.

Data Mapping and Warehousing

Ideally, a data warehouse fulfills the summary information needs of managers at the installation or higher headquarters. Data should flow primarily from a lower level transaction system (IFS, FM or other COTS) to the data warehouse. It should *not* be used as a go-between vehicle to process high volume transactions to and from operational databases. Why? Because data structures and data validation differ between databases. For example, a warehouse would be well-suit-

ed for vertical interfaces between a facilities management system and headquarters systems, but not for horizontal interfaces with financial systems like STANFINS, SDS, or SAACONS.

The Fort Eustis test showed that the volume of STANFINS errors would probably substantially increase because of design differences between FM and IFS-CS. Though the test team made every effort to impose Army rules on the FM system to facilitate the STANFINS data maps, FM still couldn't perform all existing data validation checks—it just wasn't designed to do that. In practice, FM processed and passed the data in some cases where IFS-CS checks later

DPWs/DOIMs share information—expect action!

Over the years, one of the major barriers to DPW and District cooperation has been, paradoxically, improvements in communications.

Twenty years ago, when the PAX System was new and e-mail unheard of, the Corps lead the way in improving electronic communications with its supported customers. Master planners may not have been able to communicate with their installation customers except by phone and shotgun envelope, but they could send PAXMAIL to nearly anybody in the Corps. But times change, and what was novel and highly efficient is now the equivalent of quill pen days.

As we reinvent ourselves and move into Installation 21, we have very different needs, both in the amount of information we share and the immediacy of our needs.

DPWs and the Corps are already working in new ways that make the District virtually present on the installation. We will see it increasingly as installations downsize and look for other ways of supporting essential management tasks.

At the same time, offices across the installation need real time access to information formerly only available in printed reports and maps. Installation-wide GIS is a major man-

agement improvement, already in use by leading-edge local governments, and it demands substantial LAN Bandwidth.

The challenges are obvious. Which is why HQ USACE and CPW recently hosted a DPW/DOIM Groupware session in Arlington, Virginia. Thirty selected representatives from DPWs, MACOM engineers, Corps activities, DOIMs and the Army staff spent three days analyzing our immediate and future information-sharing requirements.

They also developed a priority list of critical action items, which will soon be briefed to the Chief of Engineers. Some of these are very basic, such as every Army employee who needs a phone to do his or her job needs e-mail and access to business-related websites and we must be able to move documents, CADD files, etc. easily between offices that need them. Expect action on these soon. Expect to see Districts with IFS access. Other things will take more time and resources, but a framework to address these has been created.

The session didn't end with the departure of the participants. It continues as a virtual meeting, on-line in a special website.

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New RAILER technology for Windows

by Paul Wood

A management tool developed for the Army can optimize maintenance and repair (M&R) planning for railroads at an annual cost of less than \$150 per track mile.

RAILER7 5.0, released in March 1998 in its point-and-click version for Windows 95, helps gather track inspection data, then uses it in vibrant graphical form to create charts and reports. The same database serves to inventory the track, analyze track conditions, and determine short- and long-term M&R priorities.

The system uses data to measure tracks against safety standards and calculate a Track Structure Condition Index. On a scale of 0 to 100, the index describes the track's ability to support routine traffic and points out the work needed to restore or maintain track at such a level.

RAILER7 supports two management levels. Network-level management assesses the entire track network condition, developing management strategies and budgets. Project-level management offers detailed analyses of specific track segments, helping to create cost-effective solutions.



RAILER has been released as a Windows version, making track maintenance and repair even easier for DPWs.

RAILER7 5.0 makes it even easier to generate graphs, charts, and reports that cut time in interpreting the results.

The technology, created at the U.S. Army Construction Engineering Research Laboratories (CERL) in Champaign, Illinois, has already been beta tested at several military sites, and earlier versions are being used commercially.

Tom Pinnick, a planner at Crane Naval Surface Warfare Center in Indiana, says the newest version of RAILER7, in conjunction with its Geographic Information System (GIS) version for easily making maps, has already saved time at his installation.

"In the long run, it's going to save the taxpayers a lot of money," Pinnick said. "We have an enormous amount of track, more than most bases, and time is an issue."

Pinnick said Crane has about 160 miles of track, about 130 of them active. "One of the things RAILER7 is going to do is tell us exactly how much track we have," he said. The RAILER7 system

allows users to keep exact track inventories and work histories, all a keystroke away. Additionally, he has used the GIS aspects of RAILER7 to create a colored map overview of the network used to plan and budget future operations.

From start to finish, RAILER7 is a time-saver. One inspector walking a railroad track can make steady progress for a while—until it's time to walk back. Updated pen-based computer data collection technology called RAILER7 RED (Remote Entry Database) enables two inspectors to collaborate and increase productivity up to 80 percent.

Integral to the system is an electronic clipboard, a commercial product used off-the-shelf in keeping with Department of Defense (DoD) efforts to avoid re-inventing the wheel. One member of the team communicates findings by radio to a second inspector who stays behind in the vehicle and enters the data into the pen-based clipboard.

Back in the office, the clipboard's data is dumped into the RAILER7 database in a matter of seconds. What used to be the work of inspectors, transcribers, bookkeepers, and graphic artists can be performed by one person using point-and-click Windows 95-based technology.

RAILER7 5.0 can greatly benefit the DPW's railroad operations by cutting man-hours both in inspections and database analysis. As the database grows, it can serve as a source of comparison over the short and long term, and provide an organized resource for decision-making.

For more information about RAILER, please contact Dr. Don Uzarski, CERL, at (217) 373-6742 or Jim Routsen, USACPW, at (703) 806-5041. **PWD**

Paul Wood is a contract writer for CERL.

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caused it to fail when generating STANFINS input. No COTS implementation strategy should include this kind of transaction processing. Daily interface transaction processing must be a function of an operational database. The implementation must be through Army controlled design, whether the government or a vendor develops the custom software.

Imposing business rules that COTS is not designed to support can limit or eliminate some of the system's own intended functionality. FM's capabilities were compromised when the test team designated data elements for IFS mapping purposes rather than using them as the system originally intended. This is unavoi-

able where fixed reporting requirements exist. Any COTS must address fixed data reporting needs to minimize such adverse effects.

A data warehouse must be maintained and updated by custom software. In the case of the Fort Eustis test, it also entailed a separate database that described the mappings between FM and IFS-CS. These factors impose an added operational burden on the DPW by loading on another database to maintain and more software to process. Data mappings can also be a source for additional errors. These potential concerns must be addressed when developing data warehouses. Again, data warehouses and related mappings should be used as information sources, not as daily transaction processors. **PWD**

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