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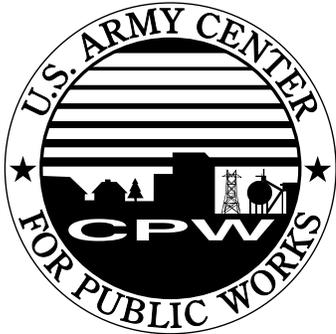
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**The US Army
Reserve:
Ready for Action**

Public Works *Digest*

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Address mail to:

Department of the Army
US Army Center for Public Works
Attn: Editor, *Public Works Digest*,
CECPW-P
7701 Telegraph Road
Alexandria, VA 22315-3862
Telephone: (703) 428-6404 DSN 328
FAX: (703) 428-7926
e-mail: alex.k.stakhiv@cpw01.usace.
army.mil

Edward T. Watling
Director—U.S. Army Center for
Public Works

Penelope Schmitt
Chief—DPW Liaison Office

Alexandra K. Stakhiv
Editor

Design and Layout:
Susan A. Shugars
RPI Marketing Communications
Baltimore, MD

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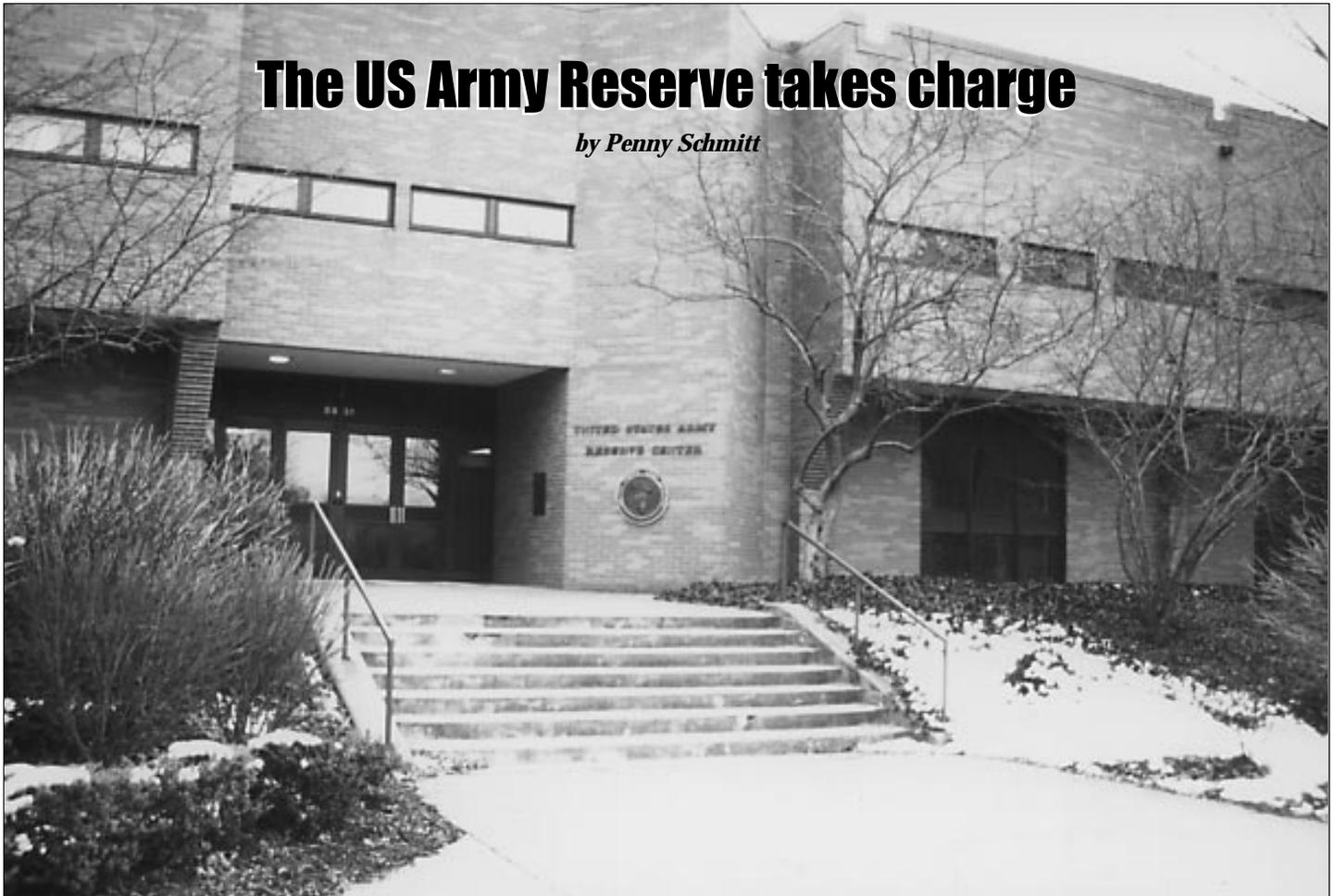


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The US Army Reserve takes charge

by Penny Schmitt



The Army Reserve will take care of its own real property from now on. (Photo by Richard Brown.)

What's it like to be in control? The U.S. Army Reserve Command (USARC) Engineers, located in Atlanta, Georgia, are experiencing both the joys and headaches of being their own landlords, after decades of dependence on Active Army installations taking care of their real property.

This fiscal year, the Army Reserve will acquire, resource, operate, maintain, and dispose of its own real property facilities. The USARC has also become the environmental steward for its real property assets.

Why did the Reserve do this? Mark Tillotson, Assistant Deputy Chief of Staff, Engineer, says the reason is incorporated in the Engineer's Vision: "Be the premier providers of excellent, state-of-the-art training and support fa-

cilities that maximize the readiness of the total force."

The command has set itself some ambitious goals. They include:

● **ISR Green**

Though the USAR began to participate in the Installation Status Report only last year, they've decided to aim for an IRS "Green" rating for every USAR facility by FY 2010. That means that facilities in the 1500 locations in the United States, with another 10 or 11 in Puerto Rico, must meet the highest Army inspection standards.

Part of the path to ISR "Green" includes divesting the Army Reserve of costly leased facilities. The goal is to draw down the bill for leased facilities from its FY 93 level of \$26.6 million to

\$10 million. At the close of 1996, the USARC was well on the way, at \$13.8 million.

● **Environmental restoration**

All environmental restoration work should be done by FY 2010 as well. "In some ways this will be easier for us," Tillotson said. "We don't have those hundreds of underground storage tanks the Active Army installations have to worry about. We have no depots or other big storage centers. Our restoration and remediation issues are comparatively modest."

● **Environmental compliance**

The USARC wants to reach compliance even sooner, by FY 2000. "While



we don't have the huge scope Active Army installations have to address, we have to deal with every State and Puerto Rico," Tillotson said. "We believe we can do this. This also supports our good neighbor philosophy," Tillotson added.

How? With a carefully re-engineered organization. "This wasn't an impulse move," Tillotson pointed out. "Planning began in 1988. We implemented the final phase last year." The Command, which used to be a traditional stovepipe type organization, is now organized into a matrix of regional customer support teams and functional teams focused on program development and management. Each Regional Support team consists of a functional representative from the following area: Master Planning, Real Estate, Construction, Facilities Operations, Environmental Stewardship, and Engineer Systems," says Doug Jones, Director of Facility Operations.

"As we have moved to managing our own BASOPs, we have moved more and more toward becoming smart shoppers. In fact, "Shop Smart" is a ruling concept for us. We work in a fully contracted environment. Before, when we depended upon installation DEHs to do the job for us, we were unsure what our costs or services were. We often couldn't establish priorities or expect to have them met. Over time this became more true, as the DEHs and DPWs continued to experience budget and staffing cuts. Now, we can prioritize for ourselves. The focus is on our number one, two, and three," continued Jones.

"We treat all potential providers, including federal sources, as contractors and suppliers," Jones said. "We are becoming very aggressive about establishing excellent customer/vendor relationships." He cited, as an example, the use of maintenance and repair contracts through the Corps of Engineers, Nashville District. "They have many parks with associated buildings to maintain. They are working in a similar environment. It makes sense to work with them."

Asked about the U.S. Army Corps of Engineers, Jones said, "We shop with

the Corps as with all our other providers. The bottom line is, that we buy from the Corps if they provide us with service at best cost." Jones emphasized, "We focus on the life cycle cost, not immediate low cost or low bid. This has led to us changing contracting agencies."

The ten Regional Support Commands are organized along the designated Standard federal Regions which are used by the Federal Management agency and EPA. "We see this standard as the future," Jones said. "Alignment with other federal agencies make sense. We can easily establish long term working relationships. These relationships are a key in the success of our Environmental Stewardship program. Our staffs work very closely with EPA. We have developed a high level of credibility. This creates a climate of cooperation toward finding the best solution to a particular problem."

How does each Regional Support Command (RSC) work? "We created a baseline standard for the RSC Deputy Chief of Staff Engineer (DESENGR)," Tillotson said. "For instance, the large RSCs were created with forward-based Customer Support teams to assist customers in smaller geographical areas within the RSC. The 81st RSC (see article on p. 4) calls these FAST teams. Call them what you will, the CST or FAST is the first point of contact for facilities needs. They accomplish minor repairs and forward major work requirements back to the RSC for programming and execution.

In addition to the RSCs, the USARC also has the support of the 416th Engineer Command, headquartered in Chicago. The 416th, a military reserve unit, is responsible for performing total facility assessments at every Reserve Center on a four-year cycle. "They have engineer expertise that we can't provide within the RSC DSENGR," Tillotson said. They ensure a baseline look at the total facility infrastructure on a cyclical basis.

As if there wasn't enough to do, the USARC is also picking up some scattered, but important, BASOPs missions for the Active Army. "We think that we are the ultimate experts in small, isolated facilities that aren't part of a large

military reservation. On 1 October 1996, we assumed the off-post area support mission for California from Fort Lewis. Our 63rd RSC is better located to provide this support and Fort Lewis is more able to concentrate on training their soldiers. We are currently working with TRADOC to determine if we can take all their off-post facilities support. That includes things like ROTC facilities, recruiting offices, remote sites, communication towers, and cemeteries. Believe it or not, the cemeteries require the most intensive management."

What does the USARC have to offer the Active Army? "Not just cemetery management!" Tillotson said. "We believe we have the potential to play a major role in the Army's BASOPS mission."

CPW automation expert Deanna Devier agrees that the USAR has some interesting things to offer, especially in the systems area. Because it has worked side-by-side with the Active Army, but hasn't been quite the same as the Active Army, the USAR has developed some automated systems and databases that address unique requirements. Gathered under an umbrella system known as the Engineer Management Automation Army Reserve (EMAAR), the system tracks real property (using the Standard Army Management Information System (STAMIS) IFS-M Real Property Management Module), environmental A-106 requirements, environmental assessment data, military construction program documentation, PPBES, and geographic information systems (GIS) information.

"This GIS information is used in a really good way," Devier said. "It is very useful for planning and for tracking work they have done. Because they are located throughout the United States, the spatial display of information on a map allows them to see trends and relationships not possible through the simple display of numbers."

"The Resource Information System Engineer Reserve (RISER) started from USAREUR's Resource Information Systems Engineers," said Jones. "We adopt good ideas and hopefully make them better. RISER allowed us to accomplish cradle-to-grave work order and financial management. We can





group any number of work orders, contracts, and financial documents, allowing RSCs the flexibility to accomplish the work most efficiently, but ensuring the capture of costs to building level detail. We also have automated connectivity to dCAS, CAPS (Commercial Accounts Payable System), and RADDs. We capture the data once, then we manipulate the data to accomplish the many reporting requirements. RISER automatically creates each RSC and the USARC Annual Management Plan as well as the extracts necessary for the POM.”

In many ways, the USARC certainly pulls the Active Army and its service providers out of several geographical and organizational boxes.

- The standard Federal Region concept shifts geographic relationships

away from Active Army installations and even from Corps Divisions and Districts—repainting the look of the nation’s real service and support areas from both and emergency management and military support perspective.

- The Active Army’s installations of the future can also learn from the model the USARC is creating today. “Our USAR centers are primarily places to work,” Tillotson said. “They are very integrated with the local community for all types of support, from fire prevention to utilities. We don’t own everything you could ever think of using—we only own and manage what we know we will consistently need; all else we buy.”

- The Army Reserve accepts constant change as the basis of its life. “Long-range planning is a challenge. Anything beyond 18 months to two years begins to enter an area of extreme unpredictability for us,” Jones said. “Our force structure is subject to major shifts over short time periods. We can’t plan to put down roots and become a permanent institution or monument in any particular community. Yet we must create a Master Plan which identifies ‘core’ facilities. This paradox makes work fun.”

- The Regional Support Command (RSC) engineer organizations are lean. The largest consists of 42 engineers, facility management specialist, environmental specialists, community planners, real estate/real property specialists, and procurement specialists, supporting 1000 buildings in an eight-state area. This situation forces a totally purchased support net. For the RCSs, there’s no doing it—only buying it done.

- Lean budgets demand the most aggressive, innovative shopping technique on the part of the Command. Army providers who don’t compete effectively will lose business. “We have no privileged vendors,” Jones said. “We have to walk to another provider if we don’t receive value for our money.”

- “We highly value long-term customer/vendor relationships. We work with many federal entities to develop long-term provider relationships. We will work with any organization to develop a customer/vendor relationship for provision of high quality, best life cycle cost products. We do not simply look for the least cost, we look for the highest value.”

POC is Doug Jones, Director of Facility Operations, USARC, (404) 629-8256. **PWD**

Penny Schmitt is the Chief of the DPW Liaison Office at CPW.

RPS— A new tool for Real Property accountability

by Frank Schwenk

This past year, the USACPW team Fort Lee concentrated their efforts on software in support of the Real Property community and the Reserves. We

recently developed a Windows version Real Property reporting system known as the Real Property Standalone (RPS) to support the smaller installations, AMC depots and the Reserve Support Commands.

The RPS was developed in Microsoft Access and has the same screens and data structure as the full-fledged installation Integrated Facilities System (IFS) product. Using RPS, you can create queries and custom reports to answer all those “what if” questions that people ask.

For the Reserves, RPS includes the data element “Fac-Id-No,” so the tables in IFS Real Property can be related to the Engineer Management Automation Army Reserve system. Representatives of the USA Reserve Command in Atlanta participated in all testing levels. Final testing was conducted with the help of the 124th Reserve Command in Seattle, Wash-

ington. Tailored training was created to assist the Reserve Commands in learning the functional and technical aspects of using the system.

The complete Windows on-line help system is a unique feature of the RPS software. It requires no hard copy user manual! The system, the screens and the individual fields all have contextual help, which tells you what the field is and what values are valid. In some cases, it even provides Army Regulation references. The product also produces the quarterly reports that provide data to Department of the Army on Real Property holdings.

There are currently 10 US Army Reserve Regional Support Commands and 36 Army Materiel Command sites using the Real Property Standalone version of IFS.

POC is Frank Schwenk, CECPW-FS, (804) 862-6645. **PWD**

Frank Schwenk leads the Test and Quality Assurance Team in CPW’s Facilities Management Directorate at Fort Lee, VA.



Installations without boundaries

by Penny Schmitt

They are *way* “bigger than a bread box,” some contain more than five Corps District offices, and at least two of them serve as many soldiers as Fort Bragg does. What are they? The Army Reserve’s ten new Regional Support Commands (RSCs).

When the Army Reserves reorganized and took over their own real property assets management responsibilities last year, it set up ten Regional Support Commands in the Continental United States. The Commands correspond geographically to the ten Federal Emergency Management Agency regions.

Each RSC manages Reserve facilities within its geographical boundaries. During a recent U.S. Army Center for Public Works Staff Assistance Visit, we talked with the DCSENGR of one of the nation’s largest RSCs, the 81st Reserve Support Command, headquartered in Birmingham, Alabama.

A glance at the map shows what a big bite of the United States the 81st manages. It is made up of the states of North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, and Kentucky—a 400,000 square mile area.

LTC Joe Rogers, Regional Engineer for the 81st, pointed out that his staff

can be a two-day drive away from some of the more distant facilities. “We have as many soldiers and as much property to manage as many installations,” Rogers said. “It’s just spread out a lot further.”

The 81st serves 238 Reserve Centers, with about five million square feet of building space. The Southeastern RSC serves 42,000 soldiers, including 90 percent of the Army’s chemical units. The Reserve units have varied missions, and because of their decentralization, pose some unique problems. “We have boat companies in Florida, other types of units all over,” Rogers said. “In managing our property, we sometimes have to take an unusual approach. Our Apache helicopters, for example, are subject to the same rules you would have at any Army installation. The weaponry must be visually checked once an hour, 24 hours a day. Anywhere else, you’d do that by posting a guard. We have to do it with microwave fence and cameras that tape

the area every hour to ensure we have ‘eyes’ on the weapons.”

Another issue that’s especially important for the Army Reserve is facility readiness. Time loss is a really serious problem. Training schedules can’t just be shifted, when the troops have only a limited window to be at their facilities. If the electricity is out or the heat is off or there’s a major building repair needed, that can wipe out a whole training cycle. We have to do what needs to be done—right now.”

Last year, the 81st managed its facilities on a budget of \$24 million. “This year so far it looks like \$16 million. We hope for more, but we don’t know.” Rogers said.

Manpower is tight as well. The 81st supports a 42-member team to manage its far-flung real property. “We are not like an installation Directorate of Public Works, though we are responsible for seeing that all the same tasks are accomplished. We do not have the housing and single soldier communities, the chapels, the NAF facilities, or the large cantonment areas a DPW manages. Instead, we have facilities like training and administrative buildings, motor pools, hangars, boat facilities and other specialized infrastructure spread out from the Northwestern tip of Kentucky all the way to the Florida Keys.”

The hands-on part of the effort resides in four FAST (Facility Area Support Teams). “Each team covers a two-state area,” Rogers said. “We have a total of 18 people in the field, with 24 back here at the DCSENGR to manage environment, contracting, real estate, engineering, resources, and all the rest. The forward FAST members are expected to visit and inspect each of the Reserve Centers entrusted to their care at least once a year.”

The FAST teams have no mobilization role. Their job is to be the advocate for their facilities’ needs. They receive work requests, document changes and requirements in the Reserves automated property management system, RISER, and track follow up and warranty on the properties. “The FASTs have up to \$25,000 funding authority,”



The Reserve has the same kind of facilities and equipment that the Army has, but intermittent use makes it harder to track and maintain them. (Photo by Richard Brown.)





Rogers said. "Anything more costly than that comes back here for approval."

"We need to get them trained so that they can have a better awareness of structural problems, fire protection requirements, and facility systems," Rogers said. "We need them to be eyes and ears to identify problems before we have a major breakdown or failure. We at headquarters have to be their 'trouble desk,' assist when they find something wrong. There is no way that we can do the work ourselves with so few people. We have three engineer positions—one civil engineer and two planners. We have to buy everything. We must go to outside providers, whether it be the Corps of Engineers, the Navy, or another source."

LTC Rogers has been working closely with his FAST teams to help them improve service to the field. "Each quarter for the past year, we have held a process check for the engineer staff. We go off-site and sit down to work through four major business processes each time we meet. This has worked really well."

The four FAST regions correspond to former ARCOM boundaries. "There was some territorial thinking at first, but the baggage is dropping away. Now we are more in a District-to-Area Office type of relationship with them. They are working more on SOPs, getting standardized across all regions."

Although this new role for the Reserves is challenging, Rogers says that he believes it is an improvement. "When our facilities were cared for us by a nearby installation, the standards varied among installations. With today's budgets, the DPW honestly doesn't have time or money to take care of his own—let alone our facilities. It's

true that we have very little staff and not enough resources, but we can at least determine our own priorities."

Rogers noted that the Reserves are even more strapped than the Active Army for facilities funding. To cope with the money and personnel crunch, the RSCs must shop smart and squeeze every nickel.

"One thing we are trying to do is to reduce the amount of leased property we use," Rogers explained. "Last year we cut down our lease bill from \$4 million to \$1.5 million. We are trying to end a lease worth about \$700,000 on an office building. That is the biggest remaining piece of leased property we can divest."

Making do with such a small staff creates stresses. "To cover this territory, we have to be a traveling organization," Rogers said. "Last year we spent thousands on travel for our 42 people. You see lights on around here until 11:00, 12:30. We can't budget for overtime, so we do comp time. But there's no time to take the comp time. We have our share of stress and burnout! We can use any help we can get—for a reasonable price."

What kind of help does the 81st Regional Support Command need? "We need ways to wrap together a lot of similar tasks that can be repeated across a fairly wide geographic area," said Dale Johnson, the Assistant DCSENG for the 81st. "I can tell you that we have a lot of aging HVAC systems in Florida, for example, that could use some kind of routine overhaul and repair contract against them. We have to figure out custodial care for our buildings. Unlike an installation, we aren't operating them all on a continuous basis, and they're not close to each other. So how do you make sure the grass gets cut and the trash gets removed? Who does QC on that? It's a different kind of problem!"

"For installations, JOC has proven to be a great answer. But so far I haven't been able to get an M&R contractor even to make a regional bid on some part of our scattered facilities. Credit cards are working well—we are using them to make more than 90 percent of our purchases under

\$2,500."

"We have found that a Huntsville instrument called a Requirements Contract has been great for us. A lot of what we need to do is two-step component repairs for facilities that already exist. We don't need to design and build, just to fix. This contract doesn't need to include design, and so it saves us time and money. It has been great for us."

Utilities bills pose another set of challenges. Johnson's response has some potential for other installations. "I am paying about 500 different utility bills every month," Johnson said. "They are all over the place both geographically and cost-wise. That's because our peak charges vary a lot. Right now, I have got monitors on several of my facilities to see just what our peak use really is. I suspect the power company might be hitting us with peak demand charges based on what we'd be using if we were operating at our heaviest during the 7 to 8 p.m. time frame. That's not true for us. We are peaking at a different time of day. I think if we monitor and get the data, we can show them they are overestimating the peak demand charge. I might even be able to go to a residential rate for some of our facilities."

"We need to get our small staff here 'smart enough' to raise a flag when they see potential structural or safety problems. We don't need them to be experts to fix things, just to notice when there's something going wrong that needs timely attention. Boilers, fire inspections, structural things—we don't need to make them into Professional Engineers, but we do need them to be our eyes and ears."

"We have few or no railroads, not many roads, but thousands of acres of hardstand and parking lots. We have hundreds of roofs—but rarely do we have one sitting next to another. All across the board, we have the same kinds of facilities the Army has—but spread out, intermittently used and occupied, harder to track and maintain," LTC Rogers said. "It's a big job, and we welcome any and all ideas for doing it effectively."

POC is Dale Johnson, Assistant DCSENG for the 81st Reserve Support Command, (205) 940-3523. **PWD**

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Reserves, Corps, Guard pioneer new design technology

by Lyle V. Bonham

Building design faces fundamental change. The Army Reserve uses new software, the Modular Design System (MDS), for its military construction program. The software was developed in cooperation with the U.S. Army Corps of Engineers and the National Guard. It is a powerful tool for skilled architects and engineers in multiple disciplines.

As the name implies, the module is the key to MDS. Each module is like a box. It holds objects and attributes that define a room. A user "stacks boxes" together to design a building.

Figure 1 shows part of a module layout with open MDS windows and tool palettes. Each module has dimensions and a three-letter code to designate the type of room. For example, a classroom looks like a rectangle. The code is CLS. The user doesn't have to remember the module code, since the project requirements window displays descriptions.

Modules vary in degrees of sophistication. Depending on function, they have companion architectural, electrical, mechanical, furniture, or structural elements. These elements are invisible in space layout, but they appear later in other design discipline files.

Current module dimensions are in

feet, because the Corps set its metric design policy at the end of MDS' initial development. Soon the system will support either English or metric design.

When the user finishes a layout, he can generate a file for export to MCACES, the standard Corps cost estimating software. The export file contains data from each module. This powerful feature provides a reliable parametric cost estimate early in the design process.

With a mouse click, MDS converts the space layout (Figure 1) into an initial architectural plan. The system automatically creates walls, numbers and names rooms, and places predefined architectural items. The MDS architectural palette has tools to complete the architectural plan. Figure 2 shows a plan developed from the Figure 1 layout.

The MDS tools manipulate graphic elements on screen. They also link design elements to the software's intelligence. For example, the door placement tool positions the door, "cuts" the wall, sets the door swing, and aligns the light switch. It automatically numbers the door and tracks it for the door schedule.

Like the architectural plan, the software creates each design discipline's ini-

tial plan with elements predetermined from the modules in space layout. Each discipline has its own set of MDS tools to complete its plan. Within a room, the module coordinates all disciplines. For example, Figure 3 illustrates the initial furniture plan, which the program automatically generates. The interior designer then refines it, making adjustments for doors, windows, and specific customer needs.

The Modular Design System grew out of a joint initiative by the Army Reserve, the Army National Guard, and the Corps of Engineers. The Louisville District developed it by contract with JMGR, an architect/engineer (A/E) firm from Memphis, Tennessee.

Thus, MDS provides documents for both Corps and state construction contracts. This requirement significantly impacts the current specifications generated by MDS. The software tracks applicable specifications for printout with design documents. Current MDS specifications are a hybrid in Construction Specification Institute (CSI) format, since the National Guard does not use Corps of Engineers Guide Specifications for state designs.

Once design proceeds to the architectural plan, the cost estimate counts actual items placed, by MDS tools, in each discipline's plan. It is a design-to-date. This is in contrast to the program estimate developed earlier, which provides a complete building estimate from the modules.

By intent, some design work is outside MDS. The amount done in MDS varies by discipline from 45 to 80 percent. Time savings range from 25 to 70 percent.

The Army Reserve and Corps of Engineers signed a memorandum of agreement (MOA) in August 1994 to maximize the use of this new tool. Under the MOA, Louisville District is the central manager of Army Reserve military construction projects.

In addition to its in-house staff, the district has four A/E firms under multi-

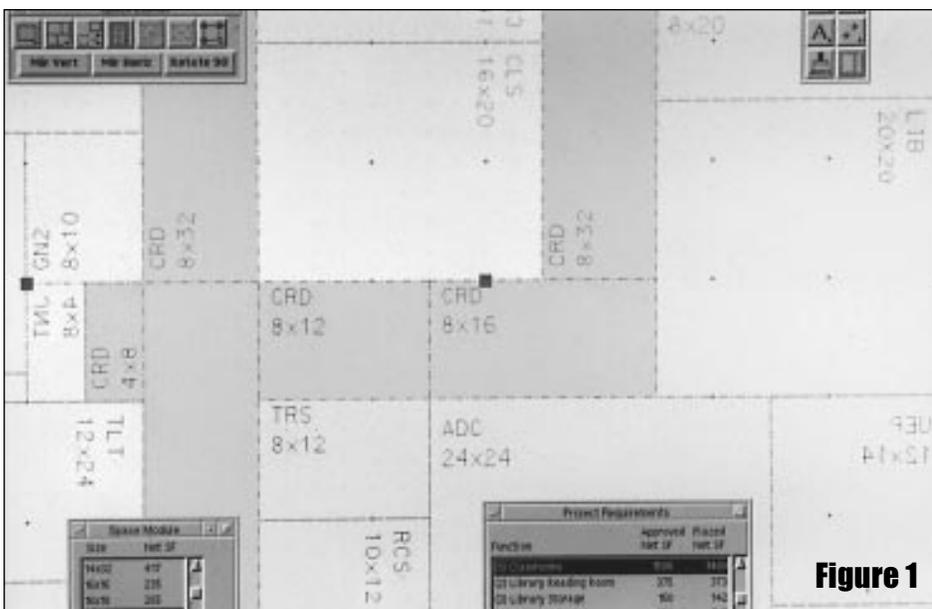


Figure 1



year contract for MDS designs. They are Mason and Hanger in Lexington, Kentucky, RSP in Minneapolis, Minnesota, Omura Casey in North Palm Beach, Florida, and Tapan Am in Wichita, Kansas. Since June 1995, the Louisville District has sponsored partnering sessions with the Army Reserve and A/E firms to mold the MDS production team.

The Fort Worth, Omaha, Sacramento, Savannah, and Seattle Districts, as well as the Huntsville Engineering and Support Center, also have in-house designers trained in MDS through the Corps' PROSPECT system.

Engineers within the Army Reserve use MDS layouts to help customers identify their project needs and options. This improves their dialogue with the A/E and installation staff in a design charette process.

This process does not replace design professionals. In fact, a novice can quickly design a bad building! Figure 2 illustrates this with two easy errors. First, the designer left an automatically-created wall segment near doors 224A, 227A, and 233A that blocks access to the corridor. Second, the toilets don't meet handicapped accessibility requirements.

To date, there are two finished MDS designs. Both are joint Army, Navy, and Marine Corps Reserve projects. One took less than eight months from predesign meeting to construction contract award. It has a 96,000 square foot,

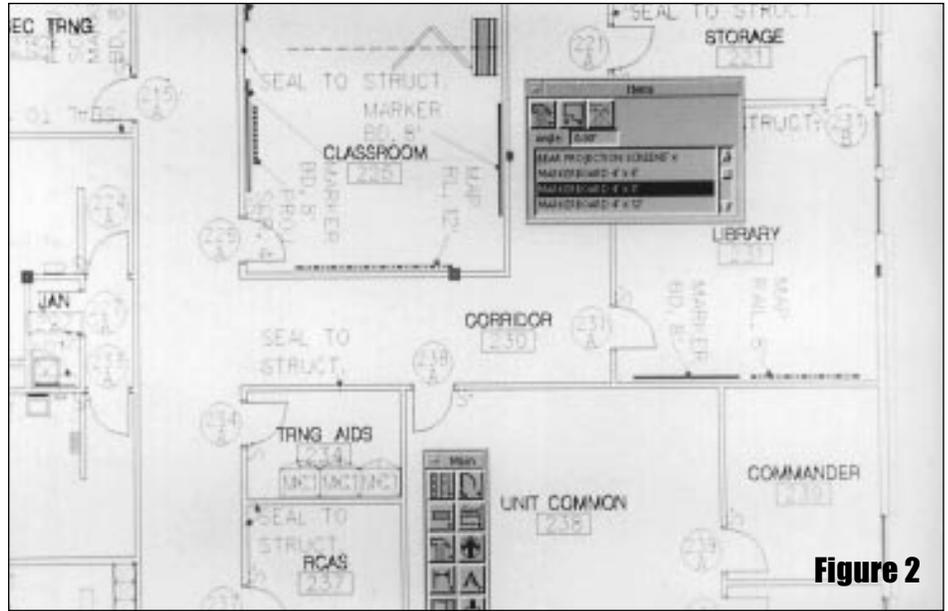


Figure 2

two-story training building and a 37,000 square foot maintenance shop.

There are eight other MDS designs at various stages. They include a building addition, a renovation, a campus-type complex of four buildings, and two airfield facilities. Only three of the eight are the type of design project originally envisioned during MDS development.

Headquarters, U.S. Army Corps of Engineers, is the proponent for MDS. The Information Technology Laboratory at Waterways Experiment Station serves as the program agent, controlling engineering and software changes. As

the Tri-Service CADD Standard evolves to a national standard, the WES Information Technology Lab will keep MDS in compliance.

The U.S. Army Construction Engineering Research Laboratory (CERL) is the technical agent. CERL assists software development and has technology research programs with academia.

Significant changes are coming in April 1997 with MDS Version 2.0. Key enhancements include design of multiple building types, in hard metric, up to five stories, with Corps of Engineers Guide Specifications.

Last year, the Corps signed a cooperative research and development agreement (CRaDA) to turn MDS into commercial software. The other CRaDA partners are Bentley Systems, JMGR, IdeaGraphix, and Building Systems Design. The commercial version should be available in October 1999.

The Modular Design System is evolving as exciting new design technology becomes available. Look for distributed design over the Internet by the year 2001.

POC is Lyle V. Bonham, consultant to the Office of the Chief, Army Reserve, HQDA OCAR (DAAR-EN), (703) 696-6235. **PWD**

Lyle V. Bonham is the program manager for the Modular Design System.

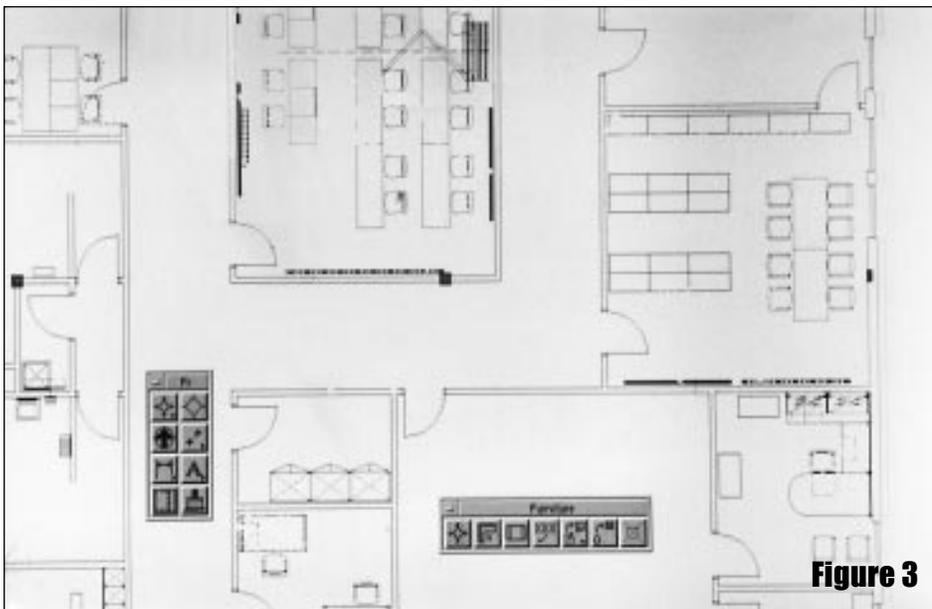


Figure 3



UST deadline approaches

by Jane Anderson

The Environmental Protection Agency's (EPA) December 1998 deadline for upgrading underground storage tanks (USTs) is rapidly approaching. EPA continues to emphasize that the deadline will not be extended. In the *Session Highlights* of the 8th Annual UST/LUST National Conference, EPA states that "There is absolutely no talk in Washington of changing the deadline."

The Army Environmental Center (AEC) reports that EPA intends to launch a nationwide enforcement sweep this spring, focusing on inspecting USTs

for leak detection compliance. Part of the purpose of the sweep is to emphasize that the December 1998 requirements will be enforced, and no extensions will be granted. All 10 EPA regions, along with state enforcement authorities, will be involved with the sweep.

In addition, installations should be aware that there is currently an audit of

Army UST compliance being conducted by the Army Audit Agency (AAA). This is an extensive audit, which will look at compliance with 1998 standards, leak detection compliance, use of TANKMAN or alternative software, fines and penalties assessed and also getting a count of all heating oil tanks (whether or not they are regulated). The AAA summary report should be completed by June 1997.

As a reminder, the 1998 requirements for underground storage tanks are:

1 Spill protection via catchment basins to contain spills from delivery hoses.

2 Overfill protection via automatic shutoff devices, overfill alarms, or ball float valves.

3 Corrosion protection via use of tanks constructed of or clad with non-corrodible materials, coated steel tanks with cathodic protection, or uncoated tanks with an interior lining and/or cathodic protection.

Underground piping must have cathodic protection, with or without a corrosion-resistant coating, or be made of a non-corrodible material.

Installations installing new underground or aboveground gasoline storage tanks to meet the new requirements may also want to consider procuring tanks with Stage I and II vapor control fittings. Current regulations require these fittings only in ozone non-attainment, but in the future, their use may be required at all gasoline fueling stations. The cost to retrofit existing tanks with these fittings (including welding, and, in the case of USTs, excavation) will be much greater than including them in the initial purchase.

CPW POCs for UST assistance are Dennis Vevang, (703) 806-6071 DSN 656 (mechanical issues), and Jane Anderson, (703) 806-5214 DSN 656 (corrosion protection). AEC POCs are Michael Worsham, (410) 612-7076, and Paul Josephson, (410) 671-1205 (vapor controls). **PWD**

Jane Anderson works on corrosion control issues in CPW's Sanitary and Chemical Division.

Basic ordering agreement helps buy ozone-friendly chillers

by Dennis Vevang

A recent memo makes installation commanders responsible for ensuring Class I ozone-depleting chemicals (ODCs) are eliminated from their installations by the end of fiscal year 2003. The February 16, 1996, Assistant Secretary of the Army for Installations, Logistics, and the Environment (ASA(IL&E)) memo sets the ground rules for Ozone-Depleting Chemicals (ODC) elimination at all Army installations.

Chillers with 100 tons or more of cooling capacity can contain large quantities of chlorofluorocarbons (CFC), a Class I ODC. To simplify procurement of these chillers, the Department of Energy and the General Service Administration (GSA) have formed a basic ordering agreement that can be used by all federal agencies.

This basic ordering agreement is a first-of-its-kind, cost-saving procurement vehicle for acquiring 100- to 2,000-ton, commercially-available centrifugal and rotary screw, water-chilling packages. It is a cooperative approach that advances energy efficiency and stratospheric ozone layer protection **and** supports the procure-

ment streamlining goals in laws and executive orders. Use of this basic ordering contract significantly reduces the procurement, design, and other costs associated with federal purchasing of chillers.

For more information, here are some points of contact:

- To obtain a GSA-issued directory, please FAX: (817) 334-5227 or e-mail, ken.cowan@gsa.gov.
- For the terms and conditions of the basic ordering agreement, please contact Jane Parman, GSA Contracting Officer, at (817) 978-2929 or e-mail: jane.parmann@gsa.gov.
- The URL for the Chiller Program is <http://www.gsa.gov/regions/7fss/7fx/chiller.htm>.
- For more detailed information on CFCs, please contact Dennis Vevang, CECPW-EM, (703) 806-6071 DSN 656, FAX: (703) 806-5220. **PWD**

Dennis Vevang is a mechanical engineer in the Mechanical & Energy Division of the US Army Center for Public Works, Fort Belvoir, VA.



Chief of Engineers releases strategic plan

As promised, LTG Joe N. Ballard released his strategic plan on February 14, 1997. The document will set a direction for further planning and action within the Corps. In creating the strategic plan, the Chief called for the ideas of his Transition Team, the Corps' Senior Leaders and District Engineers. A "second cycle," to develop Headquarters and Division Campaign Plans as well as Operational Plans for Districts, FOAs and Labs, will implement the strategic plan.

Prologue:

Throughout its history, the U.S. Army Corps of Engineers has served the national interest. Whenever the needs of the Army and the Nation changed, the Corps changed to perform new roles and missions.

The needs of the Army and the Nation are again changing!

The ideas in this Strategic Plan form the blueprint we—the soldiers and civilians of the Corps—will use to guide us as we respond to the needs of the future.

Vision statement:

The U.S. Army Corps of Engineers is the world's premier engineering organization. Trained and ready to provide support anytime, anyplace. We are a full spectrum Engineer Force of high quality, dedicated soldiers and civilians:

- A vital part of the Army.
- The Engineer team of choice—responding to our Nation's needs in peace and war.
- A values-based organization—Respected, Responsive, and Reliable.
- Changing today to meet tomorrow's challenges!

Master Strategy: Corps Plus

The Corps Plus strategy is designed to provide:

- Better service to the Army and Nation in traditional Corps mission areas.
- Enhanced service through an expanded Corps role in strategically targeted Army military and civil mission areas.

To implement the plan, the Corps will work to achieve three interconnect-



LTG Joe N. Ballard

ed goals, each with substrategies designed to build toward those goals. They are:

- Revolutionize effectiveness.
 - Align for success.
 - Satisfy the customer.
 - Build the team.
- Seek growth opportunities.
 - Serve the Army.
 - Enhance capabilities.
- Invest in people.
 - Build strategic commitment.
 - Reshape the Corps culture.

The substrategies are the "action items" in the vision. This is where Corps personnel will be focusing their efforts to identify and implement initiatives. Let's take a closer look at what the vision statement says about each:

Align for success: Continuously evaluate and realign, as necessary, existing missions, systems, resources, and organizations to reinforce our strategies.

Satisfy the customer: Significantly reengineer business processes and leverage leading edge technology to optimize effectiveness from our customers' perspective.

Build the team: Leverage the total Corps organization through teamwork to provide seamless support to customers.

Serve the Army: Focus energy on concerns of the Army leadership and challenges to the Army to serve the Nation.

Enhance capabilities: Market and capitalize on opportunities for mission growth.

Build Strategic commitment: Develop marketing and strategic communications plans to create an understanding and commitment to the corporate strategy.

Reshape the culture: shape a culture that reinforces corporateness, customer service, core values and the importance of investing in people.

Epilogue:

As the forty-ninth Chief of Engineers, I am committed to ensuring that the U.S. Army Corps of Engineers is poised and ready to perform the missions that await us in the next century. Essayons!

Lieutenant General Joe N. Ballard
Commander
United States Army Corps of
Engineers **PWD**



Author's note: I've spent the past twenty years in the installation public works business. In that time, I developed a few methods to get things done. This story relates my personal experience—how I took advantage of the services offered by my local Army Corps of Engineers District to get first-rate installation real property support.

How I learned to love the Corps

by Jim Kelley

I've discovered the secret of getting things done in the government. This is so powerful a revelation that it would overwhelm our bureaucracy if we all applied it. Yet it's simple: Treat people with respect . . . and you will build trust. Tell the truth . . . and you will earn loyalty. Show you care . . . and granite-solid relationships form. Talk to each other!

Time after time, I read and heard about the Army Corps of Engineers program for customer support. But I never saw myself as a customer. The flag that flew outside my office had the same Corps castle on it that flew in front of the District office building. I thought I belonged to that big organization called the U.S. Army Corps of Engineers.

I learned that I was the customer—not included in the Corps fraternity. Oh well, with that understood, it seemed natural to set about doing real property sustainment with the tools at hand.

My only exposure to the Corps had come through the big military construction projects. The Corps has a great management system in place. It deals with scope changes, cost overruns and schedule changes on "big" construction projects. But when those complex systems address small scope, low-dollar projects, their usefulness quickly becomes extinct. Their only purpose seems to be to increase costs and delay completion.

How do you go about changing the big Corps system? It's powerful. It's simple. You ask for help.

That's what I did. I asked for help. Here's how I got the help I needed:

I started by calling my installation advocate in the local supporting Corps district's Plans and Program Manage-

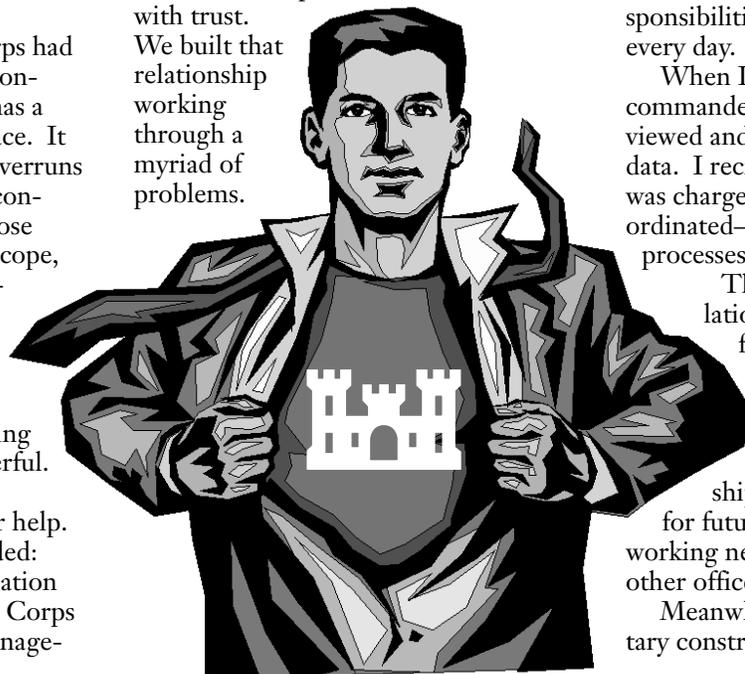
ment Division (PPMD). I was told that as a customer, I should always contact my advocate in PPMD first for any and all problems. I took them at their word.

The person who responded to my request was fully capable of turning on that complex system that hadn't solved my problems. I visited this advocate of mine. We had lunch. I explained the

"Calling on the Corps proved invaluable."

differences between big military construction projects and the maintenance and repair jobs I dealt with on a daily basis. I asked for his personal help. We shook hands and made a gentleman's agreement that we would work together and share both problems and solutions.

What a novel approach to business! Two mature adults meeting and agreeing to work together without permission or anything in writing. We started our relationship with trust. We built that relationship working through a myriad of problems.



Shortly after this bonding, a major event occurred—BRAC 91. My installation was targeted for a major mission change. That change was dramatic. It reduced the troop population by half, and changed our main activity from training mechanized forces to a graduate level, tactical training center. The fast-paced schedule to get us to the mission change would not tolerate a business-as-usual pace in the Directorate of Public Works.

We had to produce big construction projects within 18 months, instead of the usual three years. Operation, maintenance and repair work continued day after day. We had no time to learn the accelerated business processes BRAC 91 demanded.

The recently established relationship with our District advocate proved invaluable. The trust between us served to extend both my capabilities and his. My Corps advocate and I worked as twins in executing our responsibilities. We talked to each other every day.

When I provided information to my commander or staff, my advocate reviewed and even helped to prepare the data. I reciprocated when my advocate was charged with similar tasks. We coordinated—we *orchestrated* all our processes.

The true customer, the installation commander, saw no differences between my actions and those of my advocate. We worked as one—one Corps, one engineer, one problem-solving partnership. That effort opened doors for future growth. It expanded a working net of relationships through other offices in the Corps District.

Meanwhile, BRAC 91 froze all military construction projects at installa-



tions identified for change until new mission master plans could be developed. I asked my Corps District to prepare the master plan.

The first response was traditional. "We'll hire an Architect-Engineer firm and have the product in six to eight months."

But we couldn't afford to wait that long. Business as usual wouldn't work.

I asked my advocate to arrange a meeting with in-house planning personnel. The meeting took place within two days. I met with a branch chief and explained the situation. During that meeting we made agreements to prepare the master plan with personnel from the District staff. We knew that we needed to train them, and agreed to a greatly compressed schedule: One week to train and four to six weeks to prepare the plan. It was an unheard of schedule for a marginally trained staff.

The result of building trust and agreement for both the product and the process was a completed update for the master plan in 70 calendar days. Multi-million-dollar construction projects were validated and monies released for execution.

The Army was the immediate benefactor. My staff extension was the ultimate winner. I had brokered a capability with professional Corps planning personnel that would multiply tenfold in the future.

By immersing in Corps processes through my advocate, I was able to learn how to ask for support. Understanding how the Corps was funded was a major breakthrough in truly partnering for services. The reimbursable nature of business that sets the Corps apart from other government agencies necessitated a fresh approach to resource management.

The Corps can't perform unless they have funding in hand. I learned the importance of including my Corps resource management person in the process so that together we could tweak our collective funding needs. My need was to obtain creative, flexible funds management practices so that the Corps could have a flow of sufficient money to continue their support.

I began by learning the Corps processes, then educating them on my budget cycles/nuances and including them in all funding decisions that

Limit on *Digest* copies

Due to heightened security restrictions, we can no longer mail more than four copies of the *Public Works Digest* to the international and military APO/FPO addresses on our distribution list. New regulations limit us to a maximum of 16 ounces going overseas. Anything over 16 ounces must be presented in person at a post office, where a customs form must be filled out for each package. For these reasons, our overseas readers will be limited to four copies in the future. All domestic readers will continue to receive the requested numbers of *Digest* copies.

We would like to remind our readers everywhere that the *Digest* is now available on the worldwide web on our home page: <http://www.usacpe.belvoir.army.mil> **PWD**

would ultimately result in Corps involvement in my business.

I provided copies of my annual work plan and Advanced Acquisition Plan (potential contracts listing) and the Corps included me in their Project Review Board sessions as well as quarterly updates to the commander. That education exchange effort paid dividends that continue to this day.

I am a Corps customer out of necessity and choice. Personnel reductions limited my abilities to prepare in-house maintenance and repair contracts.

Those same personnel shortages were not improved by hiring architect-engineer firms. Someone still had to manage those contracts. The Corps provided a smooth service to both manage the contracts and provide project and program management.

I quickly realized the value of activating the full turnkey capabilities of the Corps and forged more in-depth relationships. Corps personnel provided dedicated project management and quality assurance services for contracts my staff prepared, as well as those the Corps had prepared. In addition, the Corps' local construction office worked side by side with my staff to manage maintenance and repair projects. Simplified design and construction became the norm rather than the exception.

Those same personnel reductions led me to ask the Corps for help in sustaining my installation master plan. Our previous team building made it a natural progression for the Corps to assume more of the master planning role. The strength of the relationship, coupled with the trust and shared responsibilities, were the hallmarks of the resulting agreement.

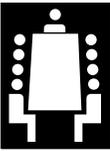
I asked the Corps to assume 80 to 90 percent of the internal controls for Real Property Master Planning. We developed an execution strategy, listed specific tasks to accomplish the job, and identified funding needed to support the program. The overall plan was submitted to the installation commander and approved, thereby enabling critical personnel full-time equivalents to be directed elsewhere on the installation. The marriage of Corps and installation master planning was a natural good choice.

Once again, calling on the Corps proved invaluable. Today, people call it partnering when the Corps and installation DPW do these things. When we did it, we just called it "getting the job done," — without the bureaucracy, the complex system, and yes, even sometimes without asking for permission.

We took some risks to better serve our customers. We learned about each other's business. We listened to each other's problems and worked solutions together. We built trust and friendships. We didn't rely on written rules nor guidelines on how to treat each other fairly. We rolled up our sleeves and set about solving real property problems by uniting our strengths. We simply worked together.

POC is Jim Kelley, CESWF-DI, (800) 250-1746. **PWD**

Jim Kelley recently moved from the Fort Polk DPW to become the chief of the USACE Reinvention Center for District Installation Support in Fort Worth, TX.



Redstone DPW “scores” priorities

by G. Keith Kirksey

Setting priorities for job order requests (JORs) at the Redstone Arsenal DPW will never be the same. Redstone has implemented a “high score wins” approach to setting priorities, after an installation process action team spent several months analyzing the post’s JORs.

This weighted priority method, tailored to specific installation requirements, provides decision makers a just basis for making and defending prioritization decisions. It also incorporates key elements from “the way we’ve always done things,” which include:

- **The “Closed Door” Approach:** A committee of one or more “experts who know” what is most important reviews the JORs and prioritizes requirements accordingly. This approach was common in the past when DPWs were more function-focused, but it is becoming less common as DPWs have shifted to a more customer-friendly focus in today’s team environment. It was the primary prioritization method used at Redstone Arsenal.
- **The “Command Emphasis” Approach:** This approach tends to surface most prominently with commanders who have a set agenda they want to accomplish during their tour of duty. As word spreads, the number of “Command Emphasis” projects grows exponentially to the detriment of other requirements that may be more critical. Another downside to this approach is that as commanders change, so do priorities. This was the secondary method once used at Redstone Arsenal.
- **The “Customer Is Always Right” Approach:** Under this approach, customers provide individual input or group consensus into prioritizing their requirements. While generally supported by customers, this approach is difficult to implement if the number of customers is large or

if they cannot reach consensus on priorities. Another downside is that infrastructure may suffer as nice-to-have projects are promoted instead of repair projects.

- **The “Hierarchy of Responsibilities”:** At Fort Leavenworth, the DPW has implemented this approach, which is patterned after Maslov’s Hierarchy of Needs. It is based on categorizing DPW services into various levels of necessity from the basic life safety functions that absolutely must be done to the “nice to have” improvements that should only be done after the requirements with greater urgency have been met.

Redstone has implemented the “high score wins” approach, which utilizes the input of subject matter experts where

appropriate, gives both the commander and the customer direct input into the prioritization process, and addresses the “hierarchical needs” factor to ensure that JORs required for the installation to function properly are taken care of first.

This approach is based on applying a numerically weighted value to the various aspects of a JOR in accordance with their relative importance and adding the values to arrive at a total numeric value for each JOR. JORs are then accomplished in order of their numeric value as far as funds will permit.

The old prioritization methods at Redstone created a great deal of confusion within the DPW about which project to work on next, and resulted in considerable frustration among the DPWs customers — who rarely had any idea when their projects would be completed. The process action team was born out of this confusion and frustration, with the mission of improving the entire JOR process.

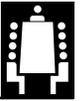
After extensive research and analysis of the various types of prioritization systems in use, the team developed an entirely new one using a weighted priority method. Numeric values were assigned to various aspects that define the level of importance of a given JOR.

With a numeric value assigned to each JOR, the process of deciding which one to accomplish first becomes a simple and clear one. Designers and project managers start with the highest-rated JOR and work down the list as far as resources will allow. This process ensures they work on the right things first and don’t just pick projects at random or those they would prefer to work on. Customers also can tell exactly where their request stands within the total DPW workload and can more readily be given a realistic estimate of when, or if, it will be accomplished. While customers with JORs low on the numeric priority list are not usually happy about it, at least they know where they stand and can plan accordingly. This prioritization process does

Commissary benefits for DoD employees

The Office of the Assistant Secretary of Defense recently announced that, effective immediately, all U.S. civilian DoD employees and dependents stationed outside the Continental United States, Alaska and Hawaii have access to Armed Services Commissaries. This policy change will be incorporated into the next update to the Department of Defense Commissary Directive, DoD Directive 1330.17.

POC is Mary Dakis, SAMR-CPP-SM, (703) 325-9984 DSN 221; e-mail: dakism@asamra.hoffman.army.mil. **PWD**



not provide more resources, but it does help ensure that available resources are spent in the best way.

But any method for prioritizing JORs must answer several important questions:

- What absolutely must be funded? If the power is not on or the water is not flowing or the temperatures indoors are too extreme for employees to tolerate, prioritization of other requirements becomes irrelevant. Define these “must funds” and don’t bother trying to prioritize them along with everything else. They will get done regardless of their priority, so prioritization is not necessary.
- What’s more important where you are? If your installation’s primary mission is training, then projects for training facilities probably should be given higher weight. If it is research and development, then projects for R&D facilities likely should be weighted higher than those for training facilities. For example, at Redstone Arsenal, which is the home of the Missile Command, projects that are required to support the R&D mission receive higher point values than other projects.
- Are there other bill payers out there? Often, a DPW will have customers with available funds separate from the DPW’s budget. In these cases, a decision must be made as to whether their requirements will be prioritized separately or along with

CPW needs contract documents

Here’s a chance for your installation to assist other installations and make our jobs easier at the same time. The US Army Center for Public Works is looking for good examples of contracts for self-help supply operation to add to our Contracts Library.

The Center collects sample performance work statements for distribution to installations. Using our sample contracts, installations can quickly develop acquisition packages, enabling them to save precious time and resources. These documents make it easier to go from the decision to outsource to the procurement process. We currently have more than 90 contract-related documents available on request, eight of which are on our website (<http://www.usacpw.belvoir.army.mil>). Many more are available through links to other websites.

☎ Please call Fred A. Reid, CECPW-FM, at (703) 428-6358 DSN 328 or e-mail: fred.a.reid@cpw01.usace.army.mil if you have a good contract document that you want to share. **PWD**

those funded by the DPW. Factors such as the availability of in-house or contractor resources to accomplish the work and the relative importance of the funded customers’ requirements must be taken into consideration when making this decision. If the customer-funded workload is sufficient to justify it, and resources can be made available to support it, establishment of dedicated teams to work customer-funded projects would preclude these projects from having to compete with the priorities of those funded by the DPW.

- What’s left in jeopardy and what is the impact of not doing it? This is where most effort will be spent in prioritizing and where a rational and documented method of prioritizing will prove its worth. If customers understand how the relative priority of their request was established and know where it stands with regard to others in the system, they are less inclined to feel they are being kept in the dark or treated unfairly.

To help minimize the inevitable resistance to this sort of change, the Redstone process action team obtained input from their customers while developing the new prioritization method. They then briefed the method to the command group and obtained the approval of the installation commander to implement supplemented by a “Commander’s Letter” announcing and endorsing the

process. During a subsequent installation-wide briefing, the team presented the new prioritization method to interested and affected parties followed by a question-and-answer session. The team then distributed additional written guidance to further enhance understanding. By taking these steps, the team was able to implement the new prioritization method with a high level of acceptance and minimal resistance.

Follow-up has also been essential. During the first year after implementation, the Redstone team kept records of problems that arose and feedback received from both internal and external customers. The team used this information to make changes and additional improvements to the prioritization process.

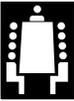
The reality of today’s military environment is that there won’t be enough resources available in the foreseeable future to do everything that should be done. This situation will force managers throughout the military to make some hard decisions. A rational, valid, and documented method for prioritizing requirements will result in decisions that are easier to make and to defend. If your organization does not have such a method of prioritizing in place, perhaps now is the time to start developing one.

☎ POC is G. Keith Kirksey, (205) 955-6083 DSN 746. **PWD**

G. Keith Kirksey is the Deputy Director of Public Works at Redstone Arsenal, Alabama.

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Department of the Army
US Army Center for Public Works
ATTN: Editor, *Public Works Digest*, CECPW-P
7701 Telegraph Rd.
Alexandria, VA 22315-3862
Phone: (703) 428-6404 DSN 328
FAX: (703) 428-6805
e-mail: alex.k.stakhiv@cpw01.usace.army.mil



80th ASG replaces hangar roof in record time



Cranes remove old concrete roof sections one at a time.

The 80th ASG (NATO/SHAPE Support Group) provides general support to the US offices and organizations of NATO and SHAPE as well as all US government agencies, their personnel and family members, in Belgium, the Netherlands and Luxembourg.

In 1992, hangar 20001 at Chievres Air Base, Belgium, was condemned because of distortions in the concrete roof arches and the possibility of the roof collapsing. In less than five months, under adverse weather conditions, the 80th ASG removed and replaced the roof of the 33,000-square-foot facility.

This project restored hangar 20001 for its intended use as an aircraft hangar at a much lower cost than demolition, site restoration, or construction of a new facility would have cost. Here's how it was done:

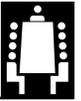
Hangar 20001 was a 45-year-old, 33,000-square-foot facility, which was built in 1950-51 for the Belgian Air Force. The facility was 60 meters wide, 40 meters long, and 12.5 meters high at the center. Its original roof used the unique "SETRA" thin film concrete arch design, only 6 centimeters (2.4 inches) thick at its center. In 1950, the "SETRA" arch was state-of-the-art construction, providing a relatively inexpensive, light-weight, concrete roof that could span large distances. The arrangement provided a large, clear span, and the structure served well for over forty years.

During an annual roof inspection in 1991, distortions in the hangar's arches were noticed, requiring further investigations by both Belgian and Corps of Engineers experts. In April 1992, after extensive testing, five hangars with this

design (hangars #20001-20005) were declared unsafe by the U.S. Army Corps of Engineers Construction Engineering Research Laboratory and immediately evacuated.

Base personnel immediately began to search for replacement facilities for the displaced activities. A temporary commissary was opened, using a metal shed and tent arrangement, and temporary metal frame buildings and porta-cabins were leased and installed for the main PX and the Food Court until new facilities could be constructed. Subsequently, a new commissary was completed in late 1992, the hangar 20002 and 20003 roofs were replaced in 1993/1994, and a new PX was opened in 1995.

The original concrete roof was removed and replaced with a modern, light-weight, prefabricated steel-truss



roof. The six free-span concrete arches were cut free from their respective end supports and lifted off by two cranes, one section at a time. The lifting method required extreme coordination between the two crane operators to avoid any additional stress and collapse of the arch before it could be safely lowered to the ground. Once on the ground, each arch was broken into manageable sections and the concrete was disposed of by the contractor. This procedure prevented any damage to the hangar walls or floor.

The new prefabricated, steel-truss roof sections were assembled on the ground and lifted into place using the same process in reverse.

Site work for the \$1,290,000 project began in August 1996 and was completed by 31 January 1997. The new roof will extend the life of the hangar for another 30 to 40 years.

☎ POC is Clayton Turner, DSN 361-5424, 80th ASG-DPW, EPS Division, Chievres, Belgium. **PWD**



New pre-fabricated, steel-truss roof sections in place.

New Secretary of Defense gets sworn in

On January 24, 1997, the new Secretary of Defense, Mr. William S. Cohen, sent a message to the men and women of the armed forces. He conveyed his pride in their collective achievements and called for a re-dedication on the part of all who wear the uniform to the ideals of protecting our nation.

Mr. Cohen also sent letters to the chairman of the Joint Chiefs of Staff, unified combatant commanders, service secretaries and chiefs of staff. The letters acknowledged their enormous responsibilities in accomplishing the vital tasks of ensuring the security of the United States, and protecting and promoting our national interests. Mr. Cohen also asked the service secretaries to convey his sincere appreciation to the many civilians who work in the departments for their tireless efforts in support of the uniformed military and the defense of the nation.

The new Secretary of Defense emphasized to both senior military and civilian leaders that he takes the Quadrennial Defense Review (QDR) process very seriously. He acknowledged that achieving a proper match of strategy, programs and resources to meet US security needs of the present and coming years poses a major challenge. "The reductions of recent years have exhausted all the easy options and, properly done, the QDR will present difficult choices," he said.

Mr. Cohen served three terms in the US Senate for the state of Maine (1979-1997) and three terms in the House of representatives from Maine's Second Congressional District (1973-1979).

An influential voice on defense and international security issues, Mr. Cohen helped craft the Goldwater-Nichols DoD Reorganization Act of 1986. He was the Senator sponsor of

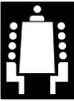
the GI Bill of 1984 and the subsequent enhancements to this landmark legislation.

Committed to bringing accountability and private sector best practices to government agencies, Mr. Cohen authored the Competition in Contracting Act of 1984 and helped draft the Federal Acquisition Reform Act of 1996. He also authored the Information Technology Management Reform Act of 1986 to improve the way federal agencies manage information technology investments and streamline the acquisition process.

The former senator was sworn in as the 20th Secretary of Defense by Vice President Al Gore during White House ceremonies on January 24, 1997.

☎ POC is Chris Klueh, SFCP-PSO, (703) 695-5332 DSN 225; e-mail: kluehcl@asamrapo1.army.mil.

PWD



CERF and CEITEC — working together with the public works community

The Civil Engineering Research Foundation (CERF) was created by the American Society of Civil Engineers in 1989, to “facilitate, coordinate, and integrate” research and innovation for the design and construction industry, and to unite private industry, government, and academia.

As part of our long-standing relationship with the US Army Corps of Engineers (USACE), CERF provides technical support and peer review in an effort to assist USACE in maintaining state-of-the-art guidance documents and procedures. In addition, CERF and USACE have established a Green Building project for sustainable development. There are several contracting vehicles through which US Army facility managers can avail themselves of the many services CERF provides.

As just one of its initiatives to improve technology transfer, CERF has created innovative technology clearinghouse centers. The centers established and operated by CERF capitalize on networks of industry and government leaders as they evaluate products and expedite application of new innovations.

The first of these centers was the Highway Innovative Technology Evaluation Center (HITEC). HITEC (<http://www.cenet.org/hitec>) has initiated over 50 technology evaluations since its inception, including:

- A bonding agent for pothole repairs.
- A highly-reflective stop sign.
- A pre-cast, pre-stressed bridge system.
- A heated pavement system.
- Composite column wraps.
- FRP bridge retrofit and strengthening systems.

CERF recently established two other innovation centers based upon HITEC's great success. The first is the Environmental Technology Verification Center (EvTEC), which is co-sponsored by the US Environmental Protection Agency. The second is CEITEC, which was established to serve the

public works community. This center plans and organizes national evaluations for a wide range of innovative construction and engineering technologies. It will ultimately disseminate a product's evaluation findings to interested agencies.

CEITEC recently received its first public works innovation for evaluation in collaboration with the Trenchless Technology Center. The Sewer Scanner & Evaluation Technology (SSET) is an innovative pipeline inspection technology developed in Japan.

SSET incorporates state-of-the-art scanner and gyroscopic innovations to avoid the pitfalls of traditional closed circuit television inspection technologies. It produces a digitized image so that a color-coded, computer-generated interior profile can be printed. A written description of each defect is produced and illustrated by a designated color code at the appropriate location along the pipeline. Horizontal and vertical deflections of the entire line are also provided. This information is substantially more comprehensive than data obtained from current closed circuit television methods.

SSET provides more support for subsequent pipeline analyses and is less reliant on experienced field technicians than current systems. As part of the SSET evaluation, each participating agency will have at least 10,000 linear feet of its sewer system inspected and will receive an inspection report package.

Subsequently, working with an evaluation panel comprised of members from the participating agencies, CEITEC will publish an evaluation report that clearly documents the performance of the SSET. This report will provide the information necessary for any state or local agency to make informed procurement decisions. Any city, municipality, commission or other public entity with responsibility for the maintenance of a sewer or drainage system may participate in this project.

CERF also works towards its goal of uniting industry, government, and academia by working with stakeholder groups through collaboration and innovation projects. CERF has joined forces with the National Evaluation Service, affiliated with the model code organizations, to establish the Partnership for Building Innovation.

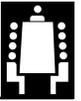
CERF also established the High Performance CONstruction MATerials Program, administered through the CONMAT Council (<http://www.cenet.org/conmat>). CONMAT is a group of 12 construction material supplier groups whose member organizations work together towards materials innovation and commercialization. It currently has about 50 projects underway or about to begin, valued in excess of \$250 million.

Also available through CERF is CENET, a CERF-operated online computer network that was developed as the gateway to civil engineering research and innovation-related information on the Internet. CENET (<http://www.cenet.org>) provides information on

industry news, publications, and events, as well as links to over 600 other related sites on the World Wide Web, and unlimited Internet subscription access.

For more information on CERF, its centers or projects, please contact George Cajigal at (202) 842-0555, corporate@cerf.asce.org, or visit us at <http://www.cenet.org>.





Program to make facilities management affordable

by Jim Caldwell

There are about 36 million square feet of excess building space on Training and Doctrine Command installations. The cost of maintaining unnecessary space is leading to a deterioration of all buildings, according to TRADOC engineers.

To remedy the situation, GEN William W. Hartzog, TRADOC commander, has launched a "Winning the Infrastructure War" (WTIW) program.

"What we are trying to achieve is affordability, where the amount of funds installations get to take care of their buildings matches their building space," said Dave Stoakley, chief of TRADOC's Engineering Plans Division.

Because of excess square footage, installations cannot afford to perform preventive maintenance and to fully repair existing facilities, leading to an increasing backlog of maintenance and repair.

Hartzog announced the WTIW program in a memorandum to his commanders in November.

"We must fundamentally change our paradigms concerning existing facilities," he wrote. "No longer should we look upon excess facilities as an asset for future expandability. Instead, we must view them as significant drains on our current resources."

Engineers used three methods to determine the proper amount of building space each TRADOC installation can afford.

The first was the Headquarters Real Property Planning Analysis (HQ RPLANS) system. The HQ RPLANS system considers mission and personnel strength to determine proper allowance of floor space to each of the various functions performed on a post, such as administration or motor pool maintenance.

The second method was to determine what a prudent landlord would invest annually in his facility. That factor is three percent of the plant replacement value, which was arrived at by an-

alyzing the facilities investment rate for universities and municipalities.

The installation's backlog of maintenance and repair was the third indicator. An increasing backlog is evidence that there is insufficient funding to maintain the existing facilities. Based upon this analysis, TRADOC installations receive only enough money to adequately maintain 70 million square feet of buildings.

All three tools indicated an excess of

"No longer should we look upon excess facilities as an asset for future expandability. Instead, we must view them as significant drains on our current resources."

—GEN William W. Hartzog, TRADOC commander

approximately 36 million square feet.

In January, each installation commander received from TRADOC an analysis of his post's excess facilities, according to Stoakley.

Hartzog has asked commanders to study their requirements and tell TRADOC headquarters how they propose to balance the discrepancy. Their comprehensive plans were due to TRADOC in March.

Hartzog has earmarked part of TRADOC's fiscal year 97 budget to help installations demolish structures.

It will cost from \$6 to \$12 per square foot, depending on the type of building, to tear down a facility.

"We save about \$3 per square foot for every building torn down," Stoakley said. "So the math tells you the payback is somewhere between two and four years. At first, we'll take a slight dip in our performance, but after two or three years, the money going back into permanent facilities will make the sacrifice worthwhile."

Winning the Infrastructure War is a multi-year program, running through FY 2004.

"In the long run, we will reach an affordability level that will serve us all better," Stoakley said. "Right now, we're in a breakdown maintenance mode."

"We can't pull regular preventive maintenance on air compressors, air conditioning units, heaters or whatever. We wait until the phone rings in the DPW. Then we rush over there and fix it."

"First of all, it may take two or three days to fix it, so you've got a bunch of disgruntled customers who are too cold or too hot. The second thing is it costs a whole lot more than it would if you had avoided the problem through preventive maintenance," he said.

The WTIW is the second effort TRADOC has made to get rid of unneeded buildings. The first concentrated on razing "temporary" World War II buildings.

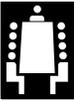
"From FY 92 through FY 96, we tore down 11.4 million square feet, and we still have 36 million square feet of excess space," Stoakley said.

TRADOC and installation commanders will know the war has been won when there are no excess facilities, there is no increasing backlog of maintenance and repair, and the amount of maintenance money matches the square feet of space being maintained, according to Stoakley.

"Winning the Infrastructure War is clearly a belt-tightening effort," he said. "Budgets are going down. We're not going to get any more money, and that's a reality of the Army."

"However, Winning the Infrastructure War provides installations with the ability to control their own destinies in a time of declining resources."

✉ POC is Jim Caldwell, Fort Monroe, VA, TRADOC News Service, e-mail: caldwelj@emh10.monroe.army.mil. **PWD**



GIS helps Fort Detrick manage projects

by John Le

Computer-aided design and drafting/geographic information systems (CADD/GIS) are powerful tools available to installation managers today. These computer-based systems handle the input, management, manipulation, analysis, and output of spatial and tabular data. Spatial data can be referenced to specific locations on the earth and stored as graphic elements. Tabular data are non-graphic attributes tied to spatial data and stored in a relational database (Oracle).

Some examples of how Fort Detrick is using GIS include storing utilities, such as water, electricity, gas, steam and telephone lines connected to buildings, as graphic elements and associated attribute data. GIS also provides Fort Detrick information to help in planning decisions such as selecting the best site for a new facility based on diverse requirements and criteria. Agencies and tenant activities can also access a single GIS database at Fort Detrick to meet their own specific data needs. For example, the Directorate of Installation Services can use GIS to maintain and upgrade utilities and the road system and the Directorate of Safety and Environment can use it to monitor hazardous waste and groundwater quality.

The Directorate of Installation Services, Planning, Program, Engineering, and Construction Division, at Fort Detrick has successfully implemented CADD for Engineering and Architecture Design. Using GIS with CADD supports life-cycle project management. GIS supplies the information required to perform planning functions, including master planning and environmental assessment. This data is then available in CADD for the design and construction phases of a project. The "as built" plans at the completion of a project can be used to update the GIS database.

GIS allows us to monitor the progress of the design project, mark up drawings with comments and revision notes, draw lines and sketch freehand on the items you want changed, add notes, send your mark ups directly to

designers and engineers, and approve design changes as soon as they are made. These comments, notes and change specifications are automatically stored in a separate file. This information in no way affects the original drawing, ensuring project data integrity.

For more information on how Fort Detrick is implementing GIS, please contact John Bennett, (301) 619-2443 DSN 343, or John Le, (301) 619-2712 DSN 343. **PWD**

John Le is an electrical engineer in the Directorate of Installation Services at Fort Detrick, MD.

Management principles good for everyone

The Deputy Assistant Secretary (Civilian Personnel Policy) recently issued the following Management Principles. While they were intended for those in the civilian personnel administration field, everyone can benefit by adhering to them.

Think strategically

- Think beyond "the box" and question the status quo.
- Make decisions based on facts AND intuition.
- Set a vision and empower people to achieve it.
- Plan.

Value individual diversity

- Capitalize on the strengths and attributes of every individual.
- Teams produce "richer" products.

Hold to the highest standards of ethical conduct

- Understand your values and Army's values.
- Factor values into decision making.

Manage like a business

- Do market analysis. (Who are our customers? What do they want? What do they need?)
- Develop and market the "product line."
- Develop life-cycle costing model

for "products." (R&D, implementation, evaluation/re-tooling)

- Assess value-added of policies, programs and administrative overhead to product success.

Hold program managers accountable for product success

- Give managers the best tools (equipment, technology, training, administrative systems and support).
- Empower for progress and success.

Approach work with a sense of humor

- Take the job seriously, but keep a balance.

Study issues, get the facts, make decisions

- Seek input, consider input, make a decision.
- Don't wait to prepare the perfect product.
- What is broken can be fixed.
- Don't avoid tough choices.

Talk straight

- Communicate and coordinate.
- Others have a need to know.

POC is Chris Klueh/SFCP-PSO, (703) 695-5332 DSN 225; e-mail: kluehcl@asamrapo1.army.mil. **PWD**



Professional Development

CPW offers Boiler/Cooling Water Treatment Workshops

The US Army Center for Public Works will offer Boiler Water Treatment Workshops on the following dates:

- 3-5 June
- 17-19 June
- 15-17 July

In addition, the Center will offer a Cooling Water Treatment Workshop from 6-8 May.

Each of these workshops is a comprehensive training session that covers the purpose, application, and testing of boiler water or cooling water treatment programs and chemicals. They're recommended for facilities engineers, plant foremen, plant operators, mechanics and others responsible for the operation and chemical treatment of boilers or cooling systems.

There are no tuition costs for these courses, which are held at Fort Belvoir, Virginia. The student's installation, however, is responsible for all TDY expenses and arrangements.

Spaces are limited and filled on a first-come, first-served basis. Information packages will be sent to students one month before the course dates. On-site training is also available on a reimbursable basis.

To reserve a space in one of the courses, please contact Crispus Sawyer or Nelson Labbe, Sanitary & Chemical Division (CECPW-ES), at (703) 806-5206 DSN 656 or FAX: (703) 806-5216.

PWD

Training opportunities for DPW managers

The Public Works Management Orientation Course (PWMOC) is a two-week course for the new DPW manager. It covers the administration, organization, functions and management systems of the installation DPW, which is essential information for managers. A complete description of the course and enrollment procedures is on the DDS and CPW Website. Course dates have also been added to our event calendar.

The Corp's Reinvention Center for Distinct Installation Support has begun teaching a brand new PROSPECT Installation Support XXI Course, focused on providing quality installation support. Two session dates have been added to the calendar.

For more information, please contact Jim Kelley at (800) 250-1746 or Betty Barnett at (205) 722-5864. PWD

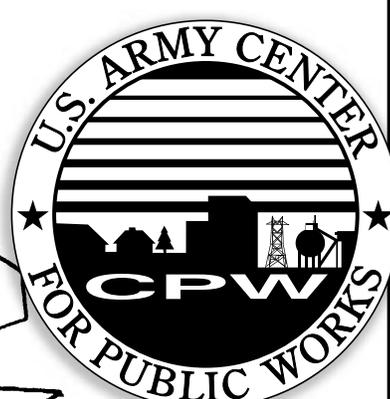
Leadership training info on web site

Information concerning the leadership training offered by the Civilian Leadership Training Division (CLTC), the Intern Leadership Development Course (ILDC), Leadership Education & Development (LEAD), Train-the-Trainer (TTT) Course, and the Organizational Leadership for Executive (OLE) Course and FY 97 course schedules are located on the Internet at web site: www.cgsc.army.mil/cgsc/cal/cltd. The FY 98 OLE course schedule is now available on this web site as well.

POC is Frank Loeffler, ATZL-SWC-CL, (913) 758-3556 DSN 720, e-mail: loefflef@leav-emh1.army.mil. PWD

Public Works problem?

Call us first!
1-800-RING-CPW

FPS—now on the “Net”

by Stu Grayson

Good news! In December 1996, a new way to access the Facility Planning System (FPS) became available. FPS has migrated from the PAX system to another computer. This means you no longer have to pay for a PAX account to be able to use this essential planning resource.

FPS has long been the easiest way to get TOE equipment and personnel data — just expensive. It is the approved source for:

- Authorization documents used for facility planning.
- Computation factors and algorithms used to develop and justify Army facility requirements. This is where RPLANS gets its rules.

FPS is now available on a computer accessible through the Internet via a TCP/IP connection or dial-up telephone modems for users who are unable to obtain a TCP/IP Internet connection. Concurrent with the move, FPS has made a lot of changes to these rules, to incorporate all the changes made in revising category code definitions in AR 415-28. These changes will have a significant impact (up to 175%) on some facility requirements — which is why your RPLANS and RPLANS-derived reports (like the Essential Facility Requirement charts) may look a little different next time.

Anyone concerned with planning, requirements justification, or space management should read FPS Newsletters 17, 18 and 19 (dated 1 January 1997). For those of you who don't have FPS accounts, the newsletters and account information is now available on the DDS and CPW web site. Look for fps.txt.

The general appearance of the FPS on the new computer is nearly identical to its appearance on the PAX. Most FPS operations are performed as quickly as data can be sent over the communication network. As a result, no speed differences can be noticed between the PAX and new computer.

BATCH and INTERACTIVE allowance computations are somewhat slower on this new computer, which is

much smaller than the PAX mainframe. Computing allowances for all FPS category codes for a typical battalion take approximately 80 seconds on the new computer. The same computations for a main support battalion take approximately three minutes.

On the new computer, there are no charges to the FPS users for computations or disk storage. The only expenses incurred by the user are those associated with the Internet provider (or those associated with a long distance telephone call). Users should experience a reduction in PAX charges, both for disk storage (DASD cylinders) asso-

ciated with FPS reports, and for computer usage and connect time.

If you do not already have Internet access with a TCP/IP capability, contact your local DOIM. Current users will be contacted and directed to furnish their e-mail address to danr@rkeng.com. This will allow us to associate PAX Ids with e-mail addresses for instances where we have not yet established this association.

For more information on FPS, including future developments, please contact Stu Grayson, CECPW-FP, at 703-428-6086 DSN 328 or e-mail: stu.grayson@usace.army.mil. **PWID**

Stu Grayson is the program manager for RPLANS/ACTS/FPS in CPW's Planning and Real Property Division.

IFS Real Property Standalone/ network version differences

There are a few differences between the client-server, networked version of the IFS Real Property System and the Standalone version that replaced DR REAL earlier this year. This has caused some consternation, especially since many users assumed that there was a 100-percent similarity, and we only got a 99-percent similarity.

“The IFS-M Real Property (Standalone) was designed to operate in a Microsoft Data Base Manager, MS-Access,” explains Program Manager Leo Oswalt. “Originally, this was to be the **only** application, and it was to be used in the IFS-M client-server version of the system.

“Late in the development of the Standalone, a disturbing discovery was made as work was proceeding toward the multi-user (or, client-server) version of the system. Microsoft and Oracle did not implement SQL the same way. This would cause the MS Access version of the system not to perform correctly, and there was no way around this. So we decided to

convert the Standalone version to Oracle for those instances where there is a need to operate against the Oracle database.

“The functions, look, feel, and key strokes will be the same as the MS-Access version. There is so little difference between the two that, training on either one will work for both. The Oracle query tools the SA/DBA will receive with IFS-M look and operate very much the same as MS-Access.

“Now . . . can I use MS-Access to do queries against the Oracle database? You bet you can, and maybe you should!

“But you may say that I just told you that MS Access and Oracle didn't implement SQL the same, and that MS-Access will not operate in the Oracle environment! This is true, but you can still append IFS database to MS-Access.” Hopefully, this will clear up any confusion.

If you have further questions, please contact Leo Oswalt at (703) 428-7120 or e-mail: leo.e.oswalt@cpw01.usace.army.mil. **PWID**



New geographic module in HQEIS

A new Geographic Information System (GIS) module is now available in the Headquarters, Executive Information System (HQEIS). This module allows HQEIS users to display installations, real property, leases, military construction projects, population and military entrance processing stations spatially.

The GIS displays data from existing databases/sources. Data sources presently include:

- Integrated Facilities System-Mini/Micro (IFS-M).
- Desktop Resource Real Property System (DR-REAL).
- Real Property Standalone.
- Best Army Leased Database (BALD).
- Construction Appropriations Programming, Control and Execution System (CAPCES).
- Army Stationing Implementation Plan (ASIP).
- Headquarters, Installation Status Report (HQISR).

Each GIS functional area allows the user to select conditions or filters on the data before creating a spatial or map view. All functional areas can be displayed by organization and/or geographically.

The organization options allow the

user to display data by major command, base, parent installation, installation or station.

Geographic selections can be made by country, Corps District, State, Congressional District or radius. Geographic options are consistent for each area. Each functional area has unique conditions that can be applied:

- Installations by HQISR status (FCG, ISR Rating).
- Real Property by Design Use, Type Construction and Ownership.
- Military Construction by Project Type and Cost.
- Leases by Space Type and Date.
- Population by Parent/Derivative Units or Unit Strength.

The HQEIS/GIS is available to users at all levels, including the Office of the Secretary of Defense, HQDA, MACOM, Major Subordinate Command, and installation.

The system can be accessed from any location, using an internet or modem connection and Winframe Client software to connect to a communications server that resides at the US Army Center for Public Works (CPW). Winframe Client software is available on the

HQIFS update— thanks for the data!

The headquarters update for the end of fiscal year 1996 was a great success. This was the first submission of data to the Headquarters Executive Information System (HQEIS), and installations, the Army Reserve, and the National Guard, along with the users of DR-REAL, set the standards for data reporting with 100 percent submission. Thank you all for your timely responses in submitting year end data, and a special thank you to the MACOMs and installations for your support during this transition of the Army Reserve. CPW's Real Property Team would like to say, "Thanks for a GREAT JOB and keep up the GREAT WORK!"

Wiley Jernigan Alexis Wathen
Derrick C. Mitchell Julie Jones

☎ POC is Alexis Wathen,
CECPW-FP, 703-428-7465. **PWD**

CPW Home Page (<http://www.usa-cpw.belvoir.army.mil>) in the Software Library. A user name and password must be obtained from the HQEIS project manager.

The HQEIS also provides graphical and tabular displays for Real Property, Real Property Maintenance Activity (RPMA) costs, housing, general statistics, installation summaries by facility number and category code, static displays (Essential Facilities Requirements (EFR), ISR, miscellaneous charts) and direct access to the HQISR and ASIP databases. In addition, a trending capability will be available in the near future.

HQEIS allows users to access many facility management tools in one location.

☎ For more information about HQEIS, please contact Linda W. Smith at (703) 428-7415 DSN 328, e-mail: linda.w.smith@cpw01.usace.army.mil or Jack Giefer at (703) 428-6073 DSN 328 or e-mail: jack.giefer@cpw01.usace.army.mil. **PWD**

Civilian Personnel On-line

February 4, 1997 began a new era in civilian personnel administration. On that date Army's civilian personnel community gained access to Civilian Personnel On-Line, a site on the internet that provides instant access to an on-line civilian personnel management library with course catalogs, Army's Civilian Personnel Strategic Plans, Civilian Personnel Bulletins, and legal and regulatory information.

In addition, Civilian Personnel On-Line provides access to Army's Personnel Management Information and Support System (PERMISS), a civilian personnel community directory, employment opportunities, a bulletin board system, a vacancy announcement builder, and information on training and career development. In the not too distant future a posi-

tion description library, Headquarters ACPERS reports and Easy ACCESS will be available through Civilian Personnel On-Line.

Civilian Personnel On-Line has been designed to meet the needs of the personnel community as well as managers, supervisors, employees and the general public. Several changes will occur as the system goes through its "shakedown" run. We encourage your use, support and comments on Civilian Personnel On-Line. With the opening of this new internet site, WebLink will be terminated. The URL address for Civilian Personnel On-Line is <http://cpol.army.mil>.

☎ POC is Ron Williams, SFCP-PSI, (703) 325-8251 DSN 221; e-mail: williamr@asamra.hoffman.army.mil.

PWD

Public Works *Digest*

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- **Implementing RPS version of IFS**
- **Setting up Regional Support Commands**
- **Using Modular Design System software**