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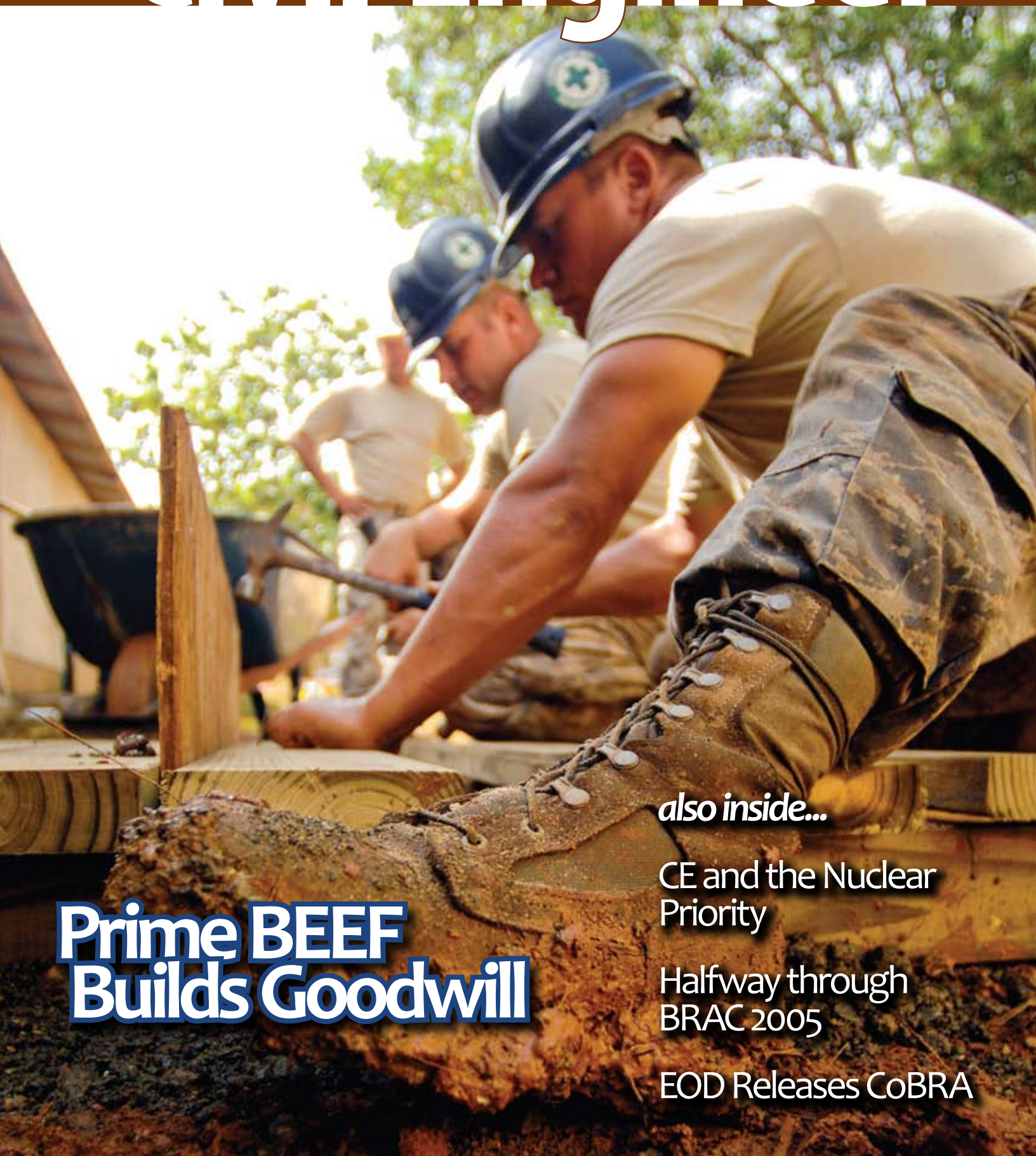

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On the Cover

During the Continuing Promise 2008 humanitarian assistance mission, TSgt Derron Price, 5 CES, Minot, N.D., works on a boardwalk to expand the school Presbitero Carlos Novel, in the Dominican Republic. All Prime BEEF team members wore helmets made especially for CP08: Prime BEEF logo on one side and green "safety seal" on the other; white for OICs/NCOICs and blue for all other team members (U.S. Navy photo by MC2 Erik C. Barker)

The Civil Engineer
Maj Gen Del Eulberg

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Final Salute

I have never been as proud of the Civil Engineering career field as I am today, and I salute each and every one of you for your continued dedication to the mission, and commitment to our ongoing journey to transform Air Force installation management. Our community is experiencing the highest operations tempo I have seen during my 30+ year career because our skills and expertise continue to be in high demand, particularly within the Joint team. Time and again, you have met these challenges with great professionalism and agility.

As you are well aware, we have had to transform the way we do business to lessen the burden on our Airmen and to ensure that we can continue to bring operational support to the fight. Although it is a lot of work up front, I assure you that over time you will reap the benefits of the new tools and processes that are continuing to be developed. This issue of the Air Force Civil Engineer magazine features several articles that highlight some of our most critical and transformational efforts, including our NexGen IT efforts and Activity Management Plans. As we reflect over the past year, there were a few areas we could improve on in our 2008 Strategic Plan. We will soon publish the 2009-2013 Strategic Plan, which will incorporate our lessons learned and the feedback we received from the field. Our goals, however, will remain very similar: increase readiness and support to the warfighter, strengthen our total force, and develop and maintain sustainable installations.

We have strengthened our organization and continue on our quest to keep our people informed and provide the field with helpful tools to manage our installations as effectively as possible. One of these tools is the newly launched CE Portal (https://cs.eis.af.mil/a7cportal/default.aspx). This is a unique Web site that hosts our business process "Playbooks," interactive resources that will help us continue to improve our performance, and Civil Engineering news, publications, and much more. The CE Portal will feature new transformational tools, like AMPs, to help organize your base projects, and various dashboards to keep you on the right track. Many of these new and exciting capabilities are coming your way soon, and will make you more efficient at your job.

As I close out my tenure with Civil Engineering, I would like to take a moment to welcome Brig Gen Timothy Byers as the new Air Force Civil Engineer. I have full confidence that Civil Engineering will flourish under his leadership, and our transformation efforts will maintain their positive forward momentum. Civil Engineers truly do lead the way, and I am humbled, but not surprised, by all you have achieved over the past few years. Civil Engineers will continue to thrive under the strategic leadership of Brig Gen Byers, and I ask you to support this great leader and warfighter.

It has been an honor serving you over the last few years as your Civil Engineer, and I want to thank you and your families for all you have done to support the fight and our nation. God bless you all.

Del Eulberg
Major General, USAF
The Air Force Civil Engineer

A Minuteman III ICBM successfully launches from Vandenberg AFB, Calif., in August 2008. The missile was configured with a National Nuclear Security Administration test assembly in which three unarmed reentry vehicles traveled approximately 4,190 miles to their pre-determined targets in the Marshall Islands. (photo by Mr. Joe Davila)

CEs take on the Air Force's #1 priority

Maj Patrick J. Carley, P.E., AF/A7CAO

The Secretary of the Air Force and the Air Force Chief of Staff have made it their number one priority to "Reinvigorate the Air Force Nuclear Enterprise." Some might think that civil engineers don't have a role in this effort, but they actually do. Civil engineers at all levels — air staff, field operating agencies, major commands, and installations – play a critical role in ensuring that the Air Force achieves this objective and retains the trust of the American public.

Why are Civil Engineers Involved?

Last year, various reports and commissions were published that described the many shortfalls and challenges existing in the Air Force's Nuclear Enterprise. These reports documented over 500 recommendations on what the Air Force could do to improve its nuclear mission. The Air Force Comprehensive Assessment of Nuclear Sustainment (AFCANS) report, published in July 2008, had two strategic findings applicable to Civil Engineering. The first dealt with training and recommended that Air Education and Training Command modify the integrated maintenance facility at Sheppard AFB, Texas. Engineers at Sheppard recently completed the $700K project, which provided new sprinkler systems, mezzanine floor, enhanced structural support to a crane/hoist rail system, 10' high partition walls, and security access devices.

"Our project converted open training space into a work area that looks and feels like the controlled area environment that trainees will experience at operational units," said Mr. Douglas Jansing, 82nd Civil Engineer Squadron Engineering Flight Chief. "Within this new training classroom, students will learn to enter, exit, and provide security for nuclear weapon areas. Work areas that give students the sense and feel for their next-assignment working conditions develop Airmen that quickly integrate into their units and are highly productive workers from the moment they arrive on base."

The second strategic finding stated that The Air Force Civil Engineer (AF/A7C) should lead an overall assessment of nuclear-related facilities to determine other nuclear sustainment requirements and create a roadmap to solve deficiencies Air Force-wide.

Progress to Date

Civil Engineering began taking on this second finding in full force at the end of 2008. Initially, a cross-command team led by Air Combat Command

drafted a definition of what civil engineers would consider a nuclear-related facility (NRF). In early 2009, the Air Force Civil Engineer Support Agency (AFCESA) began leading a contracted effort to conduct facility condition assessments (FCAs) at all Air Force NRFs. In March, a team of experts from applicable MAJCOMs met at Tyndall AFB, Fla., to finalize the definition of an NRF and the contract scope of work.

For this initiative, NRFs were broken in to three categories:

1. Air Force Space Command (AFSPC) Minuteman III Launch Facilities (LFs) and Missile Alert Facilities (MAFs) — AFSPC's Missile Engineer Squadron (MES) has a staff of 25 professionals whose primary mission is maintaining the Minuteman III facilities and infrastructure at 45 MAFs and 450 LFs for three Air Force missile wings spread out over 44,000 square miles in five states. Located at Peterson AFB, Colo., the MES has a 40-year legacy of keeping ICBMs ready as a leading deterrent in our nation's defenses. In response to the Air Force's decision to extend the Minuteman III mission to 2030 and beyond, the MES recently developed a Life Extension Assessment Program to thoroughly assess the condition of the ICBM facilities and infrastructure. The program team documented an estimated $650M in project requirements needing execution between FY10 and FY20 to ensure continued ICBM readiness.

2. Facilities within Nuclear Weapon Storage Areas (WSAs) — The Interim AFCANS II report, published in April 2009, contains an entire chapter devoted to WSAs. The report assigned responsibility to the Air Force Assistant Chief of Staff, Strategic Deterrence and Nuclear Integration (AF/A10) and the Air Force Nuclear Weapons Center at Kirtland AFB, N.M., including everything from drafting WSA policy and governance documents, creating a WSA Program Executive Office, and advocating for dedicated lines of funding for WSA acquisition and sustainment, to evaluating and benchmarking entry control procedures. Because the report defines civil engineers as support players within a holistic WSA system, it would be premature and inefficient for civil engineers to simply conduct a FCA on WSA facilities and infrastructure. Rather, AF/A7C is postured to assist an AF/A10 or nuclear weapons center-led functionality/operability assessment of the entire WSA systems in the future.

3. All Other NRFs (non-LF, MAF or WSA) — This category of facility and various infrastructure systems is the focus of the AFCESA-contracted FCA effort. Awarded in June, the centrally managed contract will ensure consistent assessment criteria and lower costs through economies of scale. In July, contracted assessors set out to 10 bases across four MAJCOMs to conduct FCAs at over 700 unique facility and infrastructure systems. The FCAs are scheduled for completion by the end of September.

Way Forward

Conducting the FCAs is only the first step in the process. Facility and infrastructure deficiencies identified must then be programmed as appropriate projects, and ultimately executed once funding is made available. Therefore, AFCESA's contract contains direction to not only identify the deficiencies, but also to forecast sustainment plans and program project requirements using Air Force forms and procedures. Lessons learned from this summer's efforts will aid the standardized facility condition assessment to be fielded next year.

Keeping in mind Civil Engineering's transformation and asset management business approach, the AFCESA-managed contract directs use of a software application called BUILDER during FCAs, to generate the future year plans and projects. BUILDER is the sister IT enabler to MicroPAVER, which is used Air Force-wide for airfield condition assessments. BUILDER is compatible with Civil Engineering's NexGen IT solution.

Interest at the Highest Levels

Civil Engineers are regularly keeping Air Force leaders informed on progress. Since early 2009, the Air Force Asset Management and Operations Division (AF/A7CA) chief has provided monthly updates to the Nuclear Logistics Surety Executive Board, composed of logistics and maintenance general officers from across the Air Force, including some command A4/7s. Weekly updates are provided to the Air Force Deputy Chief of Staff for Logistics, Installations, and Mission Support. Finally, the AF/A7CA chief has been assigned as the "champion" for infrastructure related items in the Air Force Nuclear Roadmap Assessment Internal Control Plan (ICP) recently published by AF/A10. Champions are responsible for briefing the status of their initiatives at bimonthly meetings of general officers from across the Air Force, including MAJCOM vice commanders. The ICP contains metrics which require organizations to conduct a coherent, traceable, and repeatable assessment process.

Maj Carley is an asset management program officer in the Office of The Air Force Civil Engineer, the Pentagon, Washington, D.C., and project manager for the FCA initiative supporting the CSAF's number one priority.

Driving CE Transformation with NexGen IT

Lt Col John Thomas, HQ USAF/A7CIS

Improving our IT capabilities is a pivotal element of our transformation efforts. Our challenge is to transform IT to better support our enterprise business processes, arm leadership with the information necessary to make strategic decisions, and provide engineers everywhere with the tools they need to do their job. At the center of this monumental effort is the concept of Agile Installation Management (AIM). AIM is not a system or software, but rather an initiative that connects our day-to-day business processes with IT to transform how we do business. It is focused on making the work we do at every installation more effective and efficient, and enabling those processes with IT to have an enterprise view of all our installation assets. AIM will help Civil Engineering achieve its "20/20 by 2020" vision, and transform how we support the Air Force mission today.

The Office of The Air Force Civil Engineer (AF/A7C) has completed a review of more than 1,000 separate IT investments, and found many serving redundant purposes. Ultimately, these stovepipe efforts provide individual IT solutions rather than enterprise-level ones that support Airmen across Civil Engineering. Because these systems don't communicate effectively with one another, it's not uncommon for data to be entered multiple times. Some engineers have even had to develop and maintain their own spreadsheets or databases to manage their everyday work because current IT systems don't meet their needs.

The IT component of AIM, known as NexGen IT, will implement commercial off-the-shelf IT solutions to replace existing capabilities for real estate, space management, Computerized Maintenance Management System (CMMS), energy, and project management. Following industry best practices, we will ensure that these new systems support our core business processes and provide improved data transparency and accessibility across the enterprise. Current NexGen IT efforts will begin to impact civil engineers within the next year. Everyone has a part to play in making their jobs easier in the future by ensuring the data in our current systems is up-to-date and requirements for the new systems are clearly defined.

Currently, Civil Engineering's IT acquisition strategy is on course, with software and service provider contracts expected to be awarded in August and December 2009, respectively. Initial operating capability (IOC) for Civil Engineering's IT Transformation will occur by next year, with real estate and space IOC planned for 2010 and CMMS, energy, and project management IOC expected in 2011. This means that within a year these new capabilities will begin to impact civil engineers everywhere.

Efforts are also underway to establish a centralized A7/A7C chief information officer (CIO) construct, responsible for managing all Civil Engineering existing and replacement IT systems and software purchases. During the transition period to this CIO construct, we will centralize the management and sustainment of existing capabilities and systems from the field operating agencies, AFCEE, AFCESA, and AFRPA, as well as from the MAJCOMS and bases. To limit the impact on programs, the transition will be incremental. In the coming months, these IT efforts will begin providing new and improved capabilities to Airmen everywhere, and help align our efforts to better support our community's current and future requirements.

Lt Col Thomas is the Chief, Strategic Information Technology, the Office of The Air Force Civil Engineer, The Pentagon, Washington, D.C.

AMP Implementation Update

Lt Col Mark Madaus, HQ USAF/A7CA

Activity Management Plans (AMPs) are fully in the launch phase: this past January, the Asset Management Engine Room at Randolph AFB, Texas, began providing week-long training sessions for Air Force civil engineers from MAJCOMs and installations. Training is focused on how to use data from civil engineering computer legacy systems, like ACES, and collaborate with base peers to build the AMPs. Over 200 personnel have been through the training and have come to understand how asset management and AMPs will make Civil Engineering more efficient. Since asset management is a business practice that impacts all Civil Engineering personnel, many attendees are from outside asset management flights or divisions, so the training has been extended through September to reach the widest possible audience.

Once implemented, the AMPs will provide base civil engineers with a roadmap for planning, programming, and prioritizing projects and make it easier to articulate an installation's real requirements and the risks involved if funding is deferred. In February, teams began visiting each base to help them build their five respective AMPs: facilities, utilities, transportation, waste management, and natural infrastructure. The AMPs will standardize how civil engineers collect and assess data for these core activities.

The AMP-build visits will continue through September, and as AMPs are completed, the Engine Room staff will formulate base comprehensive AMPs, or BCAMPs, which integrate data from all five AMPs into one. Following that, the BCAMPs will be formulated to 'roll up' to comprehensive AMPs at the MAJCOM- and Air Staff–levels.

Once fully implemented, AMPs will replace some existing processes and plans, such as the housing and dormitory plans, base-to-command plans, and the five-year infrastructure plan. Beyond the benefits of streamlining, leadership will be able to see where to focus its planning and resources for up to ten years out, enabling Civil Engineering to be more agile, lean, and mission-ready.

Lt Col Madaus is the Chief, Asset Management Optimization Branch, the Office of The Air Force Civil Engineer, The Pentagon, Washington, D.C.

Activity Management Plans (AMPs)

CORE ACTIVITIES	PROGRAMS
Provide Facilities	Facilities
	Housing (GOQs, Dorms & MFH)
	Custodial Services
	Flight & Space Ops (except pavements)
Provide Utilities	Water/Wastewater/Storm Water/Electric/Gas/Other
Provide Transportation	Roads and Airfields
Provide Waste Management	Land
	Grounds Maintenance
	Environment
Provide Natural Infrastructure	Integrated Solid Waste
	Hazardous Waste

"Room" to Improve: New Possibilities through Space Optimization

Ms. Geri Hart, 72 ABW/CEA

Every day, Air Force civil engineers manage approximately 700 million square feet of facility space — about 107 times the size of the Pentagon — widely dispersed across geographic areas. That's one important reason why we're taking a close look at ways to standardize and optimize how to manage space.

Space optimization is simply managing space more effectively and efficiently to achieve cost savings. It can include identifying opportunities for workspace consolidation, as well as demolishing outdated and inefficient facilities.

"Optimizing Air Force Space" is Initiative M-6 of Civil Engineering's 37 transformation efforts, addressing requirements found in Executive Order 13327, which calls for asset management of federal facilities.

In December 2007, an M-6 team was commissioned to define new standards and processes for how Air Force Civil Engineering will manage space. The team included 21 representatives from most MAJCOMs, the air staff, the Air Force Center for Engineering and the Environment, and the 72nd Air Base Wing at Tinker AFB, Okla.

The Approach

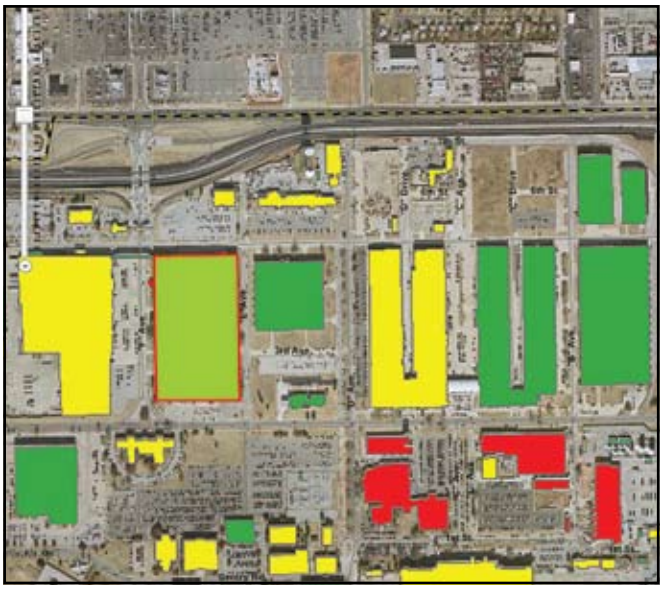
The team began by looking at industry standards for administrative space management and how they could be migrated to the Air Force. Based on their findings, the team presented recommendations for managing the Air Force's administrative space, including new standards, processes, and key performance indicators to The Air Force Civil Engineer

The standards of the Building Owners and Managers Association and the International Facility Management Association (BOMA/IFMA), which address how to measure and calculate space use, will help us charge appropriately for leased space. Space has typically been managed as having no inherent value, when in fact it can cost the Air Force an annual average of $6–$12 per square foot to maintain and operate.

The standards developed by the Open Standards Consortium for Real Estate (OSCRE) align with those of BOMA/IFMA. They provide a drop-in solution for inventorying and classifying space usage at room level, allowing us to identify and track "embedded" space, such as administrative space in our warehouses.

The M-6 team analyzed data from 20 bases at four different MAJCOMs and determined that General Services Administration standards are the best for determining administrative space needs. Adopting these standards will achieve a 28–35 percent reduction in square footage per person.

The team also tested a software application used by industry for facility management that demonstrated exciting new possibilities. Computer programs that show multicolored floor plans (see figure below) can be used to



Computer programs that color code buildings based on use or costs, are just one tool that can be used for space optimization. In the screen image above, buildings are color coded by energy costs per square foot: dark green = $0.00-0.68; yellow = $0.69-1.59; and red = >$1.59. (graphic courtesy of author)

Cutting-edge tools, like this dashboard, will help civil engineers manage their real property assets, from annual operating costs and use of facilities to total replacement value. (graphic courtesy of author)

indicate how space is being used and which space is vacant, as well as associated operational costs, including energy use, sustainment, and janitorial expenses. A variety of dashboards, such as the one shown in figure above, can be used to indicate where opportunities for efficiencies exist above room-level, not only for a particular building, but for the installation as a whole.

The Way Ahead

Implementation of space optimization practices began in late April 2009 with publication of a playbook — a living document and ready resource.

Base personnel must become educated on the new terminology and prepare for the required additional room-level data (see Sidebar at right). Because the Air Force has typically managed space at the facility level, ACES-RP will be supplemented with an "S-File," a database to support transition to the NexGen IT computer system.

Training on the space optimization process and use of the "S-File" is being coordinated through MAJCOM asset managers and will be conducted at MAJCOM and base levels, the flight chief courses, and at engineering assistant training later this year. It will be offered via the Web, video teleconferences, and classroom settings.

How to Prepare for Space Optimization

Become familiar with the BOMA measurement guide, the OSCRE pictionary, and the data template. *(Available on the A7CA CoP, M-6 Transformation folder)*

Verify and update your CAD drawings (.dwg or .dwf files). This is a requirement, regardless of the IT system selected, and will serve as the foundation for everything.

Use OSCRE's classifications to create an overlay in CAD to indicate how space is being used.

Note: Geospatial teams will determine your buildings' external corners and internal room dimensions. This data will be stored, as an interim solution, in the S-File until the NextGen IT is operational.

Ms. Hart is the Asset Management Chief, 72nd Air Base Wing, Tinker AFB, Okla.

Demolition of Excess Facilities

Mrs. Waltrina Davis
HQ ACC/A7PD

Civil Engineers are on a mission to reduce the Air Force's facility footprint and make remaining structures more energy efficient. On March 5, 2009, The Air Force Civil Engineer, Maj Gen Del Eulberg, signed the Air Force Demolition Policy, a comprehensive strategy to demolish surplus and inefficient facilities, a key directive in the "20/20 by 2020" strategic goal. In parallel with this goal, DoD established FY08-13 goals that require the Air Force to dispose of 15 million square feet (MSF) of facility space and $868M of plant replacement value of non-facility assets.

Much of the Air Force's infrastructure dates back to the Cold War era and has exceeded its useful life. During FY98-03, the DoD launched a significant campaign to demolish these facilities through Defense Reform Initiative Directive #36, Disposal/Demolition of Excess Structures. This directive enabled the Air Force to secure demolition funds and eliminate an average of nearly three MSF annually.

During FY04-07, no demolition funding was available in the President's Budget pending BRAC resolution. In FY04-06, demolition efforts dropped to two MSF per year, but in FY07, Maj Gen Eulberg reenergized the demolition program and FY07 and 08 became exceptional years, with annual footprint reductions exceeding three MSF.

As part of Shaw AFB's demolition efforts, Col Francis Xavier, 20 MSG commander, makes the first blow to a 60-year-old building on the South Carolina base. (SSgt Henry L. Hoegen, Jr.)

Commissioned by Maj Gen Eulberg, a cross-functional team of Air Staff-, MAJCOM- and base-level professionals developed an effective approach to identify and prioritize demolition requirements, advocate for and acquire funding, demolish obsolete and excess facilities, and track progress towards meeting footprint reduction goals. The team has laid the groundwork for Air Force demolition projects for the next decade.

The team is currently developing an Air Force playbook to detail the process from cradle to grave. Users will have access to information about the demolition process, from how to identify opportunities to how to submit nominations for the annual Sledgehammer Award.

As the Air Force continues to shrink its infrastructure, commanders should consider the following to meet reduction targets:

- Aggressively identify demolition opportunities
- Develop comprehensive demolition plans executable through the Activity Management Plan
- Prepare to execute projects early in the fiscal year
- Advocate for demolition funding through normal channels, end-of-year, energy savings, and tenant funding sources (The Air Force garnered $108M in AFSO21 funds to support demolition in FY09)
- Engage in strategic sourcing, salvage, reuse, and recycling practices and consolidation/demolition opportunities

Lt Col Derek Scott, commander of the 20th Civil Engineer Squadron at Shaw AFB, S.C., is an avid believer, "This initiative has not just energized the CE world, but has full support of my wing leadership." According to Scott, members of the Shaw maintenance community are definitely on board. Shaw currently leads Air Combat Command in footprint reduction initiatives and is awarding projects in 2009 to eliminate nearly 200,000 square feet of space.

Wasting space, time, and taxpayer dollars are things of the past. Air Force civil engineers, armed with this effective new demolition policy, will eliminate older, inefficient "energy hogs" and enable the Air Force to stretch taxpayer dollars while achieving 20/20 by the year 2020.

Mrs. Davis is the Demolition Team Lead for Air Combat Command, Langley AFB, Va.

Air Force Involvement in the American Recovery and Reinvestment Act

Maj Dan Guinan, HQ USAF/A7CPP

Like our sister services, the Air Force is benefitting from the $7.4B in defense-related appropriations incorporated into the American Recovery and Reinvestment Act (ARRA) of 2009. The Air Force received nearly $1.7B in multiple appropriations as part of the ARRA package. Specific appropriations provided $1.1B for sustainment, restoration and modernization activities; $100M for dormitories; $80M for child development centers; $80M for military family housing (MFH) MILCON; $16M for MFH O&M; $17M for energy conservation improvement projects; $75M for research, development, test, and evaluation; and funding from the defense-wide medical program.

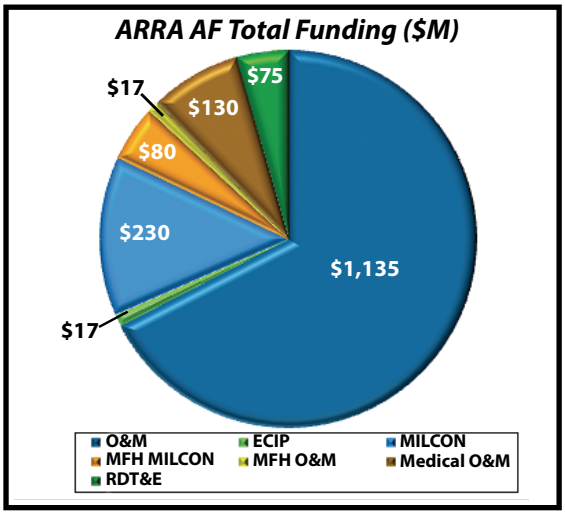
ARRA funds will be utilized at more than 100 installations in 43 states and territories for more than 1,500 projects according to Ms. Nancy Oliver, the Air Force Civil Engineering ARRA lead. "The project selection for ARRA funding was rigorous across the board," said Ms. Oliver. "We were able to balance the intent of ARRA to create and sustain jobs with mission requirements and the ability to execute the projects in a timely manner."

"ARRA funding will not only improve mission readiness, but will improve quality-of-life for our Airmen and their families across the Air Force," said Maj Gen Del Eulberg, The Air Force Civil Engineer. "Many of the projects entail making much-needed improvements to military installations and include repairs on roads, airfields, chapels, utility systems and improvements to achieve energy efficiency goals thereby improving overall Air Force readiness and enhancing workplace efficiency."

Family members will enjoy new child development centers at seven bases and improved housing at two installations. Four bases will receive new dormitories for unaccompanied enlisted Airmen.

A key component of ARRA projects will be the unprecedented transparency with which projects will be conducted. Each project will be visible to the public via http://www.defenselink.mil/recovery/. This transparency requires additional reporting for both the government and contractors involved in the projects. These changes, among other ARRA legislative requirements, necessitated an alteration in the Federal Acquisition Regulations. Five new contract cases were developed and issued in late March. After receipt of these new cases, contracting and engineering professionals began awarding contracts quickly.

"Our major command contracting and engineering teams intend to expedite the award of these contracts to get the funds into the economy and get projects moving," said Ms. Oliver. Thanks to the hard work in identifying and preparing projects, base-level personnel were able to award more than 375 projects valued at $163 million in the first six weeks of execution.



Creating the ARRA program from concept to programming and ready to execute in less than four months was a huge undertaking and unprecedented in the Air Force's history. This one-of-a-kind program involved engineers, financial managers, and contracting officers at installations, MAJCOMs, and HQ USAF working with short suspenses and pressure to maximize the benefit of every dollar while meeting the intent of Congress. Prioritizing Air Force MILCON requirements and providing those project needs to Congress as they wrote the bill condensed a one-year process into about six weeks.

"Most challenging for us was line-item managing the FSRM project list," stated Ms. Oliver. "The Air Staff traditionally reviews projects over five million dollars that require approval, with much of the funding being managed by engineers at the installation level. In this case, every project, whether five thousand dollars or five million, was reviewed all the way through the Office of the Secretary of Defense. It is a tribute to the hard work of the entire team that we are now leading the Department of Defense in award of these projects. Congratulations to the entire Air Force team actively involved in the Recovery Act program!"

Maj Guinan is the ARRA Program Manager, in the Office of the Air Force Civil Engineer, The Pentagon, Washington, D.C.

Halfway through BRAC Implementation

Mr. Frank Smolinsky
SAF/IEI BRAC PMO

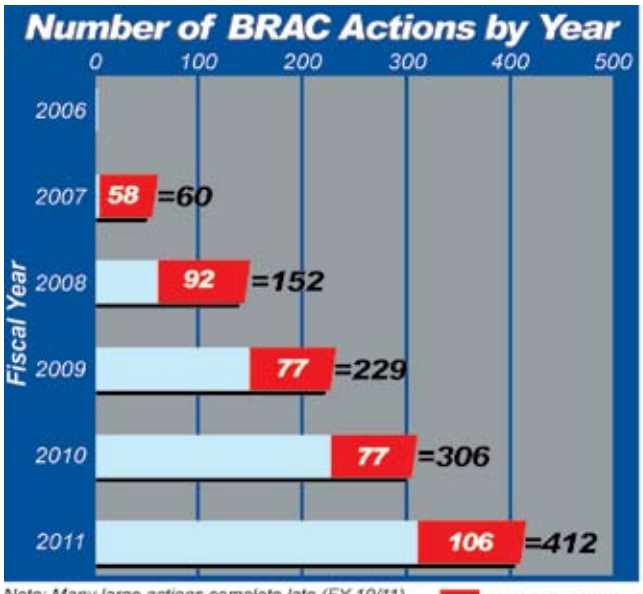
In September of 2005, former President George W. Bush accepted, and ultimately presented to Congress for approval, 220 recommendations from the Base Realignment and Closure (BRAC) Commission. These recommendations were designed to allow the DoD to divest itself of unnecessary installation infrastructure and use the resultant savings for improving warfighting capabilities and quality of life for military forces.

More than 45 months later, the implementation of the BRAC-directed recommendations are well past the halfway point towards meeting the congressionally mandated completion date of Sept. 15, 2011.

"BRAC and its implementation is a transformational initiative, affecting active duty, the Guard, and the Reserve," said Mr. Doug McCoy, acting director of the Air Force BRAC Program Management Office. "This is an important step in transforming our Air Force from a residual Cold War infrastructure to one better prepared to meet future defense needs."

The Air Force has committed to fully fund its BRAC program to the tune of $3.9B covering FY06-11, added Mr. McCoy.

"BRAC implementation is more than just bricks and mortar," said Ms. Kathleen Ferguson, Deputy Assistant Secretary of the Air Force for Installations. "Costs cover a range of requirements including military construction, operations and maintenance, environmental reviews, and the movement of weapon systems and military and civilian workers to new locations."



Note: Many large actions complete late (FY 10/11) due to complexity and need to complete larger construction projects.

Making BRAC changes a reality has been an Air Force-wide effort, continued Ms. Ferguson. "Every major command, the Guard, the Reserve, and Headquarters Air Force have supported this effort with a team of dedicated professionals whose sole focus every day is to ensure the more than 400 actions required by the Air Force to implement BRAC happen on time, within budget, and with minimal negative impact on our people and our mission," Ms. Ferguson said.

BRAC MILCON

One of the greatest challenges to moving people, equipment, and expanding missions to and from designated locations is to ensure the facilities needed to support those missions are in place. The first few years of BRAC implementation were primarily focused on developing and writing BRAC implementation business and program plans, along with MILCON planning and design. Between 2005 and 2008, there were 152 BRAC-related actions; an additional 260 actions need to be completed between 2009 and September 2011, along with the necessary construction. (See graph)

"Our program managers currently provide oversight for 227 military construction projects across the Air Force," said Mr. McCoy. "These 227 projects affect 54 installations in 36 states with a price tag of more than $2.5B."

San Antonio

One example of BRAC 2005's significant impact on the Air Force, and the DoD as a whole, is occurring in San Antonio, where the Air Force is partnering with the other Services, and the TRICARE Management Activity, to implement one of the most complex recommendations in BRAC history – the San Antonio Military Medical Center (SAMMC). Split between Lackland AFB (SAMMC-South) and Ft. Sam Houston (SAMMC-North), the updated facilities will combine two Level I trauma centers into one capable of providing world-class medical care for more than 200,000 patrons, including wounded warriors, active duty, members of the Reserve component, and retirees, as well as their families. Also included in this recommendation is the

collocation of the Air Force, Navy, and Army enlisted medical education learning centers.

On December 8, 2008, the first major SAMMC project began with groundbreaking for the $651M construction and renovation project at Ft. Sam Houston's Brooke Army Medical Center, in preparation to receive the inpatient care responsibility from Wilford Hall Medical Center. When finished, SAMMC-North will add approximately 870,000 square feet of new construction and 314,000 square feet of renovation, with total costs projected at $694M.

The full consolidation of military medical treatment and medical education training in San Antonio should take approximately three years to complete, and will use more than one-quarter of the Air Force BRAC MILCON budget. (The projected total BRAC MILCON bill in San Antonio is more than $1.5B.) At SAMMC, annual training of more than 600 physician residents in 37 clinical areas for the Air Force and Army will continue and more than 47,000 trainees will go through the enlisted learning center each year. These numbers will make the medical training center the world's largest.

BRAC across the Total Force

In one way shape or form, more than 120 Air Force installations are impacted by BRAC 2005 recommendations. Unlike the previous round of BRAC, where 82 percent of the implementation actions affected the active Air Force, in BRAC 2005, 78 percent of the implementation actions affect the Air Guard and Reserve. More than $478M will be spent in support of Air Guard and Reserve MILCON projects. Many of the active duty MILCON projects, like building or renovating the C-130 facilities at Elmendorf AFB, or the KC-135 facilities at Seymour-Johnson and MacDill AFBs, will benefit Reserve Component forces.

Less than Three Years to Go

Thousands of man-hours have been spent on planning, coordinating, meeting, scrutinizing, discussing, visiting bases, and executing the more than 410 actions the Air Force must implement to complete BRAC 2005, and thousands more are still ahead. But, the good news is the Air Force can report it is currently exceeding its self-imposed on-time-rate goal and executing the program within budget.

"We knew implementing the BRAC 2005 Commission recommendations was going to be a challenge," said Ms. Ferguson. "But the dedication and exceptional expertise of the staffs, up and down and across the echelons of the Air Force, have helped keep us on track, on time, and within budget. When September 15, 2011 arrives, we will have assisted in transforming our Air Force into a leaner, more capable, better organized, and more efficient air, space, and cyberspace force."

Mr. Smolinsky, a contractor, is the Chief of Communications for the Air Force BRAC Program Management Office, Washington, D.C.

An aerial view rendering of SAMMC-North showing the 760,000 square foot addition (center) that covers the entire front of the existing Brooke Army Medical Center. (Approximately 288,000 square feet of the existing BAMC facilities will be renovated.) A 5,000 space parking garage will also be built (far left in middle), as well as a central energy plant (lower right corner). (Graphic courtesy of the U.S. Army Corps of Engineers)

Prime BEEF Goes to Sea

Air Force CEs sail with Seabees for SOUTHCOM mission

Maj Thomas DeFazio
5 CES/CEO

The few, the proud, the Prime BEEF engineers! When U.S. Marine Corps engineers scheduled to deploy to Operation Continuing Promise 08 (CP08) had to deploy to Southwest Asia instead, Prime BEEF engineers from Minot AFB, N.D., were tasked for the mission.

From August to December 2008, I had the great privilege of commanding a 60-person contingent on CP08, a sea-based joint humanitarian and civic assistance mission to six Caribbean and South American nations: Nicaragua, Colombia, Curacao, Guyana, Trinidad and Tobago, and the Dominican Republic. While we can't confirm we are the first group of Air Force CEs to deploy on a Navy vessel, we are definitely one of the few.

The engineering team consisted of 40 Airmen from the 5th Civil Engineer Squadron and 20 Navy Seabees from Construction Battalion Maintenance Unit. I had prior "Navy" experience, having served as an exchange officer with the Seabees of the "Fearless" Naval Mobile Construction Battalion 74 from 1997-99. The OIC of CBMU 202, Chief Warrant Officer Dave Joyner, a seasoned 26-year Seabee, was my AOIC for CP08.

The purpose of CP08 was to strengthen and advance U.S. relations with Caribbean and Latin American countries and demonstrate a continued commitment to the region, as part of the vision of the SOUTHCOM commander, Admiral James G. Stavridis, to provide "An interagency oriented organization seeking to support security and stability in the Americas." During CP08, engineers worked alongside medical and dental personnel, linguists, ship's crew, non-government organizations (Project Hope and Operation Smile), and foreign military members on projects focused on improving healthcare, education, and childcare centers and providing safe areas for communities to congregate.

Photo above: The amphibious assault ship USS Kearsarge (LHD 3) is underway on Oct. 16, 2008, off the coast of the Dominican Republic after launching a landing craft utility during Continuing Promise 2008. (U.S. Navy photo by MC3 William S. Parker)

In early August, our 60-engineer contingent embarked from Norfolk, Va., on the amphibious assault ship USS Kearsarge, a tremendously flexible and capable grey-haul platform, under the mission command of Commodore Fernandez "Frank" Ponds and the ship command of Captain Walter Towns. As is sometimes the case, our prior planning barely survived first contact. Our first CP08 visit —to Nicaragua — was met with heavy rains, heat and humidity, and a slight-graded sea shore (bad for amphibious operations). Just three weeks into our mission, our second mission stop — to Colombia — was cut short by several days and our planned third stop – to Panama – was cancelled when we were diverted to Haiti for humanitarian assistance/disaster relief efforts after a string of hurricanes and tropical storms hit the island, causing serious damage and casualties. After a quick port visit to Puerto Rico, we resumed our scheduled CP08 mission and the 5 CES engineers actually ended up sailing to seven countries. Following are some of our mission details.

Predeployment Planning and Logistics

Predeployment planning was extensive and involved two mid-planning conferences, a final planning conference, and a pre-sail conference. Each consisted of approximately 120 personnel representing 80 different organizations. Additionally, pre-deployment site survey teams visited the host nations in late February and early March to determine the nature of work, scope of projects, site logistics, and equipment requirements. Local construction materials were available in all but two countries, Nicaragua and Panama.

With allotted funding of $600K ($100K per country), $575,482 was expended on materials and services for the engineering mission. We brought $330K worth of materials with us, including all materials for the two previously mentioned countries, $46K worth of lumber (a late add after extreme cost estimates were given from the country prime vendors), and eight commercial-grade playground sets (these were a hit in every country). Collectively, we also brought 32 pieces of CE support equipment, conexes of Air Force and Seabee tools, 10 tents, 10 generators, and life support items. The Seabees brought most of the heavy equipment (e.g. five 15-ton trucks, three Humvees, etc.); we brought two bobcats (with attachments) and three small utility vehicles. All were stored in the expansive upper and lower vehicle storage areas of the USS Kearsarge normally used to store the equipment of a Marine Expeditionary Unit (MEU). The coordination of who was bringing what was a job in itself.

Twelve members of our ADVON party arrived in Norfolk on July 19 to inventory and palletize our materials and equipment that had been delivered to the pier, before loading them onto the ship, scheduled for August 1-4. This was our first unexpected challenge: while an MEU comes fully prepared and equipped to handle its own logistics, we didn't. With all the ship's crew enjoying its last few days of predeployment liberty – a typical scenario, we learned – we were left scrambling with just a few dedicated standby duty forklift operators (since we were not qualified to drive on the ship). Two 18-hour days later, our "stuff" was loaded. With all of our engineers, materials, and equipment on board, we left port on August 6.

Accomplishing the Mission

In an odd twist from our usual mission, we and the medical/dental contingent were the supported elements of this mission. Overall, the engineering component of the humanitarian/civic assistance mission completed 23 proj-

Nicaragua

Community Education Center –built 2 standard 16'x32' SEAHuts

Municipal Park – repaired gazebo and lighting; improved grounds/playground

Juan Comenius HS – installed 9 classroom (25'x30') ceilings and perimeter chain link fence

Central School – built 2 frame shelters

Colombia

Yulu community well – built new roof structure

Los Alps School – built L-shaped school (= 4 SEAHuts)

San Cristobal Hospital – renovated 4 bathrooms, evaluated/fixed 72 lights and 4 A/C units

Palmira Village – installed 3,000- gallon water tank/built playground

Dominican Republic

Sabana Grande School – built 4-classroom modified SEAHut; improved grounds/playground/basketball courts

Bonao Caribe Clinic – renovated clinic floor-to-roof top; landscaped grounds

Socorro Sanchez School – built CMU block food prep/storage area; renovated library

Villa Altagracia – built playground

Curacao

Willemstad Hospital - relocated electric panel; installed generator

Trinidad and Tobago

St. Jude's School – renovated 44-room complex (ceilings, walls, electrical, plumbing)

All-In-One Child Development Center – renovated bathroom; added lights/security lights/shed/playground/fence

Cyril Ross Nursery – improved drainage; repaired roof; cleaned site; painted

Guyana

East Ruimveldt Community Center – Installed 1,500-foot perimeter fence; painted 7,000-sq ft center; installed playground, awning, exterior lights

West Demerara Hospital Canteen – built CMU block canteen w/serving counter, sinks, picnic tables

Houston HS – renovated library; repaired bathroom

Note: CP08 was diverted to Haiti for disaster relief support and mission to Panama was subsequently cancelled.

ects in five countries – Nicaragua, Colombia, Dominican Republic, Trinidad and Tobago, and Guyana — valued at $1.87M, and worked a total of 3,939 direct labor mandays (U.S. engineers, community relations personnel, and host nation engineers). Completed projects included three new schools, five renovated schools, five renovated clinics, 10 recreation projects, and five infrastructure repairs. An overview of the projects by country is given in sidebar on previous page.

Once on scene, we often re-scoped the projects to meet the people's needs. My SNCOs did a fantastic job with this, adding more than was asked or expected. The ship's crew was invaluable to the success of the engineering mission, providing many hours of skilled and unskilled labor in every country.

Each country provided its own unique logistics and communications challenges. In four countries we either established tent camps (Nicaragua and Guyana) or stayed in barracks provided by the host nation (Dominican Republic and Trinidad and Tobago) and traveled to and from the camps to the work sites daily. In Colombia, we remained on the ship and traveled in landing crafts to shore, then bussed and convoyed to the job sites. Primary communications were made via cell phones back to Virginia then back down to the ship, which created poor reception and connectivity. Transportation assets for moving personnel, equipment, and materials ashore included two SH-60 Sea Hawk and six MH-53 Sea Dragon helicopters, as well as three landing craft. I cannot say enough about the skill and professionalism of these support units.

SSgt Arthur Malecki of the 5 CES, Minot, N.D., helps make repairs to The Best Hospital in West Demarara, Guyana. (U.S. Navy photo by MC Ernest Scott)

Detour to Haiti

The CP08 humanitarian mission was temporarily put on hold in September, when the USS Kearsarge and embarked personnel were diverted to Haiti in support of a disaster relief mission.

Following the devastating effects of three consecutive hurricanes and tropical storms, engineers aided in the movement and delivery of almost 2,000 tons of relief supplies via helicopter and landing craft. Engineers also completed 15 bridge assessments, and 450 miles of roadway surveys and restored a 2,000-foot water pipeline in a remote village. In all, we validated 47 projects valued at $90M, and prepared storyboards for the 4th Fleet Commander to report to Congress.

Challenges and Lessons Learned

The mission was extremely challenging given the timetable and logistical complexities. Because of the diversion, we worked 57 days straight without a day off, and 113 out of 118 days overall. It was hard to develop a work rhythm. Every country was different and we only averaged 10-14 days in each country, so we literally had to "hit the ground running." Getting to and from ship to shore was time consuming; we usually loitered 3 to 20 nautical miles offshore, sailing out further every few nights to perform daily ship maintenance. Travel to and from the job sites could eat up a lot of our time. We would usually have three sites in a country, each separated by an hour or more drive. One of our biggest challenges was loading and unloading the ship. As we left each country, we would have to backload the ship with the next country and its projects in mind.

We learned much along the way and came back with some very good lessons for future missions:

To make the most of our time, we started buying materials for upcoming countries in the country we were currently in. We set up a workshop on the ship to prepare or pre-build as much as possible while we were underway. More time could have been spent in preliminary site surveying. As we came "new" to a site, it was often difficult to design off the limited photos we were provided. In many cases, it was harder to do renovation than new construction, because the new materials often didn't fit with the existing ones. It

became important not to overbuy materials, because we couldn't bring back any lumber back with us. As it was, we had to do a top-to-bottom agricultural wash-down of the ship and equipment before returning to the United States.

Spanish-speaking personnel were by far the most valuable team members for this particular mission — at least one Spanish speaker, with an understanding of construction terms, per unit was necessary. We were very fortunate to have seven internal to our unit. Finally, one of the worst lessons we learned: a 15-ton truck can't swim as it nose dives off the end of a landing craft into five feet of surf.

Rewards

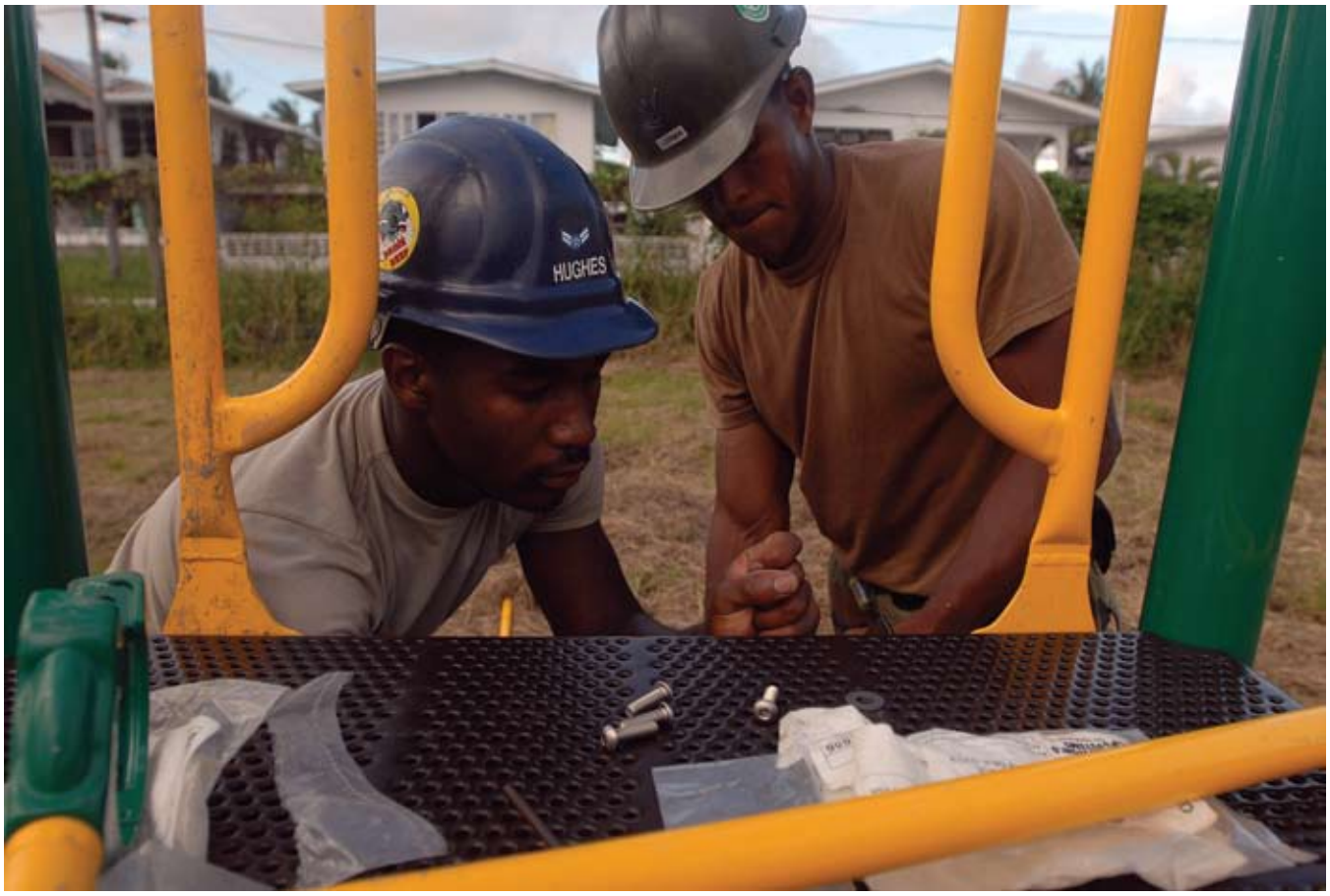
Operation Continuing Promise 2008 concluded on Dec. 2, 2008 when the USS Kearsarge pulled into Pier 8 at Norfolk Naval Station, Va. Engineers from the 5 CES debarked and returned to Minot AFB and 52 inches of snow, exhausted but proud of our success.

Some of our most rewarding experiences involved the inspirational people we encountered. One of our CEs, A1C Joel Mendoza, a native Nicaraguan, received a surprise visit with his mother and father. "I never thought in a million years I would return home and get the opportunity to help out," said A1C Mendoza.

In concert with the U.S. Ambassadors of each country, we were able to bring our message to the highest levels of government, presidents, prime ministers, chiefs of staff, military counterparts, governors and mayors. And while we were only there for very short periods of time, our accomplishments truly were remarkable. Everywhere we went there was gratitude. "I want to thank the Americans. You are very generous and caring ...the most beautiful thing a nation can do," said Sister Helena of St. Jude's School for Girls, in Trinidad and Tobago.

CP08 provided our engineers with training, cross-training, and a service-to-service exchange of expertise. We exceeded all the mission requirements we were given, and under budget. We consistently received accolades from our hosts, in person and in the press. CP08 was also a wonderful opportunity to showcase what our professional military engineers, Air Force and Seabees alike, can do.

Maj DeFazio is the commander of Det 1, 823 RHS, Silver Flag Exercise Site, Tyndall AFB, Fla. He was the Operations Flight chief, 5th Civil Engineer Squadron, Minot AFB, N.D.



A1C Pasha Hughes, left, of the 5 CES, and Navy Seabee Hugo Lerma work together building a new playground for a local community in Guyana. (U.S. Navy photo by MC2 Gina Wollman)

Farewell, Genera

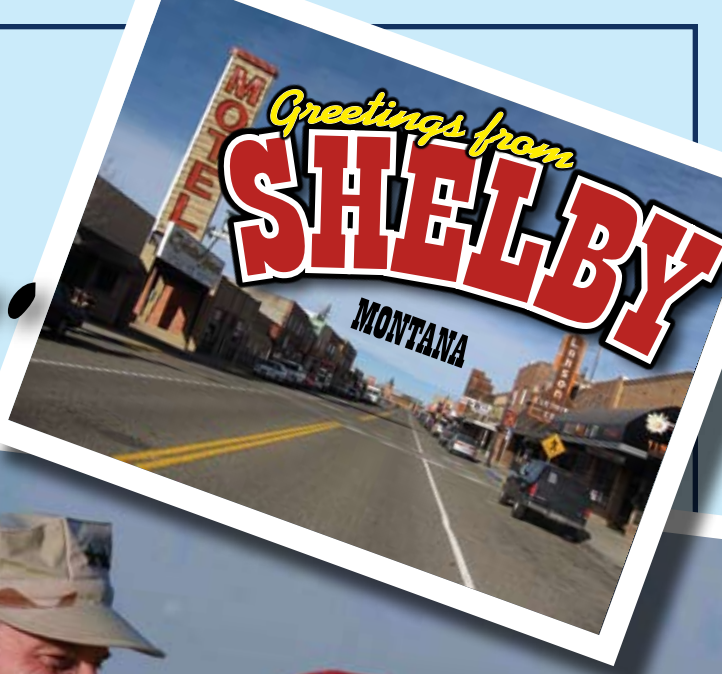
Maj Gen Del Eulberg will retire in August, culminating a career of more than 31 years of service to the Air Force and the nation. The last three years were distinguished by his position as The Air Force Civil Engineer, leading an Air Force career field of 60,000 and overseeing support for more $204 billion worth of Air Force infrastructure.

A native of Shelby, Mont., Maj Gen Eulberg was commissioned in 1978 following graduation with honors from the Air Force Academy with a B.S. in civil engineering. Since his first assignment with the 92nd Civil Engineer Squadron at Fairchild AFB, Wash., he has held positions at the squadron, major command, and Air Staff levels. He has commanded two civil engineer squadrons and a support group, and was the 99th Air Base Wing and Installation commander at Nellis AFB, Nev.

As The Air Force Civil Engineer, Maj Gen Eulberg guided Civil Engineering during a time of transformation initiated by the "force reduction for weapons systems recapitalization" actions directed by Program Budget Decision 720, then continued by the imperative to reconstruct and advance the "business" of Civil Engineering. He led civil engineers as they continued their high level of support to warfighters in Operations Iraqi Freedom and Enduring Freedom. More than 2,800 highly trained and equipped civil engineer Airmen are now in the Southwest Asia area of responsibility, working jointly with soldiers, sailors, and marines, inside and outside "the wire."

"When I look out my office window, I see the Pentagon and the Washington Monument, both powerful symbols of our American values and the men and women who fought for those values. On my travels to your installations, I meet the patriots of today who continue those traditions….I am honored to lead this proud Air Force engineer team." (Maj Gen Del Eulberg, AFCE magazine, Vol. 14, No. 3, 2006)

l Eulberg...



Modernizing the CE Recurring Work Program

Capt Ross E. Dotzlaf
Dr. Alfred E. Thal, Jr.
AFIT/ENV

For years, the Recurring Work Program (RWP) has been a fundamental program within Civil Engineering operations. The program is based on the concept of preventive maintenance: through the performance of routine maintenance actions, equipment life or failure can be extended or reduced and overall life-cycle costs can be minimized.

As many Civil Engineering members know, the size and quality of RWP, as well as leadership emphasis, vary greatly from base to base, and personal opinions on the program's value are equally diverse. In fact, stagnating program performance has led many to question the value of the RWP. At the same time, there has been a renewed interest in the RWP, from the perspective of Asset Management, because of the program's cost-savings potential and system life-cycle approach to maintenance.

Evaluating the RWP

Through the Graduate Engineering Management program at the Air Force Institute of Technology, a case study analysis of the current RWP was conducted to evaluate the program and provide recommendations for its future. To create a basis for the analysis, previous research was reviewed to identify best practices from the maintenance management industry and understand applicable maintenance management concepts and theories.

Twenty-five members of the CE community — representing all the major commands —were interviewed to gain a thorough understanding of each person's positive and negative experiences, opinions, and recommendations for the program. The pool of subjects had an average of 22 years of experience in Civil Engineering and included a relatively even mix of officer, enlisted, and civilian personnel who have held a wide variety of jobs with respect to the RWP.

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was performed, and the findings were determined by identifying 1) recurring themes from the interview responses and 2) gaps between the current program and established best practices from industry. Findings consisted of one strength, six weaknesses, eight opportunities, seven threats, and three unclassified.

RWP Focus Areas

To effectively communicate the results of the SWOT analysis, the supporting information from the findings was compiled into eight 'focus areas' (FAs). Each FA represents a theme of practical recommendations for maximizing the effectiveness of the RWP; when taken together, the FAs serve as a model for modernizing the RWP. Only the five FAs applying to unit-level RWP implementation are discussed below, along with recommendations, if available.

FA#1: Accurate Record Keeping

Accurate record keeping is one of the basic requirements of the RWP and was one of the most cited reasons for program success. Similarly, failure to keep accurate records was one of the most cited reasons for program failure. Problems with accurate record keeping may include failure to record work completion data, improper IWIMS data entry, or "pencil whipping." However, two of the most cited reasons for poor record keeping were

During a routine inspection of the liquid fuel systems across the Kadena flightline, Mr. Satoshi Uza and SSgt Zebulan Tune, 18 CES, Kadena AB, Japan, examine a pressure relief control from a fuel control valve. (photo by Amn Chad Warren)

a lack of understanding of how and why to perform required actions, and personnel are not held accountable. Inaccurate records provide a false representation of program performance and offer no basis from which to improve the program.

Recommendations: Leaders should ensure that all personnel involved in the RWP understand the importance of accurate records and how to track them; leaders should hold personnel accountable and take an active role in ensuring RWP records are accurate.

FA#2: Annual Program Reviews

Annual Program Reviews are another basic requirement of the RWP. Program reviews were also highly cited in the interviews as a primary driver for the success or failure of the RWP. Some of the most cited reasons for not completing program reviews were 1) lack of understanding how/why to perform the reviews, 2) lack of time or personnel required to complete reviews, and 3) personnel are not held accountable for performing the reviews. Failure to perform periodic reviews of the RWP will prevent it from being optimized for the best level of performance or hinder matching available manpower and resources.

Recommendations: Leaders should ensure personnel understand how to properly implement and review the RWP. Leaders should also ensure adequate resources (specifically time and personnel) are allocated for performance of the reviews; once these are allocated, leaders must hold personnel accountable for completing the reviews.

FA#3: Education and Training

This FA and the next, Leadership Attention, are not specific components of the RWP; however, they are basic concepts for successful maintenance management. Without an adequate understanding of how and why to perform required tasks of the program, personnel will not be able to produce an effective RWP. Important topics for personnel involved with the RWP include how to 1) create and update RWP actions, 2) optimize work schedules, 3) use IWIMS to manage the RWP, and 4) review the RWP. Avenues for training include formal training (tech schools, CDCs, AFIT/CESS classes), on-the-job training, local classes, vendor training, and personal research/reading.

FA#4: Leadership Attention

Leadership attention can be subdivided into two categories: 1) support – providing the necessary time, personnel, and resources to properly execute the program, and 2) accountability – establishing priorities and holding personnel responsible for meeting the desired level of performance. The level of support must match the level of accountability. As one of the interview subjects said, "If RWP is at the top of the list, then staff me, fund me, give me the time to really do it, give me the materials, and hold me accountable for getting it done."

FA#5: Predictive Maintenance

Predictive maintenance is the concept of performing maintenance actions based on need, rather than according to a set schedule regardless of need, like the RWP and other traditional preventive maintenance programs. With predictive maintenance, maintenance needs are identified by remote sensing equipment (e.g., EMCS used by HVAC) or through routine inspections. If implemented properly over time, predictive maintenance can lead to manpower and resource savings and afford a similar level of reliability as preventive maintenance.

Recommendations: Consider gradually transitioning the RWP for select equipment types from preventive methods to predictive methods. Consult technical experts and/or published guidance for equipment-specific methods for predictive maintenance. Investigate emerging computer-based technologies and sensors for unique ways to implement predictive maintenance.

Conclusion

While the FAs developed from this study are not a fail-safe method for improving the RWP, they provide practical recommendations based on structured research, established concepts, and insight from experts in the Civil Engineering community. The results of the study showed that although the RWP can be cumbersome in its current format, the underlying concepts of the RWP are strong. Providing adequate education, training, and leadership attention to the program improves chances that the basics of the program will be accomplished, and incorporating proven maintenance concepts, like predictive maintenance, into the RWP can increase the effectiveness of the program.

Further Information

Complete results from this study have been turned over to the operational sponsors to determine the best way to incorporate and disseminate the lessons learned. If you are interested in viewing the full report, an electronic copy should be available through the Defense Technical Information Center (DTIC) soon. For more information, contact Dr. Thal (Alfred.Thal@afit.edu).

Capt Dotzlaf is currently deployed to Iraq from the 21st Civil Engineer Squadron, Peterson AFB, Colo. This article is based on his thesis research conducted as a master's degree candidate at the Air Force Institute of Technology, Wright-Patterson AFB, Ohio. Dr Thal is an assistant professor of engineering management supporting the Graduate Engineering Management master's degree program at AFIT.

CoBRA STRIKES AT WARRIOR TRAINING

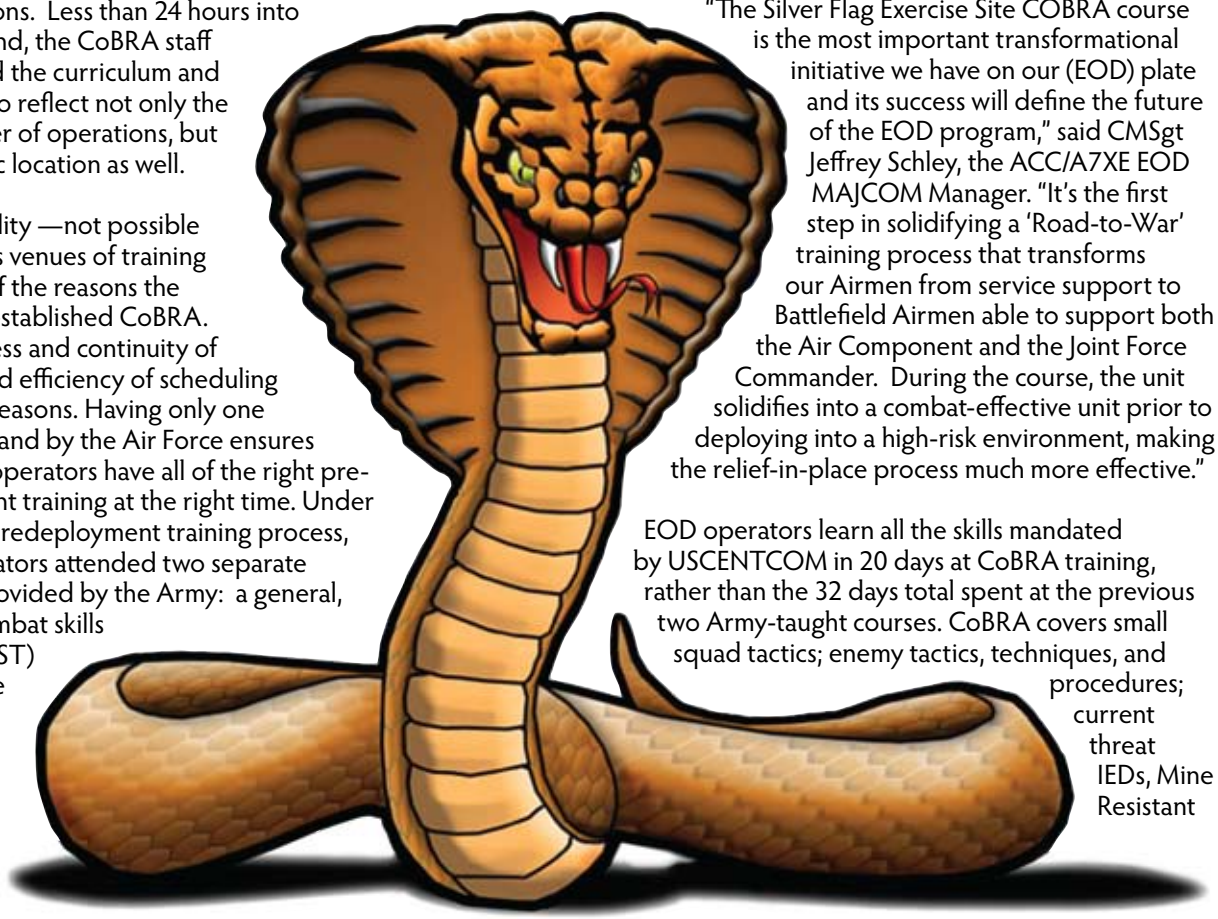
Mr. James Prater, HQ AFCESA/CEXD

Predeployment course at CoBRA ensures EOD Airmen are trained and lethal

In February, a group of EOD Airmen completed the first Combat Battlefield Ready Airman (CoBRA) class and deployed directly from the Silver Flag Exercise Site (SFES) at Tyndall AFB, Fla., to Southwest Asia. At CoBRA, class leaders quickly formed their students into the same teams they would be in the AOR, and during the 20-day course, the teams trained on scenarios tailored specifically to their deployed location. They did this despite the fact that on Friday of their first week at CoBRA, the teams received notification from USAFCENT that not only had their deployment location changed but also the theater of operations. Less than 24 hours into the weekend, the CoBRA staff rearranged the curriculum and scenarios to reflect not only the new theater of operations, but the specific location as well.

This flexibility —not possible at previous venues of training — is one of the reasons the Air Force established CoBRA. Effectiveness and continuity of training and efficiency of scheduling are other reasons. Having only one course for and by the Air Force ensures that EOD operators have all of the right pre-deployment training at the right time. Under the prior predeployment training process, EOD operators attended two separate courses provided by the Army: a general, 18-day combat skills training (CST) class at one of the U.S. Army Power Projection Platforms in CONUS and the 14-day GATOR (EOD expeditionary mission) training at Redstone Arsenal, Ala. Often there would be significant intervals of time between CST and GATOR and between GATOR and deployment. The first guaranteed opportunity for EOD personnel to come together as an integrated team was at the deployed location during the "left-seat-right-seat" mission spin-up period. CoBRA changes all that.

In March 2007, Air Staff, HQ AFCESA, and HQ ACC EOD functionals began working plans to move all EOD predeployment training to a consolidated venue. During this same time, at a Civil Engineer Readiness Board-sponsored IPT, the EOD working group identified significant gaps in current training venues and documented the need to develop a more robust program at Tyndall's SFES or at another Air Force venue.



"The Silver Flag Exercise Site COBRA course is the most important transformational initiative we have on our (EOD) plate and its success will define the future of the EOD program," said CMSgt Jeffrey Schley, the ACC/A7XE EOD MAJCOM Manager. "It's the first step in solidifying a 'Road-to-War' training process that transforms our Airmen from service support to Battlefield Airmen able to support both the Air Component and the Joint Force Commander. During the course, the unit solidifies into a combat-effective unit prior to deploying into a high-risk environment, making the relief-in-place process much more effective."

EOD operators learn all the skills mandated by USCENTCOM in 20 days at CoBRA training, rather than the 32 days total spent at the previous two Army-taught courses. CoBRA covers small squad tactics; enemy tactics, techniques, and procedures; current threat IEDs, Mine Resistant

Ambush Protected (MRAP) vehicles, shoot targets out to 1000 meters; and communications training.

Some of the favorite classes are Combat Lifesaver and Joint Tactics. With Combat Lifesaver, EOD operators are taught the skills needed to save each other during any operation. This includes sniper fire, small arms, shrapnel, and large explosions. Then using the MEDIVAC 9-line procedure learned during Joint Tactics they will correctly call in the items needed to get support when and where needed. CoBRA refreshes Airmen's skills on Counter Improvised Explosive Defeat-related topics, trains on new and deployed equipment not maintained at home station, and culminates in a four-day field training exercise where all their learned skills are tested to make sure they are ready.

Success at CoBRA depends on each individual's home station training status. The main purpose of CoBRA training is to raise the knowledge and skill levels of all EOD technicians to a standard, but higher, level. The only way this will be accomplished is if everyone is completely up-to-date on their home station training.

With approximately 20 instructors – five military and the rest contract personnel —CoBRA has an enviable student-to-instructor ratio. The military jobs are all deployable positions; this allows military instructors to stay current with AOR-related mission requirements. The contract instructors (all former military) provide continuity. The group includes former Navy Corpsmen and Army Special Operation Forces personnel, so that students are well prepared to work in a joint environment.

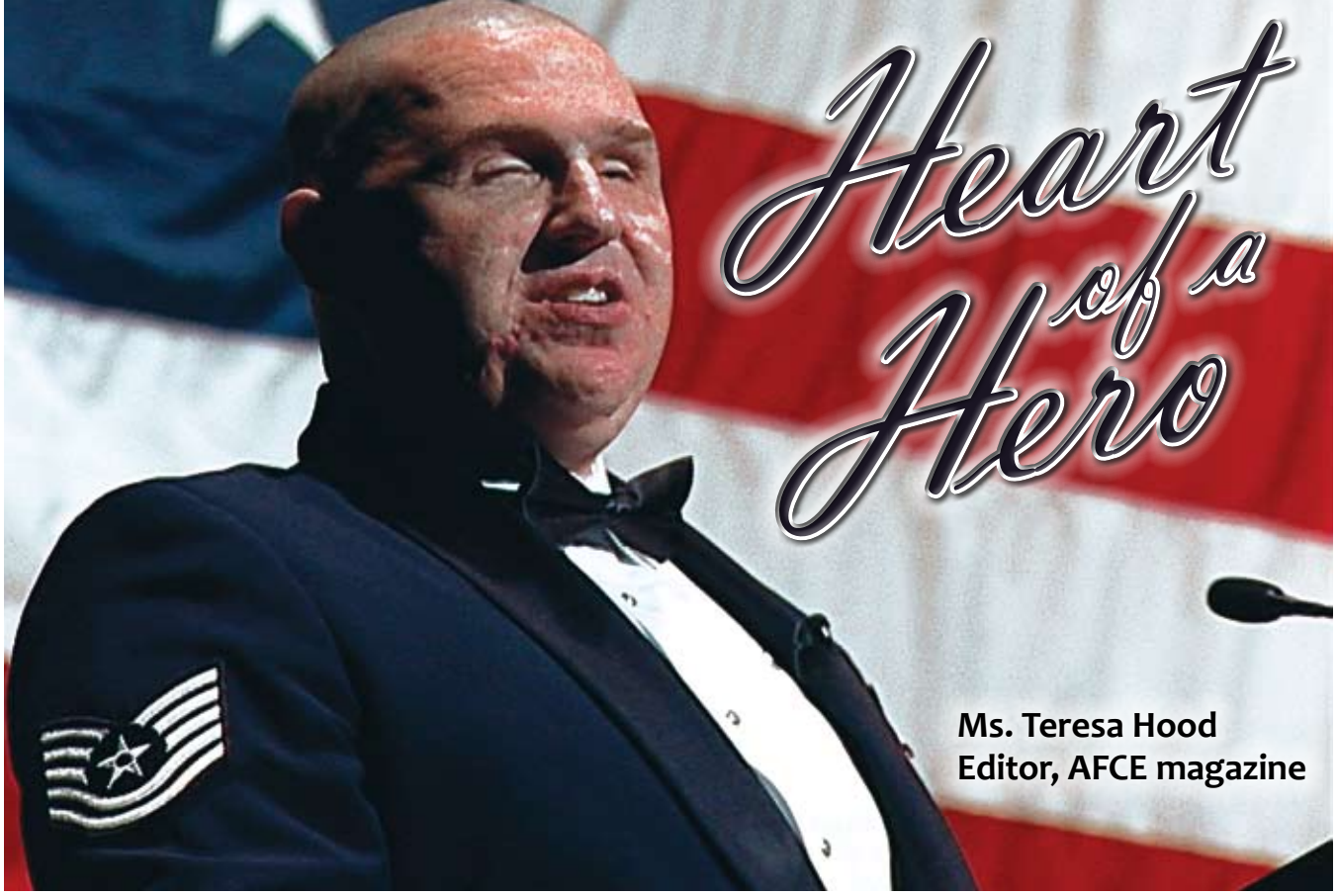
The Air Force EOD program is currently supporting a high – and increasing – number of requests for forces. In fact, over the last three years, support to the Southwest Asia theater of operations has increased 100%, and some ranks are experiencing a 1:1 dwell. With this high operations tempo, it's very important that predeployment training build upon home station training to be efficient and effective.

"CoBRA provides two distinct improvements - it consolidates training while increasing the vital teamwork and cohesion so critical to our EOD Airman on the battlefield," said Col Robert Staib, Chief of HQ ACC's Readiness Division. "We have turned our war prep from a pick-up game to team training, ensuring Airmen are more prepared than ever to go into the fight together. You're seeing continuous process improvement at its finest."

Students finishing CoBRA and heading for the AOR hold the same view. "CoBRA is absolutely 100% spot on," said recent graduate Capt Jeff England, 1 CES, Langley AFB, Va. "It's very obvious that the CoBRA cadre put a lot of effort into providing the best training possible."

Mr. Prater, a contractor, provides support as the EOD Contingency Training Program manager, HQ AFCESA, Tyndall AFB, Fla.

During the 20-day CoBRA class, students participate in a variety of training, including (top to bottom) firing at 1,000-meter targets (actual distance); HMMWV Egress Assistance Training; actual combat scenarios (30 total); and instruction and live firing of the turret-mounted M240/b. (photos by Mr. Guy Ivie [third from top] and Mr. Jim Monhollon)



Heart of a Hero

Ms. Teresa Hood
Editor, AFCE magazine

In October 2007, halfway through his third voluntary deployment, TSgt Matthew Slaydon was leading his Explosive Ordnance Disposal (EOD) team on a mission in northern Iraq when an improvised explosive device (IED) detonated a few feet from him. The EOD technician from Luke AFB, Ariz., survived the explosion, but his injuries were severe: loss of his left eye as well as his left arm above the elbow; complete blindness in his right eye; both eardrums punctured; a moderate traumatic brain injury; a skull fracture; a collapsed left lung; his jaw broken in two places; every facial bone shattered; and multiple face lacerations. He also survived two pulmonary embolisms in the weeks following the explosion.

"Both should have killed me," said TSgt Slaydon. "I think there's about four times I should have died."

Coming back to the states via Landsthul, Germany, TSgt Slaydon spent a few days at Walter Reed Army Medical Center, Washington, D.C. before being transferred to Brooke Army Medical Center, San Antonio, Texas. After more than 16 operations and 15 months of rehabilitation at Brooke and the Center for the Intrepid, also in San Antonio, he continues with rehabilitation from his home station in Arizona.

Ever since he returned to the states, his wife, Mrs. Annette Slaydon, has been beside him, with him for every up, every down. And beside both of them have been the EOD community and the Air Force.

"Until this happened, I didn't realize just how close the EOD community is," said Mrs. Slaydon. "They scooped me up, they picked me up, and they have taken care of us, just like the Air Force has. The Air Force has programs in place that help families go through this. I always had a family liaison officer between myself and the military while he was in the hospital and going through the whole process. Sergeant Ryan Winger from Luke was with me from the beginning and then Airman Dan Acosta took over for us in Texas. There are programs such as Operation Comfort, and the Coalition to Salute America's Heroes, the Wounded EOD Warrior Foundation, and many others. All of these people just came out of the woodwork to offer assistance to us in so many different ways, and they do so for many others as well."

In March of 2008, TSgt and Mrs. Slaydon were invited to speak about the Family Liaison Program during the Commander's Course at Maxwell AFB, Ala. Since then, the two have been "road warriors," traveling together across

Photo above: *TSgt Matthew Slaydon delivers the keynote address at Hurlburt Field's 2009 Annual Awards Banquet on February 27. TSgt Slaydon and his wife, Annette, have traveled across the United States and in Europe for over 50 speaking engagements. (photo by Mr. Jim Monhollon)*

the country and telling their story during more than 50 speaking engagements.

"It snowballed from there," said TSgt Slaydon. "It's amazing how many people are interested in our story and the EOD story. And that's the big one I want to tell. My story is the story of the EOD guys and I'm not unique. We have been on the road a lot, but I'm motivated by wanting to do as much as I can for the career field while I still have that opportunity. I've also taken it upon myself to recruit as many Airmen for EOD as I can. It's probably something they'd never regret. There is no more satisfying feeling than the one you get when you've destroyed an enemy IED and the area is now safe and the infantry can get on with their job. It's the ultimate in gratification and I think that's what kept calling me back to the battlefield."

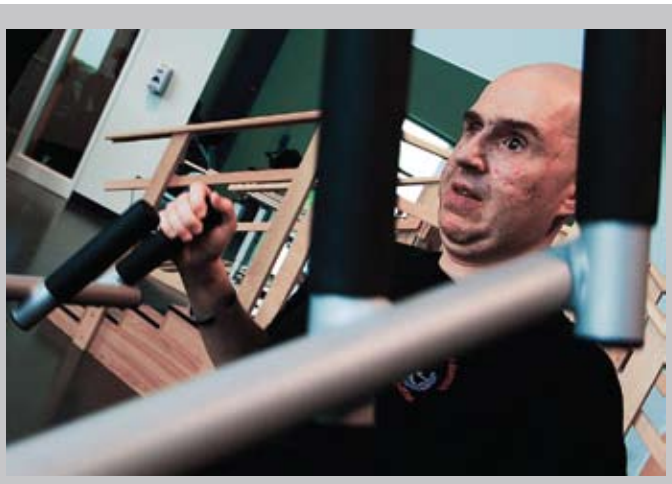
"I also think it's important that we let other people know how much support we've gotten from the EOD community, the Air Force, and the other organizations" said Mrs. Slaydon, "so that they can contribute to them. I also know there's a fear out there, of 'what would happen if my spouse got hurt?' I want them to know they will be taken care of; as Matt said, we are not unique. "

In August 2009, TSgt Slaydon will leave the Air Force with a medical retirement, and in his words, "about 15 years too soon." He plans to attend school to become a psychologist with a goal of counseling veterans, especially those with post-traumatic stress disorder.

"EOD is, and always will be, my first calling," said TSgt Slaydon. "But this is a way I can give back to the fight, to help warriors get their job done, which is EOD's primary job – to enable the ground-pounder to get out there and come to grips with the bad guy. That's my job, to clear the right of way for them to do their job. So I guess this is my way of regrouping and attacking in a different direction. "

"The hardest thing to leave behind is the deployments. If I'd stayed in my bucket, I would be with my team in Afghanistan right now. If I miss anything, it's the job, the sense of purpose, the company of fellow warriors – once you've been around that, you get so used to it, and it's hard to be around people who aren't that way."

TSgt Slaydon will officially retire from active duty, his physical appearance and abilities changed from the injuries he suffered in combat. Inside, however, he remains unchanged. TSgt Matthew Slaydon will always be an Air Force Civil Engineer, an Explosive Ordnance Disposal technician, a warrior.



TSgt Matthew Slaydon, completed over 15 months of rehabilitation at Brooke Army Medical Center and the Center for the Intrepid (shown here), both in San Antonio, Texas, and continues with physical therapy from his home station, Luke AFB, Ariz. (photo by TSgt Matthew Hannen)

TSgt Matthew Slaydon (center) received his promotion to technical sergeant on Dec. 19, 2008, from Gen Stephen Lorenz (left), Air Education and Training Command commander, on behalf of Brig Gen Kurt Neubauer, commander of TSgt Slaydon's home unit, the 56th Fighter Wing. Mrs. Annette Slaydon (right) helps the general tack on the stripes. (photo by Ms. Michelle Deleon)

"It is only with the heart that one can see rightly; what is essential is invisible to the eye."

Antoine de Saint-Exupery

CE Wounded Warriors Stay the Course

Ms. Teresa Hood
Editor, *AFCE* magazine

It's been four years since two Air Force civil engineers deployed to the 455 ECES were injured by a land mine explosion in Afghanistan, and three years since an article in the Air Force Civil Engineer magazine (Vol. 14, No. 1) gave an account of their progress. On June 17, 2005, Maj Matthew Conlan, the squadron commander, was with TSgt Chris Ramakka and other members of the 455th's EOD team cleaning up a former Soviet artillery field near Bagram AB when TSgt Ramakka stepped on an old Soviet pressure-sensitive anti-personnel mine. As he stepped off, the mine exploded.

The explosion caused severe injuries to the two civil engineers. TSgt Ramakka's left leg below the knee was badly damaged and later amputated; he lost the tips of a couple of fingers, and shrapnel caused serious damage to his right leg. Maj Conlan's most serious injuries were also to his legs, especially the right, which was missing a large piece of bone and muscle below the knee; the blast had also blown a large piece of muscle from his upper left thigh. Eventually, they ended up in Texas for recovery and rehabilitation – Maj Conlan at Wilford Hall and TSgt Ramakka at Wilford Hall, then Brooke Army Medical Center. In the time since the previous article was published in 2006, both Airmen passed medical board reviews, allowing them to remain in Air Force Civil Engineering.

Maj Matthew Conlan

"My goal was always to finish 20 years in the Air Force, and I'm very glad that I've been able to do that," said Maj Conlan. In October 2006, he passed a medical board and was allowed to remain on active duty with no limitations. This was after almost 10 operations and close to a year of recovery and physical therapy.

"They had to do a lot of reconstruction on my right leg, which also had a lot of nerve damage. It was very painful and still is. But at the end of the day, it's my leg and I can walk. By the time of the medical board I had worked up to walking three miles a day and their rationale was that if I could walk that far, I could probably run 100 yards in an emergency."

In April 2007, Maj Conlan took a job in Washington, D.C., working with the EOD Division in the Readiness Directorate in the Office of the Air Force Civil Engineer. In May of this year, he officially retired from the job and the Air Force with 20 years of active duty service. "It's huge to be able to make that goal and I couldn't have done it without the support of my family and the CE community," said Maj Conlan.

TSgt Chris Ramakka

In December 2008, TSgt Chris Ramakka deployed to the Southwest Asia area of responsibility as an EOD Flight Chief. He is the first EOD technician from any of the Services to deploy after losing a limb, according to CMSgt Robert Hodges, the Air Force EOD Career Field Manager.

"I didn't really know that I would be the first," said TSgt Ramakka. "Maybe it will set a precedent – at least as far as this career field. I hope people that are still capable of doing their jobs don't get turned away just because they're missing a limb. I probably can't jump as high and I carry a little more 'gear' with me, but I can still do my job just like before."

TSgt Ramakka deployed from Lackland AFB, Texas, where he's been an instructor (now chief) for the EOD Preliminary course since 2006. Through three years of numerous operations and intense physical therapy and exercise, he's been determined to redeploy.

"I passed PT for two solid years before they cleared me to deploy again," said TSgt Ramakka. "It's just one more step to being normal. I don't think of myself as special in any way, and that's another reason it was important to deploy. The people I work with keep me grounded; they don't cut me any slack. I'm just one of the guys and that's pretty important."

(Photo right) *TSgt Christopher Ramakka, 380 ECES EOD Flight Chief, goes for an early-morning run while deployed to Southwest Asia. (photo by TSgt Denise Johnson)*

(Photo left) *While working in the Air Force's counter-improvised explosive device office, Maj Matthew Conlan walked regularly through the below-ground tunnel system of shops and restaurants in Crystal City, Va. Maj Conlan retired from the Air Force in May. (photo by Fred W. Baker III)*

Island Engineering

Capt Christopher Bulson
CAT Palau OIC

On a tiny island 700 miles west of Guam, 13 Airmen are making a difference. The Palau Civic Action Team (CAT) is the last of its kind in Micronesia: a full-time engineering force dedicated to improving the way of life for 19,000 islanders. Although traditionally filled by Navy Seabees, Camp Katuu in the Republic of Palau is now the home to the fifth Air Force team to share this unique responsibility.

The CAT program is a joint service humanitarian initiative that supports bilateral agreements and treaty obligations under the Compact of Free Association; administrative control is maintained by the 36th Civil Engineer Squadron, Andersen AFB. Air Force CAT members are selected for the six- to seven-month tour by a competitive process.

The mission of the program is threefold: 1) maintain a favorable presence in support of the U.S. Pacific Command (USPACOM) Theater Security Cooperation Plan; 2) assist and train the local population in engineering, administrative, and medical skills; and 3) provide construction support to the Republic of Palau in their basic infrastructure development. This mission is accomplished through four execution elements: construction projects, apprentice training, medical outreach, and community relations.

The CAT provides support through small-scale construction projects that directly benefit the host community without competing with private construction or other programs. The CAT has a variety of heavy construction equipment and members are typically trained in the following types of construction: concrete, roofing, interior/exterior electrical and lighting, plumbing, masonry, HVAC, general carpentry and interior finishes, steel work, welding, pre-engineered buildings, earthwork and site development.

Currently, the CAT is working on three USPACOM-funded projects. A 1,450-square foot concrete-block Airai Clinic, with a reception area, two exam rooms, a lab, a pharmacy, and a restroom, will serve the health needs of the 1,900 residents of the state of Airai on the largest island. An elementary school restroom project on the tiny island of Angaur is smaller (450 square feet), but has bigger challenges. Team members and materials have to take a two-to four-hour boat ride (depending on sea conditions and boat size) from Palau's largest city, Koror. On the west side of Babeldaob, the Ngardmau Police/Fire Substation, a 2,400-square foot pre-engineered building, will house emergency services for Palau's largest island. Similar to a 2005 CAT-built structure on the east side, it will have vehicle bays, offices, restrooms, a kitchen, and two jail cells.

The one-year apprentice program assigns local apprentices with a team member who serves as a primary instructor and evaluator. The team has slots for 14 apprentices. An Air Force physician assistant leads the efforts of the Medical Civic Action Program under supervision of the CAT's OIC and a physician from Naval Hospital Guam.

The Community Relations (COMREL) program aggressively promotes a positive U.S. image through direct involvement in community activities and through technical assistance, which includes all construction or construction-related services to the community requiring less than 10 mandays per job. Under the COMREL program, CEs have used heavy equipment to help improve sections of rural roads and have used excess project material to build walls, tile classroom floors, and install water filters at a local school.

"Going to Palau is a unique opportunity," said SMSgt Freddie Davis, CAT Palau's assistant officer-in-charge. "We truly are goodwill ambassadors with the prospect of affecting all 19,000 people living here. The local communities will remember our interaction and efforts for years."

Capt Bulson is currently the officer-in-charge of the Palau Civic Action Team. After his tour he will return to the 11th Civil Engineer Squadron, Bolling AFB, Washington, D.C., as the chief of contracts.

The new clinic built by the Air Force CAT will serve 1,900 people in the state of Airai, Republic of Palau. (photo by the author)

Ms. Mary Hall
Ms. Linda Geissinger
AFRPA/PA

McClellan Springs from Grim to Green

On the former McClellan AFB in California, a mother watches three toddlers play in the courtyard of Serna Village, a new housing complex near the old base gym. Across the street, a retired chief master sergeant unpacks his trunk for an evening workout at "Cal-Fit McClellan," the now privately owned gym. Several blocks away, employees in the high-tech sector leave their jobs from the same warehouses used by military repair mechanics for decades.

The former military base has had more than a facelift over the past eight years since it closed. It's been transformed from the inside out, with dramatic changes in both the environment and the population. When the base was shuttered in 2001, as a result of Base Realignment and Closure (BRAC), environmental and redevelopment experts promised they could work together. After their logistics mission departed, the Air Force's cleanup of groundwater and soil would continue, and more importantly, as long as the community allowed clean-up projects to proceed alongside redevelopment, they would be given the keys to the base.

"By working closely with regulators, the local redevelopment authority, and the developer, we're conducting an aggressive cleanup program at McClellan, while they're redeveloping parts of the base and moving in tenants," said Mr. Phil Mook, Air Force Real Property Agency western region supervisor.

Established in 1936, McClellan served as an aircraft repair depot and supply base until closing in 2001. In its heyday, the base provided worldwide logistic support for aircraft, communication-electronic systems, and ground power generators. More recently, the runway landed F-111s, A-10s, F-15s and KC-135s. In fulfilling its mission at McClellan, the Air Force used a variety of toxic and hazardous chemicals resulting in soil and groundwater contamination.

"McClellan was one of the more contaminated Air Force bases closed in the BRAC program," said Mr. Mook. In response, the Air Force has led a large-scale cleanup program since the 1980s. In 1987, the U.S. Environmental Protection Agency (EPA) listed McClellan on its National Priorities (Superfund) List. Regulatory oversight comes from the EPA and the State of California.

Despite the ongoing cleanup, redevelopment is a success. Today, there are more people on site than when the base closed; almost 14,000 employees and visitors are at the 220 businesses occupying roughly seven million square feet at McClellan Business Park. County officials attribute this success to the spirit of cooperation between all players involved: the Air Force, the County of Sacramento, McClellan Business Park, the regulatory agencies, and elected officials.

An example of this cooperation is a 62-acre parcel transferred "early," meaning cleanup is still needed. In August 2007, Parcel C-6 in the southwest corner of McClellan was transferred to the county (which then transferred it to

The Air Force has worked with local government, industry, and regulatory agencies to ensure environmental cleanup continues along with redevelopment at the former McClellan AFB. Closed by BRAC in 2001, the former base in California has undergone some dramatic changes, as seen in these before and after photos of a large facility (top), and an outside courtyard and hangars (bottom, left to right). (U.S. Air Force photos)

McClellan Business Park) under early transfer authority. The Air Force paid a negotiated cost to the county to fund the remaining cleanup for the property. Under this agreement, the EPA took over the Air Force's role in determining cleanup remedies.

This was the nation's first early transfer with privatized cleanup at a Department of Defense Superfund site. Building on the Air Force's investigation work on site, the EPA quickly proposed a cleanup plan and is now refining its Record of Decision to specify necessary actions on the site. According to the US EPA, cleanup is expected to be complete by fall 2009.

In the meantime, Sacramento County and McClellan Business Park are attracting a key tenant who will construct a 500,000 square-foot building at the prime C-6 location site, bringing some 500 jobs to McClellan.

"It's the perfect scenario for privatization," said Mr. Alan Hersh, vice president for McClellan Business Park. "You complete privatization cleanup concurrent with a major user getting ready to move on site."

With the C-6 transfer going so well, the group is working on a second, much larger privatization transfer. It will move 600 acres — along with the cleanup —off the Air Force rolls and into the county's hands.

While cleanup and property transfer is critical to redevelopment at the former base, the real test is if businesses are moving in and creating jobs for the region. The answer is a resounding 'yes.' While 2009 has been slow and challenging due to the down-turned economy, the former base is alive and bustling with new businesses and people.

A new high-tech employer operates a computer server farm in a former radar repair facility, providing secure, reliable, off-site data storage for a number of Fortune 500 companies, according to the county. And, McClellan is making somewhat of a return to its roots with the addition of an aviation maintenance and repair facility.

Despite its environmental history, the former military base is fast becoming a green business park. A solar energy business expanded its McClellan operations in 2008 from 10,000 to some 70,000 square feet. The company manufactures, installs, and operates residential, commercial, and industrial solar panels and solar energy systems worldwide. A startup manufacturer of recycled products for landscaping materials recently added 8,000 square feet to its McClellan operations to produce a second recycled paper–based product line and the company anticipates adding a third product line later this year in its 44,000 square foot facility.

These successes have made McClellan a model for successful base reuse. In fact, late last year a Korean delegation looking for advice for dealing with the 54 bases The Republic of Korea is inheriting back from the U.S. Government came to McClellan for answers.

Mastering Engineering Management

Lt Col Christopher West
AFIT/ENV

Do you have your master's degree yet? If not, how do you plan to get it? Night school? On-line? Tuition assistance? If those options don't appeal to you, then you should consider the Graduate Engineering Management (GEM) program offered by the Air Force Institute of Technology (AFIT). Each year, the civil engineer career field offers graduate school slots to selected junior officers who then enjoy a tuition-free, 18-month assignment as an AFIT graduate student at Wright-Patterson AFB, Ohio.

For decades, the GEM program curriculum — specifically tailored to meet the needs of civil engineers — has built an analytical foundation that directly enhances engineering management abilities. The core curriculum includes statistics; operations research; management and behavior in organizations; business process improvement (a foundational AFS021 course); system dynamics; project management; project risk analysis; strategic cost management; strategic information management; and environmental policy. Each student also selects a focus sequence that allows more in-depth coverage of a specific area. The current focus sequences are crisis management, infrastructure management, and construction management.

The GEM program has the backing of senior leaders in the civil engineer career field, who ensure that the program is properly positioned to support the career field across the spectrum of the Civil Engineering mission. A team of senior civil engineer officers from the operational world regularly review the GEM program and make recommendations on future directions for the program, including the three focus sequences.

(U.S. Air Force photo)

Ranked as top-notch by external agencies, the GEM program is the nation's only master's degree in engineering management accredited by the Accreditation Board for Engineering and Technology. Faculty from three leading engineering management schools (University of Missouri-Rolla, George Washington University, and Old Dominion University) recently reviewed the program and commented that it has everything that a civilian institution engineering management program offers, but is unique because it's specifically designed for Air Force civil engineers.

Program graduates consistently comment on the value of the relationships they establish during the year and a half of daily contact with their career-field peers. The strong social networks developed by GEM students endure long after they leave AFIT; operational assistance and career or assignment advice is often as close as a phone call to a fellow graduate.

Interested officers need to do two things. First, apply for academic eligibility to AFIT at: http://www.afit.edu/en/Admissions/Default.cfm?l=apps. This can be done at any time, there is no yearly application cycle like at civilian universities, but a current GRE score is necessary to apply. Official admission standards include 3.0 undergraduate GPA as well as a 600 math/500 verbal score on the GRE. However, all applications will be individually reviewed and waivers are regularly granted. Second, indicate your preference for attending the GEM program on your Airman Development Plan, or ADP, and have your commander sign your form 3849. GEM candidates are competitively selected each fall at the Working Development Team meeting from the pool of academically eligible officers. Selection is based on officer performance reports, so, as always, it is essential that you do the best you can at your current job. Interested enlisted personnel should contact their career field manager. For further information regarding the program, please consult the GEM Website at: http://www.afit.edu/en/env/PDF/EngineeringManagement.pdf.

Editor's note: The GEM program is also open to qualified civilians. Those interested should contact their career program office for more information.

Lt Col West is an Assistant Professor of Engineering Management and the director of the GEM Program, Graduate School of Engineering and Management, AFIT; Wright-Patterson AFB, Ohio.

Air Force CBRN Challenge 2009

MSgt Steve Phipps
HQ AFCESA/CEXR

This year's Air Force CBRN Challenge was held March 16-20 at Brooks-City Base, Texas. Forty-five competitors from nine MAJCOMs participated in the annual competition, which tests the best-of-the-best in the Emergency Management (EM) and Bioenvironmental Engineer (BEE) career fields in homeland defense and expeditionary chemical, biological, radiological, and nuclear, or CBRN, response procedures. The teams were challenged on their proficiency and knowledge of equipment, emergency response tactics, techniques, and procedures; health risk assessment; and advice on mission impact during realistic scenarios. The challenge consisted of six, three-hour response scenarios, a fitness challenge, and a "Jeopardy" knowledge competition.

While this event was a competition, it also served as an outstanding training opportunity to sharpen the CBRN response capabilities of the participants. The challenge helped identify policy and equipment gaps in both the Bioenvironmental Engineering and Emergency Management mission sets. The competition added value to the entire Air Force through joint competition by combining the two career fields into individual teams (three BEEs and two EMs), encouraging partnership and smooth collaborative emergency response operations consistent with the Air Force Incident Management System.

The week-long competition culminated with an awards ceremony dinner at which Col Donald Gleason, Air Force chief of Readiness and Emergency Management, congratulated the winners. First place winners were Air Force Space Command (Capt Travis Meidinger, SSgt Odelsa Aguirre, SSgt Michael Chancey, SrA Charles Walker, and SrA Michael Herrington) and the runner-up was Air National Guard (Lt Col Michael Antoszewskit, MSgt Steven Buss, TSgt William Catton, SSgt Gary Fletcher, and SSgt Jeffrey Sharpmack.

Next Challenge

Start training now! CBRN Challenge 2010 is tentatively scheduled for March. Contact your MAJCOM functional for the latest details.

MSgt Phipps is the Readiness/EM Training Manager, HQ AFCESA, Tyndall AFB, Fla.

During the 2009 CBRN Challenge, teams participated in several scenarios, including those involving (top to bottom) radiological dispersal devices, chemical munitions, and sensitive sight exploitation.
(U.S. Air Force photos)

Lakenheath EOD Team Leader Killed by IED

Top: SSgt Phillip Myers, from the 48th CES, RAF Lakenheath, England, receives the Bronze Star Medal from Lt Gen Robert D. Bishop, 3rd Air Force commander, on March 19, 2008. (photo by Amn Perry Aston) Middle and Bottom: During TSgt Myers funeral April 27 at Arlington National Cemetery, U.S. Air Force Honor Guard Airmen carry his casket and his father, Mr. Eddie Myers, places a folded flag in a shadow box. (photos by MSgt Stan Parker)

On April 4, 2009, then-SSgt Phillip A. Myers was killed by an improvised explosive device while conducting operations in Afghanistan. He was deployed from the 48th Civil Engineering Squadron (CES) Explosive Ordinance Disposal (EOD) Flight at RAF Lakenheath, United Kingdom, to the 755 Air Expedition Group (AEG) in southern Afghanistan as an EOD team leader. He leaves behind his wife, Aimee, and two young children.

Just over a year ago, he received the Bronze Star from Lt Gen Robert Bishop, 3rd Air Force commander. He also earned the 2008 Maj Gen Eugene A. Lupia Award for Civil Engineer Military Technician of the Year. Because of his dedication to duty and hard work, he was nominated for a STEP promotion before his death. Col Jay Silveria, 48 FW commander, awarded the promotion posthumously.

"Sergeant Myers was an exceptional NCO, dedicated warrior, and valued patriot who died in an effort to protect his comrades," Col Silveria said. He added that the promotion was not for the situation but for the many things TSgt Myers had done for the Air Force.

At a memorial service held at Kandahar Airfield, Afghanistan, Capt Robert Scott, 755 AEG/EOD OL-B officer-in-charge, described TSgt Myers as a "shining example of selfless leadership and heroism. He was a man who took great care to educate team members…. [H]e personified excellence and took great pride in his team's successes."

MSgt Kieran Flynn, 48 CES EOD flight, accompanied TSgt Myers' family to the United States to receive the body at Dover AFB, Del. The Myers family was the first to allow media coverage of the dignified transfer of remains under a new Department of Defense policy implemented on April 6, 2009. "The core of the policy is built around the desires of the family," said Pentagon spokesman Mr. Bryan Whitman, "and it will be the families that decide whether or not media have access to any of these dignified transfers."

Speaking at a memorial service for TSgt Myers at RAF Lakenheath, MSgt Flynn said, "Phil loved what he did more than anyone I have ever met. He was a model EOD technician."

TSgt Myers was buried with military honors on April 27 at Arlington Cemetery.

Compiled from Air Force News stories by SrA Kristopher Lawrence and other Air Force News personnel.

Two New HORSEs Join the Herd

Two new Reserve RED HORSE squadrons (RHSs), the 567 RHS and the 560 RHS, were officially established on March 7 and March 8, respectively. Both 209-member units are the first Active Associate RED HORSE squadrons and will partner with active duty Prime BEEF units to accomplish troop training projects, deployments for training, and Air Expeditionary Force rotations.

"We're embarking on a new path, both serving as and seeing new mentors and benchmarks to forge this new unit and prove this new Active Associate construct," said Col Daniel Leveille, 560 RHS commander.

From their home station at Charleston AFB, S.C., members of the 560 RHS will partner with members of the 437th Civil Engineer Squadron (CES). Commanded by Col Timothy Lamb, the 567 RHS is headquartered at Pope AFB, N.C. and will team with 33 members of the 4 CES.

Right: Air Force Reserve members of the 560 RHS work with an active duty CE from the 437 CES (center, with black hat) to place the 560th's Charging Charlie on his new "pad" at Charleston AFB, S.C. (U.S. Air Force photo)

Bottom: Air Force Reserve CEs replaced their regular caps with the traditional "red hats" during the ceremony officially establishing the 567 RHS at Pope AFB, N.C. (U.S. Air Force photo)

Byers Named The AF Civil Engineer

On June 5, Brig Gen Timothy Byers became The Air Force Civil Engineer, Deputy Chief of Staff, Logistics, Installations and Mission Support, Headquarters United States Air Force, Pentagon, Washington, D.C. He replaces Maj Gen Del Eulberg, who is retiring effective August 1, and served in that position since June 2006. Brig Gen Byers has been nominated for the rank of Major General and was formerly the Director of Installations and Mission Support, Headquarters Air Combat Command, Langley AFB, Va. His previous experience includes headquarters tours at both the Air Staff and major command levels, commander of a civil engineering squadron and mission support group, and a career broadening tour with Air Force ROTC. Brig Gen Byers entered the Air Force in October 1981 as a distinguished graduate of the ROTC program at the University of Kentucky, where he earned a B.S. in Civil Engineering. He also earned an M.S. degree in engineering management from the Air Force Institute of Technology at Wright-Patterson AFB, Ohio, and completed the Executive Program at the Darden School of Business Administration, University of Virginia, Charlottesville, Va.

CE Named Chief Master Sergeant of the Air Force

Air Force Chief of Staff Gen Norton Schwartz and Chief Master Sergeant of the Air Force Rodney J. McKinley recently announced that CMSgt James A. Roy, an Air Force civil engineer, will be the service's next top enlisted leader. CMSgt Roy will become the 16th chief master sergeant of the Air Force during an appointment ceremony June 30 which will coincide with the retirement of CMSgt McKinley.

"This is a good day for all Airmen," Gen Schwartz said. "While they will lose a tremendous leader and advocate in Chief McKinley, they gain a worthy successor in Chief Roy. Given his record and reputation, I am confident that Chief Roy will carry the best interests of our Air Force family forward to our nation's leaders as we support today's joint fight and rebalance our force for the challenges ahead."

CMSgt Roy comes to the position from Camp Smith, Hawaii, where he served as the senior enlisted leader and advisor to the U.S. Pacific Command (USPACOM) combatant commander, representing more than 200,000 Airmen, Soldiers, Sailors and Marines. After joining the Air Force in 1982 as a heavy equipment operator, his first assignment was with the 56th Civil Engineer Squadron at MacDill AFB, Fla. From 1987 to 1999, he worked in civil engineer squadrons at Osan AB, Korea; Andersen AFB, Guam; and Keesler AFB, Miss.; and as an instructor at Ft. Leonard Wood, Mo. He has served as the command chief master sergeant at wings in Air Education and Training Command, Air Mobility Command, and Air Combat Command, and was deployed as the command chief master sergeant of the 386th Air Expeditionary Wing in Southwest Asia. Prior to his position with USPACOM, he was the command chief master sergeant for U.S. Forces Japan and 5th Air Force at Yokota AB, Japan.

Key Personnel Changes

Headquarters Air Force

Mr. Michael Aimone, a civil engineer, is retiring as Assistant Deputy Chief of Staff, Logistics, Installations and Mission Support, Headquarters U.S. Air Force, Washington, D.C. He will be replaced by Ms. Patricia M. Young, currently Deputy to the Commander, Military Surface Deployment and Distribution Command, U.S. Transportation Command, Scott AFB, Ill.

Major Commands

Brig Gen Dave Howe

Brig Gen Dave Howe is the new Director, Installations and Mission Support, Headquarters Air Combat Command, Langley AFB, Va. He was the Director, Logistics, Installation, and Mission Support, Headquarters U.S. Air Forces in Europe, Ramstein AB, Germany.

Brig Gen Leonard Patrick

Brig Gen Leonard Patrick is now the Commander, 502nd Air Base Wing, Air Education and Training Command, Lackland AFB, Texas. He was the commander of the 37th Training Wing for AETC at Lackland.

Col Karl Bosworth will replace Col William M. Corson as Director, Installations and Mission Support, Headquarters Pacific Air Forces, Hickam AFB, Hawaii. Col Corson is retiring, effective December 1. Col Bosworth is currently the Chief, Readiness Emergency Services Division for HQ PACAF.

Col Claude "Van" Fuller is the new Director, Installations and Mission Support, Headquarters Air Force Special Operations Command, Hurlbert Field, Fla. He replaces Col Steven Hoarn, who is retiring. Col Fuller was the Deputy Commanding Officer for the Gulf Region Division, U.S. Army Corps of Engineers, Baghdad, Iraq.

Col Nicholas Desport is the new Director, Installations and Mission Support, Headquarters Air Force Reserve Command, Robins AFB, Ga. He was formerly the Deputy Director, Installations and Mission Support, Headquarters Air Mobility Command, Scott AFB, Ill. He replaces Col Steven Zander, who is retiring.

Field Operating Agencies

Col Wilfred "Will" Cassidy is the new Executive Director and Military Commander, Headquarters Air Force Center for Engineering and the Environment, Brooks City-Base, Texas. He replaces Col Keith Yaktus, who has retired. Col Cassidy was formerly the Commander, 820th RED HORSE Squadron, Nellis AFB, Nev.

Office of The Civil Engineer, HQ USAF

Col Joseph Schwarz is the new Chief, Asset Management and Operations Division, replacing Col Liesel Golden, who is retiring. Col Schwarz was Director, Planning and Strategic Development, Office of the Deputy Assistant Secretary of the Air Force (Installations).

Col Derrek Sanks is the new Chief, Planning Division, replacing Col Joel Benefield, who is retiring. Col Sanks was Chief, Infrastructure Branch, Headquarters Air Force Space Command, Peterson AFB, Colo.

Col Beth Brown is now the Chief, Programs Division, moving from Headquarters Air Force Center for Engineering and the Environment, Brooks City-Base, Texas, where she was deputy chief of the Capital Investment Management Division. She replaces Col Timothy Green, who is now Special Assistant to the Commander, United States European Command, Brussels, Belgium.

Col Curt Van De Walle will become the Chief, Readiness and Emergency Management Division, replacing Col Donald Gleason, who is retiring. Col Van De Walle was a student at U.S. Army War College, Carlisle Barracks, Pa.

Boots on the ground...

A civil engineer from the 819th Expeditionary RED HORSE Squadron stands ready with a sledge hammer at Kandahar Airfield, Afghanistan, on May 7, 2009. RED HORSE engineers are assisting the 451st Air Expeditionary Group with airfield expansion to accommodate the influx of aircraft required to support the surge in Afghanistan.

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